Mind Tools

Essential skills for an excellent career

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The Mind Tools E-book

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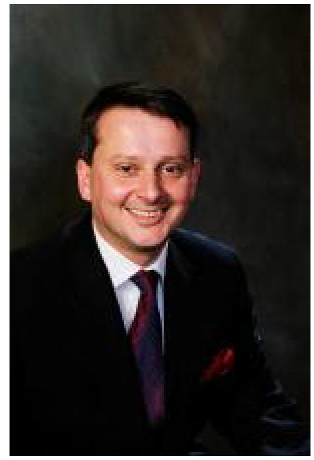
Contents

About the Author



"We are here to help you understand the simple, practical skills that will help you to excel, what ever you choose to do."
James Manktelow, Mind Tools

James Manktelow founded MindTools.com in 1995. The concept for the site started with his research into the practical skills and techniques he needed to progress his own career – he found it frustrating that so many simple but important life and career skills were so little taught.

The Mind Tools site exists to correct this issue – our team now works with experts and specialists, spanning four continents, to bring you the best and most up-to-date career skills we can find.

Since 1999, more than 8,500,000 visitors have used the site to develop their careers. Many have been kind enough to send us enthusiastic testimonials saying how the techniques we have helped to popularize have helped them in their lives and their jobs.

As well as leading the Mind Tools team, James has written six books, including Make Time for Success! with Namita Anand, and How to Lead with Felix Brodbeck and Namita Anand.

In addition to working with Mind Tools, James' career has spanned strategic analysis, business development, marketing, production and project management, business and systems analysis, software development and consultancy for major corporations in several European countries. He has led teams at all corporate levels and, as an entrepreneur, he has worked with others to build two successful companies.

James holds an MBA from London Business School with specialties in entrepreneurship and strategy. He lives in the UK with his wife Rachel (also an LBS MBA) and son Alex.

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- Helena Smalman-Smith for editing and updating the latest version of this book; and
- My wife Rachel, for her help and professional advice during the writing of this e-book.

How to use this e-book

Welcome to Mind Tools!

This e-book is a tool kit for your mind.

On its own, a screwdriver will only help you in a small way. Although it can be very useful, there are only a few jobs that you can use it for. When, however, you use this screwdriver as part of a complete tool kit, the range of options open to you is enormous. A craftsman with a good tool kit can make many different, useful things.

Similarly, individual thinking skills used on their own may help you in a small way. When, however, you use many different thinking skills together, your ability to solve problems increases significantly. Mind Tools is a tool kit of thinking techniques.

This e-book is divided into two parts. The first part covers techniques that will help you to develop your skills as a business thinker and make you more productive. This begins with individual sections that cover the time and stress management skills you will need as you become increasingly successful. They explain how to control and dissipate the pressures that will build around you. These tools will help you to live a happy life as well as a highly successful one.

Next, there are sections on the Information and Communication Skills that are so critical in today's workplace. Finally, the section on Memory Improvement explains useful ways of remembering people's names, lists of information, foreign languages, and so on.

The second part of the book focuses on the tools you need to lead and manage others effectively. This begins with all-important Leadership skills, and then moves on to cover Problem Solving and Decision Making, giving you the skills you need to understand many difficult problems, and make the best decisions possible with the information available. The section on Project Planning shows you how to plan, schedule and implement complex projects, and the book ends with a section on Practical Creativity that shows you how to generate fresh and innovative ideas reliably.

The best way to use this e-book is to skim through it quickly so that you get an overview of what is contained within it. Then read through the sections that are useful to you in more detail, so that you remember the bones of the methods. Finally, keep Mind Tools on your PC desktop, and refer to it whenever you need a new approach to solving a problem. It will be worth skimming through it periodically to keep the range of tools you now have available fresh within your mind.

Worksheets and Templates Supplement
This e-book is supplied with a free accompanying *Worksheets and Templates Supplement*. Wherever you see the "Worksheet" or "Template" symbols (shown below) in the text, you will find a Worksheet or Template for that tool in your *Worksheets and Templates Supplement*. Electronic copies of these can be downloaded by clicking links in the online versions of the articles at www.mindtools.com.

Part 1: Personal Productivity and Development Tools

Section 1: Time Management

- Beating Procrastination – Manage your time. Get it all done.
- Activity Logs – Knowing where you waste it
- Action Plans – Starting to achieve, in a small way
- Prioritized To-Do Lists – Taking control of your time
- Scheduling Skills – Bringing your workload under control
- Personal Goal Setting – Planning to live your life your way

1. Introduction to Time Management

Work smarter. Improve time utilization.

This section discusses personal time management skills. These are essential skills for effective people.

People who use these techniques routinely are the highest achievers in all walks of life, from business to sport to public service. If you use these skills well, then you will be able to function effectively, even under intense pressure.

At the heart of time management is an important shift in focus:

Concentrate on results, not on being busy

Many people spend their days in a frenzy of activity, but achieve very little because they are not concentrating on the right things.

The 80:20 Rule

This is neatly summed up in the Pareto Principle, or the '80:20 Rule'. This argues that typically 80% of unfocussed effort generates only 20% of results. The remaining 80% of results are achieved with only 20% of the effort. While the ratio is not always 80:20, this broad pattern of a small proportion of activity generating non-scalar returns recurs so frequently as to be the norm in many areas.

By applying the time management tips and skills in this section you can optimize your effort to ensure that you concentrate as much of your time and energy as possible on the high payoff tasks. This ensures that you achieve the greatest benefit possible with the limited amount of time available to you.

Time Management Tools

The tools we will discuss are:

- Beating Procrastination – Manage time. Get things done
- Activity Logs – Finding out how you really spend your time
- Action Plans – Small scale planning
- Prioritized To-Do Lists – Tackling the right tasks first
- Personal Goal Setting – Deciding what your personal priorities should be
- Effective Scheduling – Planning to make the best use of your time

By the end of this section, you should have a much clearer understanding of how to use time to its greatest effect.

1.1 Beating Procrastination

Manage your time. Get it all done.

If you've found yourself putting off important tasks over and over again, you're not alone. In fact, many people procrastinate to some degree – but some are so chronically affected by procrastination that it stops them achieving things they're capable of and disrupts their careers.

The key to controlling and ultimately combating this destructive habit is to recognize when you start procrastinating, understand why it happens (even to the best of us), and take active steps to better manage your time and outcomes.

Why do we Procrastinate?

In a nutshell, you procrastinate when you put off things that you should be focusing on right now, usually in favor of doing something that is more enjoyable or that you're more comfortable doing.

Procrastinators work as many hours in the day as other people (and often work longer hours) but they invest their time in the wrong tasks. Sometimes this is simply because they don't understand the difference between urgent tasks and important tasks, and jump straight into getting on with urgent tasks that aren't actually important.

They may feel that they're doing the right thing by reacting fast. Or they may not even think about their approach and simply be driven by the person whose demands are loudest. Either way, by doing this, they have little or no time left for the important tasks, despite the unpleasant outcomes this may bring about.

Another common cause of procrastination is feeling overwhelmed by the task. You may not know where to begin. Or you may doubt that you have the skills or resources you think you need. So you seek comfort in doing tasks you know you're capable of completing. Unfortunately, the big task isn't going to go away – truly important tasks rarely do.

Other causes of procrastination include:

- Waiting for the "right" mood or the "right" time to tackle the important task at hand;
- A fear of failure or success;
- Underdeveloped decision making skills;
- Poor organizational skills; and
- Perfectionism ("I don't have the right skills or resources to do this perfectly now, so I won't do it at all.")

How to Overcome Procrastination

Whatever the reason behind procrastination, it must be recognized, dealt with and controlled before you miss opportunities or your career is derailed.

Step 1: Recognize that you're Procrastinating

If you're honest with yourself, you probably know when you're procrastinating.

But to be sure, you first need to make sure you know your priorities. Putting off an unimportant task isn't procrastination, it's probably good prioritization. Identify your priorities, and then work from a Prioritized To Do List on a daily basis.

Some useful indicators which will help you pull yourself up as soon as you start procrastinating include:

- Filling your day with low priority tasks from your To Do List;
- Reading an e-mail or request that you've noted in your notebook or on your To Do List more than once, without starting work on it or deciding when you're going to start work on it;
- Sitting down to start a high-priority task, and almost immediately going off to make a cup of coffee or check your e-mails;
- Leaving an item on your To Do list for a long time, even though you know it's important;
- Regularly saying "Yes" to unimportant tasks that others ask you to do, and filling your time with these instead of getting on with the important tasks already on your list.

Step 2: Work out WHY you're procrastinating
Why you procrastinate can depend on both you and the task. But it's important to understand what the reasons for procrastination are for each situation, so that you can select the best approach for overcoming your reluctance to get going.

Common causes of procrastination were discussed in detail above, but they can often be reduced to two main reasons:

- You find the task unpleasant; or
- You find the task overwhelming

Step 3: Get over it!
If you are putting something off because you just don't want to do it, and you really can't delegate the work to someone else, you need to find ways of motivating yourself to get moving. The following approaches can be helpful here:

- Make up your own rewards. For example, promise yourself a piece of tasty flapjack at lunchtime if you've completed a certain task.
- Ask someone else to check up on you. Peer pressure works! This is the principle behind slimming and other self-help groups, and it is widely recognized as a highly effective approach.
- Identify the unpleasant consequences of NOT doing the task.
- Work out the cost of your time to your employer. As your employers are paying you to do the things that they think are important, you're not delivering value for money if you're not doing those things. Shame yourself into getting going!
- If you're putting off starting a project because you find it overwhelming, you need to take a different approach. Here are some tips:
- Break the project into a set of smaller, more manageable tasks. You may find it helpful to create an action plan.

Start with some quick, small tasks if you can, even if these aren't the logical first actions. You'll feel that you're achieving things, and so perhaps the whole project won't be so overwhelming after all.

Key Points
To have a good chance of conquering procrastination, you need to spot straight away that you're doing it. Then, you need to identify why you're procrastinating and taken appropriate steps to overcome the block.

1.2 Activity Logs
Finding Out How You Really Spend Your Time

How long do you spend each day on unimportant things; Things that don't really contribute to your success at work? Do you KNOW how much time you've spent reading junk mail, talking to colleagues, making coffee and eating lunch? And how often have you thought, "I could achieve so much more if I just had another half hour each day."

And are you aware of when in the day you check your e-mail, write important articles or do your long-term planning?

Most people find they function at different levels of effectiveness at different times of day as their energy levels fluctuate. Your effectiveness may vary depending on the amount of sugar in your blood, the length of time since you last took a break, routine distractions, stress, discomfort, or a range of other factors.

Activity logs help you to analyze how you actually spend your time. The first time you use an activity log you may be shocked to see the amount of time that you waste! Memory is a very poor guide when it comes to this, as it can be too easy to forget time spent on non-core tasks.

How to Use the Tool

Keeping an Activity Log for several days helps you to understand how you spend your time, and when you perform at your best. Without modifying your behavior any further than you have to, note down the things you do as you do them on the Activity Log template from your *Worksheets and Templates Supplement*. Every time you change activities, whether opening mail, working, making coffee, gossiping with colleagues or whatever, note down the time of the change.

As well as recording activities, note how you feel, whether alert, flat, tired, energetic, etc. Do this periodically throughout the day. You may decide to integrate your Activity Log with a stress diary.

Learning from Your Log

Once you have logged your time for a few days, analyze your daily activity log. You may be alarmed to see the amount of time you spend doing low value jobs!

You may also see that you are energetic in some parts of the day, and flat in other parts. A lot of this can depend on the rest breaks you take, the times and amounts you eat, and quality of your nutrition. The activity log gives you some basis for experimenting with these variables.

Your analysis should help you to free up extra time in your day by applying one of the following actions to most activities:

- Eliminate jobs that your employer shouldn't be paying you to do. These may include tasks that someone else in the organization should be doing, possibly at a lower pay rate, or personal activities such as sending non-work e-mails.
- Schedule your most challenging tasks for the times of day when your energy is highest. That way your work will be better and it should take you less time.
- Try to minimize the number of times a day you switch between types of task. For example, read and reply to e-mails in blocks once in the morning and once in the afternoon only.
- Reduce the amount of time spent on legitimate personal activities such as making coffee (take turns in your team to do this – it saves time and strengthens team spirit).

Key Points

Activity Logs are useful tools for auditing the way that you use your time. They can also help you to track changes in your energy, alertness and effectiveness throughout the day.

By analyzing your activity log you will be able to identify and eliminate time-wasting or low-yield jobs. You will also know the times of day at which you are most effective, so that you can carry out your most important tasks during these times.

1.3 Action Plans – Small Scale Planning

So, you know that you need to produce a newsletter, organize a team-building session, put together a bid for a new piece of work, or organize moving Jenny's team up to the second floor. Exactly what do you need to do to achieve this?

None of these are major projects. In fact, you can probably think of all the steps in your head right now. But how do you ensure that you really have covered everything? Would anyone else know where you'd got to with the work if you were unexpectedly off sick for a few days? And are you quite clear about when you need to start if everything is to be done and dusted by the deadline?

An Action Plan is a simple list of all of the tasks that you need to carry out to achieve an objective. It differs from a To Do List in that it focuses on the achievement of a single goal.

How to Use the Tool

Wherever you want to achieve something significant, draw up an Action Plan. This helps you think about what you need to do to achieve that thing, so that you can get help where you need it and monitor your progress.

To draw up an Action Plan, simply list the tasks that you need to carry out to achieve your goal, in the order that you need to complete them. This is very simple, but is still very useful!

Keep the Action Plan by you as you carry out the work and update it as you go along with any additional activities that come up.

If you think you'll be trying to achieve a similar goal again, revise your Action Plan after the work is complete, by changing anything that could have gone better. Perhaps you could have avoided a last-minute panic if you'd alerted a supplier in advance about when and approximately what size of order you would be placing. Or maybe colleagues would have been able to follow up on the impact of your newsletter on clients if you have communicated with them about when it would be hitting clients' desks. (If you're doing the job often, it can be incredibly powerful to turn your Action Plan into an Aide Memoire.)

Tip:
Action Plans are great for small projects, where deadlines are not particularly important or strenuous, and where you don't need to co-ordinate other people.

As your projects grow, however, you'll need to develop project management skills. This is particularly the case if you need to schedule other people's time, or complete projects to tight deadlines. Visit the Mind Tools Project Planning section to learn these skills, and in particular, see our article on Gantt Charts.

Key Points

An Action Plan is a list of things that you need to do to achieve a goal. To use it, simply carry out each task in the list!

1.4 To-Do Lists

Your first step in beating work overload

Template

Do you feel overwhelmed by the amount of work you have to do? Do you face a constant barrage of looming deadlines? And do you sometimes just forget to do something important, so that people have to chase you to get work done?

All of these are symptoms of not keeping a proper "To-Do List". To-Do Lists are prioritized lists of all the tasks that you need to carry out. They list everything that you have to do, with the most important tasks at the top of the list, and the least important tasks at the bottom. And starting to keep a To-Do List effectively is often the first personal productivity/time management breakthrough that people make as they start to make a success of their careers.

By keeping a To-Do List, you make sure that you capture all of the tasks you have to complete in one place. This is essential if you're not going to forget things. And by prioritizing work, you plan the order in which you'll do things, so you can tell what needs your immediate attention, and what you can quietly forget about until much, much later. This is essential if you're going to beat work overload. Without To-Do Lists, you'll seem dizzy, unfocused and unreliable to the people around you. With To-Do Lists, you'll be much better organized and much more reliable. This is very important!

Whilst To-Do Lists are very simple, they are also extremely powerful, both as a method of organizing yourself and as a way of reducing stress. Often problems may seem overwhelming or you may have a seemingly huge number of demands on your time. This may leave you feeling out of control, and overburdened with work.

Preparing a To-Do List

The solution is often simple: Firstly, print out our To-Do List template from your *Worksheets and Templates Supplement*.

Start by writing down the tasks that face you, and if they are large, break them down into their component elements. If these still seem large, break them down again. Do this until you have listed everything that you have to do, and until tasks are will take no more than 1-2 hours to complete.

Once you have done this, run through these jobs allocating priorities from A (very important) to F (unimportant). If too many tasks have a high priority, run through the list again and demote the less important ones. Once you have done this, rewrite the list in priority order.

You will then have a precise plan that you can use to eliminate the problems you face. You will be able to tackle these in order of importance. This allows you to separate important jobs from the many time-consuming trivial ones.

Using Your To-Do Lists

Different people use To-Do Lists in different ways in different situations: if you are in a sales-type role, a good way of motivating yourself is to keep your list relatively short and aim to complete it every day.

In an operational role, or if tasks are large or dependent on too many other people, then it may be better to keep one list and 'chip away' at it.

It may be that you carry unimportant jobs from one To-Do List to the next. You may not be able to complete some very low priority jobs for several months. Only worry about this if you need to – if you are running up against a deadline for them, raise their priority.

If you have not used To-Do Lists before, try them now: They are one of the keys to being really productive and efficient.

Key Points

Prioritized To-Do Lists are fundamentally important to efficient work. If you use To-Do Lists, you will ensure that:

- You remember to carry out all necessary tasks
- You tackle the most important jobs first, and do not waste time on trivial tasks.
- You do not get stressed by a large number of unimportant jobs.

To draw up a Prioritized To-Do List, print a hard copy of our To-Do List template from your *Worksheets and Templates Supplement* and use it to list all the tasks you must carry out. Mark the importance of the task next to it, with a priority from A (very important) to F (unimportant). Redraft the list into this order of importance.

Now carry out the jobs at the top of the list first. These are the most important, most beneficial tasks to complete.

1.5 Personal Goal Setting
Find Direction. Live Your Life Your Way.

Goal setting is a powerful process for personal planning.

The process of setting goals helps you choose where you want to go in life. By knowing precisely what you want to achieve, you know where you have to concentrate your efforts. You'll also quickly spot the distractions that would otherwise lure you from your course.

More than this, properly-set goals can be incredibly motivating, and as you get into the habit of setting and achieving goals, you'll find that your self-confidence builds fast.

Achieving More with Focus

Goal setting techniques are used by top-level athletes, successful business-people and achievers in all fields. They give you long-term vision and short-term motivation. They focus your acquisition of knowledge and help you to organize your time and your resources so that you can make the very most of your life.

By setting sharp, clearly defined goals, you can measure and take pride in the achievement of those goals. You can see forward progress in what might previously have seemed a long pointless grind. By setting goals, you will also raise your self-confidence, as you recognize your ability and competence in achieving the goals that you have set.

Goals are set on a number of different levels: First you decide what you want to do with your life and what large-scale goals you want to achieve. Second, you break these down into the smaller and smaller targets that you must hit so that you reach your lifetime goals. Finally, once you have your plan, you start working to achieve it.

Starting to Set Personal Goals

This section explains a simple technique for setting personal goals. It starts with your lifetime goals, and then works through a series of lower level plans culminating in a daily to-do list. By setting up this structure of plans you can break even the biggest life goal down into a number of small tasks that you need to do each day to reach the lifetime goals.

Your Lifetime Goals

The first step in setting personal goals is to consider what you want to achieve in your lifetime, as setting Lifetime goals gives you the overall perspective that shapes all other aspects of your decision making.

To give a broad, balanced coverage of all important areas in your life, try to set goals in some of these categories (or in categories of your own, where these are important to you):

- *Artistic:*
  Do you want to achieve any artistic goals? If so, what?
- *Attitude*:
  Is any part of your mindset holding you back? Is there any part of the way that you behave that upsets you? If so, set a goal to improve your behavior or find a solution to the problem.
- *Career:*
  What level do you want to reach in your career?
- *Education:*
  Is there any knowledge you want to acquire in particular? What information and skills will you need to achieve other goals?
- *Family:*
  Do you want to be a parent? If so, how are you going to be a good parent? How do you want to be seen by a partner or by members of your extended family?

- *Financial:*
  How much do you want to earn by what stage?
- *Physical:*
  Are there any athletic goals you want to achieve, or do you want good health deep into old age? What steps are you going to take to achieve this?
- *Pleasure:*
  How do you want to enjoy yourself? – you should ensure that some of your life is for you!
- *Public Service:*
  Do you want to make the world a better place by your existence? If so, how?

Once you have decided your goals in these categories, assign a priority to them from A to F. Then review the goals and re-prioritize until you are satisfied that they reflect the shape of the life that you want to lead. Also ensure that the goals that you have set are the goals that you want to achieve, not what your parents, spouse, family, or employers want them to be.

Starting to Achieve Your Lifetime Goals

Once you have set your lifetime goals, set a 25 year plan of smaller goals that you should complete if you are to reach your lifetime plan. Then set a 5 year plan, 1 year plan, 6 month plan, and 1 month plan of progressively smaller goals that you should reach to achieve your lifetime goals. Each of these should be based on the previous plan.

Then create a daily to-do list of things that you should do today to work towards your lifetime goals. At an early stage these goals may be to read books and gather information on the achievement of your goals. This will help you to improve the quality and realism of your goal setting.

Finally review your plans, and make sure that they fit the way in which you want to live your life.

Staying on Course

Once you have decided your first set of plans, keep the process going by reviewing and updating your to-do list on a daily basis. Periodically review the longer term plans, and modify them to reflect your changing priorities and experience.

An easy way of doing this is to use the goal-setting software like GoalPro 6 on a daily basis.

Goal Setting Tips

The following broad guidelines will help you to set effective goals:

- **State each goal as a positive statement:** Express your goals positively – 'Execute this technique well' is a much better goal than 'Don't make this stupid mistake'
- **Be precise:** Set a precise goal, putting in dates, times and amounts so that you can measure achievement. If you do this, you will know exactly when you have achieved the goal, and can take complete satisfaction from having achieved it.
- **Set priorities:** When you have several goals, give each a priority. This helps you to avoid feeling overwhelmed by too many goals, and helps to direct your attention to the most important ones.
- **Write goals down:** This crystallizes them and gives them more force.
- **Keep operational goals small:** Keep the low-level goals you are working towards small and achievable. If a goal is too large, then it can seem that you are not making progress towards it. Keeping goals small and incremental gives more opportunities for reward. Derive today's goals from larger ones.
- **Set performance goals, not outcome goals:** You should take care to set goals over which you have as much control as possible. There is nothing more dispiriting than failing to achieve a personal goal for reasons beyond your control. These could be bad business environments, poor judging, bad weather, injury, or just plain bad luck. If you base your

goals on personal performance, then you can keep control over the achievement of your goals and draw satisfaction from them.

- **Set realistic goals:** It is important to set goals that you can achieve. All sorts of people (parents, media, society) can set unrealistic goals for you. They will often do this in ignorance of your own desires and ambitions. Alternatively you may be naïve in setting very high goals. You might not appreciate either the obstacles in the way, or understand quite how much skill you need to develop to achieve a particular level of performance.
- **Do not set goals too low:** Just as it is important not to set goals unrealistically high, do not set them too low. People tend to do this where they are afraid of failure or where they are lazy! You should set goals so that they are slightly out of your immediate grasp, but not so far that there is no hope of achieving them. No one will put serious effort into achieving a goal that they believe is unrealistic. However, remember that your belief that a goal is unrealistic may be incorrect. If this could be the case, you can to change this belief by using imagery effectively.

SMART Goals:
A useful way of making goals more powerful is to use the SMART mnemonic. While there are plenty of variants, SMART usually stands for:

S Specific
M Measurable
A Attainable
R Relevant
T Time-bound

For example, instead of having “to sail around the world” as a goal, it is more powerful to say “To have completed my trip around the world by December 31, 2015.” Obviously, this will only be attainable if a lot of preparation has been completed beforehand!

Achieving Goals

When you have achieved a goal, take the time to enjoy the satisfaction of having done so. Absorb the implications of the goal achievement, and observe the progress you have made towards other goals. If the goal was a significant one, reward yourself appropriately.

With the experience of having achieved this goal, review the rest of your goal plans:

- If you achieved the goal too easily, make your next goals harder
- If the goal took a dispiriting length of time to achieve, make the next goals a little easier
- If you learned something that would lead you to change other goals, do so
- If while achieving the goal you noticed a deficit in your skills, decide whether to set goals to fix this.

Failure to meet goals does not matter as long as you learn from it. Feed lessons learned back into your goal-setting program.

Remember too that your goals will change as you mature. Adjust them regularly to reflect this growth in your personality. If goals do not hold any attraction any longer, then let them go. Goal setting is your servant, not your master. It should bring you real pleasure, satisfaction and a sense of achievement.

Example

The best example of goal setting that you can have is to try setting your own goals. Set aside two hours to think through your lifetime goals in each of the categories. Then work back through the 25-year plan, 5-year plan, 1-year plan, 6-month plan, a 1-month plan. Finally draw up a To Do List of jobs to do tomorrow to move towards your goals.

Tomorrow, do those jobs, and start to use goal-setting routinely!

Key Points

Goal setting is an important method of:

- Deciding what is important for you to achieve in your life
- Separating what is important from what is irrelevant
- Motivating yourself to achievement
- Building your self-confidence based on measured achievement of goals

When you achieve goals, allow yourself to enjoy this achievement of goals and reward yourself appropriately. Draw lessons where appropriate, and feed these back into future performance.

1.6 Effective Scheduling

Plan your time. Make time for yourself.

So far in this section of Mind Tools, we have looked at your priorities and your goals – these define what you aspire to do with your time. Scheduling is where these aspirations meet reality.

Scheduling is the process by which you look at the time available to you, and plan how you will use it to achieve the goals you have identified. By using a schedule properly, you can:

- Understand what you can realistically achieve with your time;
- Plan to make the best use of the time available;
- Leave enough time for things you absolutely must do;
- Preserve contingency time to handle 'the unexpected'; and
- Minimize stress by avoiding over-commitment to yourself and others.

A well thought-through schedule allows you to manage your commitments, while still leaving you time to do the things that are important to you. It is therefore your most important weapon for beating work overload.

How to Use the Tool

Scheduling is best done on a regular basis, for example at the start of every week or month. Go through the following steps in preparing your schedule:

1. Start by identifying the time you want to make available for your work. This will depend on the design of your job and on your personal goals in life.

2. Next, block in the actions you absolutely must take to do a good job. These will often be the things you are assessed against.

3. For example, if you manage people, then you must make time available for dealing with issues that arise, coaching, and supervision. Similarly, you must allow time to communicate with your boss and key people around you. (While people may let you get away with 'neglecting them' in the short-term, your best time management efforts will surely be derailed if you do not set aside time for those who are important in your life.)
4. Review your To Do List, and schedule in the high-priority urgent activities, as well as the essential maintenance tasks that cannot be delegated and cannot be avoided.

5. Next, block in appropriate contingency time. You will learn how much of this you need by experience. Normally, the more unpredictable your job, the more contingency time you need. The reality of many people's work is of constant interruption: Studies show some managers getting an average of as little as six minutes uninterrupted work done at a time.

6. Obviously, you cannot tell when interruptions will occur. However, by leaving space in your schedule, you give yourself the flexibility to rearrange your schedule to react effectively to issues as they arise.

7. What you now have left is your "discretionary time": the time available to deliver your priorities and achieve your goals. Review your Prioritized To Do List and personal goals, evaluate the time needed to achieve these actions, and schedule these in.

By the time you reach step 5, you may find that you have little or no discretionary time available. If this is the case, then revisit the assumptions you used in the first four steps. Question whether things are absolutely necessary, whether they can be delegated, or whether they can be done in an abbreviated way.

Remember that one of the most important ways people learn to achieve success is by maximizing the 'leverage' they can achieve with their time. They increase the amount of work they can manage by delegating work to other people, spending money outsourcing key tasks, or using technology to automate as much of their work as possible. This frees them up to achieve their goals.

Also, use this as an opportunity to review your To Do List and Personal Goals. Have you set goals that just aren't achievable with the time you have available? Are you taking on too many additional duties? Or are you treating things as being more important than they really are?

If your discretionary time is still limited, then you may need to renegotiate your workload. With a well-thought through schedule as evidence, you may find this surprisingly easy.

Key Points

Scheduling is the process by which you plan your use of time. By scheduling effectively, you can both reduce stress and maximize your effectiveness. This makes it one of the most important time management skills you can use.

Before you can schedule efficiently, you need an effective scheduling system. This can be a diary, calendar, paper-based organizer, PDA or a software package like MS Outlook. The best solution depends entirely on your circumstances.

Scheduling is then a five-step process:

1. Identify the time you have available.
2. Block in the essential tasks you must carry out to succeed in your job.
3. Schedule in high priority urgent tasks and vital "house-keeping" activities.
4. Block in appropriate contingency time to handle unpredictable interruptions.
5. In the time that remains, schedule the activities that address your priorities and personal goals.

If you have little or no discretionary time left by the time you reach step five, then revisit the assumptions you have made in steps one to four.

Section 2: Stress Management

- Stress Diary – Identifying the short-term stress in your life
- Job Analysis – The first step in managing work overload and job stress
- Performance Planning – Planning ahead to reduce performance stress
- Imagery – Mental stress management
- Physical Relaxation Techniques – Deep breathing, PMR and the 'Relaxation Response'
- Thought Awareness, Rational Thinking and Positive Thinking,
- Anger Management – Channeling anger productively
- Burnout Self-Test – Testing yourself for burnout
- Building Self-Confidence

2. Introduction to Stress Management

A lot of research has been conducted into stress over the last hundred years. Some of the theories behind it are now settled and accepted; others are still being researched and debated. During this time, there seems to have been something approaching open warfare between competing theories and definitions: Views have been passionately held and aggressively defended.

What complicates this is that intuitively we all feel that we know what stress is, as it is something we have all experienced. A definition should therefore be obvious…except that it is not.

Definitions

Hans Selye was one of the founding fathers of stress research. His view in 1956 was that "stress is not necessarily something bad – it all depends on how you take it. The stress of exhilarating, creative successful work is beneficial, while that of failure, humiliation or infection is detrimental." Selye believed that the biochemical effects of stress would be experienced irrespective of whether the situation was positive or negative.

Since then, a great deal of further research has been conducted, and ideas have moved on. Stress is now viewed as a "bad thing", with a range of harmful biochemical and long-term effects. These effects have rarely been observed in positive situations.

The most commonly accepted definition of stress (mainly attributed to Richard S Lazarus) is that stress is a condition or feeling experienced when a person perceives that "demands exceed the personal and social resources the individual is able to mobilize." In short, it's what we feel when we think we've lost control of events.

This is the main definition used by this section of Mind Tools, although we also recognize that there is an intertwined instinctive stress response to unexpected events. The stress response inside us is therefore part instinct and part to do with the way we think.

Fight-or-Flight

Some of the early research on stress (conducted by Walter Cannon in 1932) established the existence of the well-known "fight-or-flight" response. His work showed that when an organism experiences a shock or perceives a threat, it quickly releases hormones that help it to survive.

In humans, as in other animals, these hormones help us to run faster and fight harder. They increase heart rate and blood pressure, delivering more oxygen and blood sugar to power important muscles. They increase sweating in an effort to cool these muscles, and help them stay efficient. They divert blood away from the skin to the core of our bodies, reducing blood loss if we are damaged. As well as this, these hormones focus our attention on the threat, to the exclusion of everything else. All of this significantly improves our ability to survive life-threatening events.

Not only life-threatening events trigger this reaction: We experience it almost any time we come across something unexpected or something that frustrates our goals. When the threat is small, our response is small and we often do not notice it among the many other distractions of a stressful situation.

Unfortunately, this mobilization of the body for survival also has negative consequences. In this state, we are excitable, anxious, jumpy and irritable. This actually reduces our ability to work effectively with other people. With trembling and a pounding heart, we can find it difficult to execute precise, controlled skills. The intensity of our focus on survival interferes with our ability to make fine judgments by drawing information from many sources. We find ourselves more accident-prone and less able to make good decisions.

There are very few situations in modern working life where this response is useful. Most situations benefit from a calm, rational, controlled and socially sensitive approach.

In the short term, we need to keep this fight-or-flight response under control to be effective in our jobs. In the long term we need to keep it under control to avoid problems of poor health and burnout.

Managing Stress

There are very many proven skills that we can use to manage stress. These help us to remain calm and effective in high pressure situations, and help us avoid the problems of long term stress. In the rest of this section of Mind Tools, we look at the most important of these techniques.

Keeping a Stress Diary or carrying out the Burnout Self-Test will help you to identify your current levels of stress, so you can decide what action, if any, you need to take. Job Analysis and Performance Planning will help you to get on top of your workload. While the emotionally-oriented skills of Imagery, Physical Techniques and Thought Awareness, Rational Thinking and Positive Thinking will help you change the way you see apparently stressful situations. Finally, the article on Anger Management will help you to channel your feelings into performance.

***Warning:** Stress can cause severe health problems and, in extreme cases, can cause death. While these stress management techniques have been shown to have a positive effect on reducing stress, they are for guidance only, and readers should take the advice of suitably qualified health professionals if they have any concerns over stress-related illnesses or if stress is causing significant or persistent unhappiness. Health professionals should also be consulted before any major change in diet or levels of exercise.*

2.1 Stress Diary

Template

Identifying sources of short-term stress

Stress Diaries are important for understanding the causes of short-term stress in your life. They also give you an important insight into how you react to stress, and help you to identify the level of stress at which you prefer to operate.

The idea behind Stress Diaries is that, on a regular basis, you record information about the stresses you are experiencing, so that you can analyze these stresses and then manage them.

This is important because often these stresses flit in and out of our minds without getting the attention and focus that they deserve.

As well as helping you capture and analyze the most common sources of stress in your life, Stress Diaries help you to understand:

- The causes of stress in more detail;
- The levels of stress at which you operate most efficiently; and
- How you react to stress, and whether your reactions are appropriate and useful.
- Stress Diaries, therefore, give you the important information that you need to manage stress.

How to Use the Tool

Stress Diaries are useful in that they gather information regularly and routinely, over a period of time. This helps you to separate the common, routine stresses from those that only occur occasionally. They establish a pattern that you can analyze to extract the information that you need.

Print out a hard copy of our Stress Diary template from your *Worksheets and Templates Supplement* and make regular entries in your Stress Diary (for example, every hour). If you have any difficulty remembering to do this, set an alarm to remind you to make your next diary entry.

Also make an entry in your diary after each incident that is stressful enough for you to feel that it is significant.

Every time you make an entry, record the following information:

- The date and time of the entry.
- The most recent stressful event you have experienced.
- How happy you feel now, using a subjective assessment on a scale of -10 (the most unhappy you have ever been) to +10 (the happiest you have been). As well as this, write down the mood you are feeling.
- How effectively you are working now (a subjective assessment, on a scale of 0 to 10). A 0 here would show complete ineffectiveness, while a 10 would show the greatest effectiveness you have ever achieved.
- The fundamental cause of the stress (being as honest and objective as possible).

You may also want to note:

- How stressed you feel now, again on a subjective scale of 0 to 10. As before, 0 here would be the most relaxed you have ever been, while 10 would show the greatest stress you have ever experienced.
- The symptom you felt (e.g. "butterflies in your stomach", anger, headache, raised pulse rate, sweaty palms, etc.).
- How well you handled the event: Did your reaction help solve the problem, or did it inflame it?

You will reap the real benefits of having a stress diary in the first few weeks. After this, the benefit you get will reduce each additional day. If, however, your lifestyle changes, or you begin to suffer from stress again in the future, then it may be worth using the diary approach again. You will probably find that the stresses you face have changed. If this is the case, then keeping a diary again will help you to develop a different approach to deal with them.

Analyze the diary at the end of this period.

Analyzing the Diary

Analyze the diary in the following ways:

- First, look at the different stresses you experienced during the time you kept your diary. List the types of stress that you experienced by frequency, with the most frequent stresses at the top of the list.
- Next, prepare a second list with the most unpleasant stresses at the top of the list and the least unpleasant at the bottom.
- Looking at your lists of stresses, those at the top of each list are the most important for you to learn to control.
- Working through the stresses, look at your assessments of their underlying causes, and your appraisal of how well you handled the stressful event. Do these show you areas where you handled stress poorly, and could improve your stress management skills? If so, list these.
- Next, look through your diary at the situations that cause you stress. List these.
- Finally, look at how you felt when you were under stress. Look at how it affected your happiness and your effectiveness, understand how you behaved, and think about how you felt.

Having analyzed your diary, you should fully understand what the most important and frequent sources of stress are in your life. You should appreciate the levels of stress at which you are happiest. You should also know the sort of situations that cause you stress so that you can prepare for them and manage them well.

As well as this, you should now understand how you react to stress, and the symptoms that you show when you are stressed. When you experience these symptoms in the future, this should be a trigger for you to use appropriate stress management techniques.

Key Points

Stress Diaries help you to get a good understanding of the routine, short-term stresses that you experience in your life. They help you to identify the most important, and most frequent, stresses that you experience, so that you can concentrate your efforts on these. They also help you to identify areas where you need to improve your stress management skills, and help you to understand the levels of stress at which you are happiest, and most effective.

To keep a stress diary, make a regular diary entry with the headings above. For example, you may do this every hour. Also make entries after stressful events.

Analyze the diary to identify the most frequent and most serious stresses that you experience. Use it also to identify areas where you can improve your management of stress.

2.2 Job Analysis

The First Step in Managing Job Overload

We have all experienced that appalling sense of having far too much work to do and too little time to do it in. We can choose to ignore this, and work unreasonably long hours to stay on top of our workload. The risks here are that we become exhausted, that we have so much to do that we do a poor quality job, and that we neglect other areas of our life. Each of these can lead to intense stress.

The alternative is to work more intelligently, by focusing on the things that are important for job success and reducing the time we spend on low priority tasks. Job Analysis is the first step in doing this.

The first of the action-oriented skills that we look at is Job Analysis. Job Analysis is a key technique for managing job overload – an important source of stress.

To do an excellent job, you need to fully understand what is expected of you. While this may seem obvious, in the hurly-burly of a new, fast-moving, high-pressure role, it is oftentimes something that is easy to overlook.

By understanding the priorities in your job, and what constitutes success within it, you can focus on these activities and minimize work on other tasks as much as possible. This helps you get the greatest return from the work you do, and keep your workload under control.

Job Analysis is a useful technique for getting a firm grip on what really is important in your job so that you are able to perform excellently. It helps you to cut through clutter and distraction to get to the heart of what you need to do.

How to Use the Tool

To conduct a job analysis, go through the following steps:

1. Review formal job documentation:

- Look at your job description. Identify the key objectives and priorities within it.
- Look at the forms for the periodic performance reviews. These show precisely the behaviors that will be rewarded and, by implication, show those that will be punished.
- Find out what training is available for the role. Ensure that you attend appropriate training so that you know as much as possible about what you need to know.
- Look at incentive schemes to understand the behaviors that these reward.

2. Understand the organization's strategy and culture:
Your job exists for a reason – this will ultimately be determined by the strategy of the organizational unit you work for. This strategy is often expressed in a mission statement. In some way, what you do should help the organization achieve its mission (if it does not, you have to ask yourself how secure the job is!). Make sure you understand and perform well the tasks that contribute to the strategy.

Similarly, every organization has its own culture – its own, historically developed values, rights and wrongs, and things that it considers to be important. If you are new to an organization, talk through with established, respected members of staff to understand these values.

Make sure that you understand this culture. Make sure that your actions reinforce the company's culture, or at least do not go against it. Looked at through the lens of culture, will the company value what you do?

Check that your priorities are consistent with this mission statement and the company culture.

3. Find out who the top achievers are, and understand why they are successful:
Inside or outside the organization, there may be people in a similar role to you who are seen as highly successful. Find out how they work, and what they do to generate this success. Look at what they do, and learn from them. Understand what skills make them successful, and learn those skills.

4. Check that you have the people and resources to do the job:
The next step is to check that you have the staff support, resources and training needed to do an excellent job. If you do not, start work on obtaining them.

5. Confirm priorities with your boss:
By this stage, you should have a thorough understanding of what your job entails, and what your key objectives are. You should also have a good idea of the resources that you need, and any additional training you may need to do the best you can.
This is the time to talk the job through with your boss, and confirm that you share an understanding of what constitutes good performance in the role.

It is also worth talking through serious inconsistencies, and agreeing how these can be managed.

6. Take Action:
You should now know what you have to do to be successful in your job. You should have a good idea of the most important things that you have to do, and also the least important.

Where you can drop the less-important tasks, do so. Where you can de-prioritize them, do so.

Where you need more resource or training to do your job, negotiate for this.

Remember to be a little sensitive in the way you do this: Good teamwork often means helping other people out with jobs that do not benefit you. However, do not let people take advantage of you: Be assertive in explaining that you have your own work to do. If you cannot drop tasks, delegate them or negotiate longer time scales.

Key Points

Job analysis is a five-step technique for:

- Understanding and agreeing how to achieve peak performance in your job;
- Ensuring that you and your boss agree on the areas you should concentrate on when time gets tight; and the areas that can be de-emphasized during this time; and
- Making sure that you have the resources, training and staff needed to do a good job.
- By using the Job Analysis technique, you should gain a good understanding of how you can excel at your job. You should also understand your job priorities.

This helps you to manage the stress of job overload by helping to decide which jobs you should drop.

Job Analysis is just one of many practical action-oriented techniques for reducing the stress of job overload. These and other types of technique help you to resolve structural problems within jobs, work more effectively with your boss and powerful people, improving the way your teams function and become more assertive so that other people respect your right not to take on an excessive workload. These are all important techniques for bringing job stress under control, for improving the quality of your working life, and for achieving career success.

2.3 Performance Planning

Planning to Manage Performance Stress

We all know the feeling of sickness in our stomach before an important presentation or performance. We have all experienced the sweaty palms, the raised heart rate, and the sense of agitation that we feel as these events approach. We have probably all also experienced how much worse this becomes when things go wrong in the run up to an event.

This article helps you deal with this by helping you to prepare well for future performances.

The Thought Awareness, Rational Thinking and Positive Thinking technique that we look at later may be enough to help you manage the fears, anxieties and negative thoughts that may arise in a small performance.

For larger events, it is worth preparing a Performance Plan. This is a pre-prepared plan that helps you to deal effectively with any problems or distractions that may occur, and perform in a positive and focused frame of mind.

How to Use the Tool

To prepare your Performance Plan, begin by making a list all of the steps that you need to do from getting prepared for a performance through to its conclusion.

Start far enough in advance to sort out any equipment problems. List all of the physical and mental steps that you need to take to:

- Prepare and check your equipment, and repair or replace it where it does not work;
- Make travel arrangements;
- Pack your equipment and luggage;
- Travel to the site of your performance;
- Set up equipment;
- Wait and prepare for your performance; and

- Deliver your performance.

Next, work through each of these steps. Think though:

- Everything that could reasonably go wrong at each step with equipment and arrangements; and
- Any distractions and negative thinking that could undermine your confidence or stop you having a positive, focused frame of mind at the start of and during your performance.
- Work through all of the things that could go wrong. Look at the likelihood of the problem occurring. Many of the things you have listed may be extremely unlikely. Where appropriate, strike these out and ignore them from your planning.

Look at each of the remaining contingencies. These will fall into three categories:

1. Things you can eliminate by appropriate preparation, including making back-up arrangements and acquiring appropriate additional or spare equipment;
2. Things you can manage by avoiding unnecessary risk; and
3. Things you can manage with a pre-prepared action or with an appropriate stress management technique

For example, if you are depending on using a data projector for a presentation, you can arrange for a back up projector to be available, purchase a replacement bulb, and/or print off paper copies of the presentation in case all else fails. You can leave earlier than strictly necessary so that you have time for serious travel delays. You can also think through appropriate alternatives if your travel plans are disrupted. If you are forced to wait before your event in an uncomfortable or unsuitably distracting place, prepare the relaxation techniques you can use to keep a calm, positive frame of mind. Research all of the information you will need to take the appropriate actions quickly, and ensure that you have the appropriate resources available.

Also, prepare the positive thinking you will use to counter fears and negative thoughts both before the event and during it. Use stress anticipation skills to ensure that you are properly prepared to manage stress. Then use thought awareness, rational thinking and positive thinking skills to prepare the positive thoughts that you will use to protect and build your confidence.

Write your plan down on paper in a form that is easy to read and easy to refer to. Keep it with you as you prepare for, and deliver, your performance. Refer to it whenever you need it in the time leading up to the event, and during it.

Key Points

Performance Plans help you to prepare for an important performance. They bring together practical contingency planning with mental preparation to help you prepare for situations and eventualities that may realistically occur.

This gives you the confidence that comes from knowing you are as well prepared for an event as is practically possible to be. It also helps you to avoid the unpleasant stresses that come from poor preparation, meaning that you can deliver your performance in a relaxed, positive and focused frame of mind, whatever problems or upsets may have occurred.

2.4 Imagery – Mental stress management

Sometimes we are not able to change our environment to manage stress – this may be the case where we do not have the power to change a situation, or where we are about to give an important performance. Imagery is a useful skill for relaxing in these situations.

Imagery is a potent method of stress reduction, especially when combined with physical relaxation methods such as deep breathing.

You will be aware of how particular environments can be very relaxing, while others can be intensely stressful. The principle behind the use of imagery in stress reduction is that you can use your imagination to recreate and enjoy a situation that is very relaxing. The more intensely you imagine the situation, the more relaxing the experience will be.

This sounds unlikely. In fact, the effectiveness of imagery can be shown very effectively if you have access to biofeedback equipment. By imagining a pleasant and relaxing scene (which reduces stress) you can objectively see the measured stress in your body reduce. By imagining an unpleasant and stressful situation, you can see the stress in your body increase. This very real effect can be quite alarming when you see it happen the first time!

How to Use the Tool

Two situations where imagery can be very effective are when you're trying to relax and when you're preparing or rehearsing for a performance.

Imagery in Relaxation

One common use of imagery in relaxation is to imagine a scene, place or event that you remember as safe, peaceful, restful, beautiful and happy. You can bring all your senses into the image with, for example, sounds of running water and birds, the smell of cut grass, the taste of cool white wine, the warmth of the sun, etc. Use the imagined place as a retreat from stress and pressure.

Scenes can involve complex images such as lying on a beach in a deserted cove. You may “see” cliffs, sea and sand around you, “hear” the waves crashing against rocks, “smell” the salt in the air, and “feel” the warmth of the sun and a gentle breeze on your body. Other images might include looking at a mountain view, swimming in a tropical pool, or whatever you want. You will be able to come up with the most effective images for yourself.

Other uses of imagery in relaxation involve creating mental pictures of stress flowing out of your body, or of stress, distractions and everyday concerns being folded away and locked into a padlocked chest.

Imagery in Preparation and Rehearsal

You can also use imagery in rehearsal before a big event, allowing you to run through the event in your mind.

Aside from allowing you to rehearse mentally, imagery also allows you to practice in advance for anything unusual that might occur, so that you are prepared and already practiced in handling it. This is a technique used very commonly by top sports people, who learn good performance habits by repeatedly rehearsing performances in their imagination. When the unusual eventualities they have rehearsed using imagery occur, they have good, pre-prepared, habitual responses to them.

Imagery also allows you to pre-experience achievement of your goals, helping to give you the self-confidence you need to do something well. This is another technique used by successful athletes.

Key Points

With imagery, you substitute actual experience with scenes from your imagination. Your body reacts to these imagined scenes almost as if they were real, calming you down and letting adrenaline disperse.

To relax with imagery, imagine a warm, comfortable, safe and pleasant place, and enjoy it in your imagination.

Imagery can be shown to work by using biofeedback devices that measure body stress. By imagining pleasant and unpleasant scenes, you can actually see or hear the changing levels of stress in your body diminish.

2.5 Physical Relaxation Techniques
Deep Breathing, PMR and the Relaxation Response

Physical relaxation techniques are as effective as mental techniques in reducing stress. In fact, the best relaxation is achieved by using physical and mental techniques together.

These three useful physical relaxation techniques can help you reduce muscle tension and manage the effects of the fight-or-flight response on your body. This is particularly important if you need to think clearly and perform precisely when you are under pressure.

The techniques we will look at are Deep Breathing, Progressive Muscular Relaxation and "The Relaxation Response".

Deep Breathing
Deep breathing is a simple, but very effective, method of relaxation. It is a core component of everything from the "take ten deep breaths" approach to calming someone down, right through to yoga relaxation and Zen meditation. It works well in conjunction with other relaxation techniques such as Progressive Muscular Relaxation, relaxation imagery and meditation to reduce stress.

To use the technique, take a number of deep breaths and relax your body further with each breath. That's all there is to it!

Progressive Muscular Relaxation
Progressive Muscular Relaxation is useful for relaxing your body when your muscles are tense.

The idea behind PMR is that you tense up a group of muscles so that they are as tightly contracted as possible. Hold them in a state of extreme tension for a few seconds. Then, relax the muscles normally. Then, consciously relax the muscles even further so that you are as relaxed as possible.

By tensing your muscles first, you will find that you are able to relax your muscles more than would be the case if you tried to relax your muscles directly.

Experiment with PMR by forming a fist, and clenching your hand as tight as you can for a few seconds. Relax your hand to its previous tension, and then consciously relax it again so that it is as loose as possible. You should feel deep relaxation in your hand muscles.

The Relaxation Response
'The Relaxation Response' is the name of a book published by Dr Herbert Benson of Harvard University in 1968. In a series of experiments into various popular meditation techniques, Dr. Benson established that these techniques had a very real effect on reducing stress and controlling the fight-or-flight response. Direct effects included deep relaxation, slowed heartbeat and breathing, reduced oxygen consumption and increased skin resistance.

This is something that you can do for yourself by following these steps:

- Sit quietly and comfortably.

- Close your eyes.
- Start by relaxing the muscles of your feet and work up your body relaxing muscles.
- Focus your attention on your breathing.
- Breathe in deeply and then let your breath out. Count your breaths, and say the number of the breath as you let it out (this gives you something to do with your mind, helping you to avoid distraction).
- Do this for ten or twenty minutes.

An even more potent alternative approach is to follow these steps, but to use relaxation imagery instead of counting breaths in step 5. Again, you can prove to yourself that this works using the biofeedback equipment.

Key Points

“Deep Breathing,” “Progressive Muscular Relaxation,” and the steps leading to the “Relaxation Response” are three good techniques that can help you to relax your body and manage the symptoms of the fight-or-flight response.

These are particularly helpful for both handling nerves prior to an important performance, and reducing stress generally.

2.6 Thought Awareness, Rational Thinking and Positive Thinking

Quite often, our experience of stress comes from our perception of the situation. Often that perception is right, but sometimes it is not. Often we are unreasonably harsh with ourselves or instinctively jump to wrong conclusions about people’s motives. This can send us into a downward spiral of negative thinking that can be hard to break.

Thought Awareness, Rational Thinking and Positive Thinking are simple tools that help you to change this negative way of thinking.

Introduction

The most commonly accepted definition of stress is that it occurs when a person believes that “demands exceed the personal and social resources the individual is able to mobilize”.

When people feel stressed, they have made two main judgments: First, they feel threatened by the situation, and second, they believe that their capabilities and resources are not enough to meet the threat. How stressed someone feels depends on how much damage they think the situation can do them, and how closely their resources meet the demands of the situation.

Perception is key to this as (technically) situations are not stressful in their own right. Rather it is our interpretation of the situation that drives the level of stress that we feel.

Quite obviously, we are sometimes right in what we say to ourselves. Some situations may actually be dangerous, may threaten us physically, socially or in our career. Here, stress and emotion are part of the early warning system that alerts us to the threat from these situations.

Very often, however, we are overly harsh and unjust to ourselves in a way that we would never be with friends or co-workers. This, along with other negative thinking, can cause intense stress and unhappiness and can severely undermine self-confidence.

How to Use the Tool

Thought Awareness

You are thinking negatively when you fear the future, put yourself down, criticize yourself for errors, doubt your abilities, or expect failure. Negative thinking damages confidence, harms performance and paralyzes mental skills.

Unfortunately, negative thoughts tend to flit into our consciousness, do their damage and flit back out again, with their significance having barely been noticed. Since we barely realise that they were there, we do not challenge them properly, which means that they can be completely incorrect and wrong.

Thought Awareness is the process by which you observe your thoughts and become aware of what is going through your head.

One approach to it is to observe your "stream of consciousness" as you think about the thing you're trying to achieve which is stressful. Do not suppress any thoughts. Instead, just let them run their course while you watch them, and write them down on the Thought Awareness Worksheet from your *Worksheets and Templates Supplement* as they occur. Then let them go.

Another more general approach to Thought Awareness comes with logging stress in your Stress Diary. When you analyze your diary at the end of the period, you should be able to see the most common and the most damaging thoughts. Tackle these as a priority using the techniques below.

Here are some typical negative thoughts you might experience when preparing to give a major presentation:

- Fear about the quality of your performance or of problems that may interfere with it;
- Worry about how the audience (especially important people in it like your boss) or the press may react to you;
- Dwelling on the negative consequences of a poor performance; or
- Self-criticism over a less-than-perfect rehearsal.
- Thought awareness is the first step in the process of managing negative thoughts, as you cannot manage thoughts that you are unaware of.

Rational Thinking

The next step in dealing with negative thinking is to challenge the negative thoughts that you identified using the Thought Awareness technique. Look at every thought you wrote down and challenge it rationally. Ask yourself whether the thought is reasonable. What evidence is there for and against the thought? Would your colleagues and mentors agree or disagree with it?
Looking at the examples, the following challenges could be made to the negative thoughts we identified earlier:

- **Feelings of inadequacy:** Have you trained yourself as well as you reasonably should have? Do you have the experience and resources you need to make the presentation? Have you planned, prepared and rehearsed enough? If you have done all of these, you've done as much as you can to give a good performance.
- **Worries about performance during rehearsal:** If some of your practice was less than perfect, then remind yourself that the purpose of the practice is to identify areas for improvement and problems so that these can be sorted out before the performance.
- **Problems with issues outside your control:** Have you identified the risks of these things happening, and have you taken steps to reduce the likelihood of them happening or their impact if they do? What will you do if they occur? And what do you need others to do for you?
- **Worry about other people's reactions:** If you have put in good preparation, and you do the best you can, then you should be satisfied. If you perform as well as you reasonably

can, then fair people are likely to respond well. If people are not fair, the best thing to do is ignore their comments and rise above them.

Write your rational response to each negative thought in the Rational Thought column on the worksheet.

> **Tip:**
> If you find it difficult to look at your negative thoughts objectively, imagine that you are your best friend or a respected coach or mentor. Look at the list of negative thoughts and imagine the negative thoughts were written by someone you were giving objective advice to, and think how you would challenge these thoughts.

When you challenge negative thoughts rationally, you should be able to see quickly whether the thoughts are wrong or whether they have some substance to them. Where there is some substance, take appropriate action. However, make sure that your negative thoughts are genuinely important to achieving your goals, and don't just reflect a lack of experience, which everyone has to go through at some stage.

Positive Thinking and Opportunity Seeking
By now, you should already be feeling more positive. Some of your negative thoughts will have been allayed by planning your preparation and contingencies. The final step is to prepare rational, positive thoughts and affirmations to counter any remaining negativity. It can also be useful to look at the situation and see if there are any useful opportunities that are offered by it.

Affirmations help you to build self-confidence. By basing your affirmations on the clear, rational assessments of facts that you made using Rational Thinking, you can use them to undo the damage that negative thinking may have done to your self-confidence.

> **Tip:**
> Your affirmations will be strongest if they are specific, are expressed in the present tense and have strong emotional content.

Continuing the examples above, positive affirmations might be:

- **Problems during practice:** “I have learned from my rehearsals. This has put me in a position where I can deliver a great performance. I am going to perform well and enjoy the event."
- **Worries about performance:** “I have prepared well and rehearsed thoroughly. I am well positioned to give an excellent performance.”
- **Problems issues outside your control:** “I have thought through everything that might reasonably happen and have planned how I can handle all likely contingencies. I am very well placed to react flexibly to events.”
- **Worry about other people’s reaction:** “Fair people will react well to a good performance. I will rise above any unfair criticism in a mature and professional way.”

If appropriate, write these affirmations down on your worksheet so that you can use them when you need them.

As well as allowing you to structure useful affirmations, part of Positive Thinking is to look at opportunities that the situation might offer to you. In the examples above, successfully overcoming the situations causing the original negative thinking will open up opportunities. You will acquire new skills, you will be seen as someone who can handle difficult challenges, and you may open up new career opportunities.

Make sure that identifying these opportunities and focusing on them is part of your positive thinking.

> **Tip:**
> In the past people have advocated positive thinking almost recklessly, as if it is a solution to everything. Positive thinking should be used with common sense. First, decide rationally what goals you can realistically attain with hard work, and then use positive thinking to reinforce these.

Key Points

This set of tools helps you to manage and counter the stress of negative thinking.

Thought Awareness helps you to understand the negative thinking, unpleasant memories and misinterpretation of situations that may interfere with your performance and damage your self-confidence.

Rational Thinking is the technique that helps you to challenge these negative thoughts and either learn from them or refute them as incorrect.

Positive thinking is then used to create positive affirmations that you can use to counter negative thoughts. These affirmations neutralize negative thoughts and build your self-confidence. It is also used to find the opportunities that are almost always present to some degree in a difficult situation.

2.7 Anger Management

Channeling Anger into Performance

Template

Anger can be normal and healthy emotion that helps us instinctively detect and respond to a threatening situation. More than this, when it is properly channeled, it can be a powerful motivating force – we all know how hard we can work to remedy an obvious injustice.

However it can also be an emotion that gets out of control, leading to stress, distress, unhealthiness and unhappiness. Uncontrolled anger can seriously harm your personal and professional life, because it can become incredibly destructive – to yourself and the people around you.

And in a modern workplace that often demands trust and collaboration, it can cause great damage to working relationships.

This article teaches an effective 12-step approach that helps you direct your anger constructively rather than destructively. The 12-step approach is based on the ideas of Duke University's Redford Williams, MD, who with his wife, authored the best-selling book *Anger Kills*. (In this book, Williams discusses 17 steps for controlling anger – these are often abridged to the 12 steps described here.)

Understanding the Theory

Anger is a well-developed coping mechanism that we turn to when our goals are frustrated, or when we feel threat to ourselves or to people, things and ideas we care about. It helps us react quickly and decisively in situations where there is no time for a careful, reasoned analysis of the situation. And it can motivate us to solve problems, achieve our goals, and remove threats.

Acting in anger can serve, therefore, to protect yourself or others. A positive response and constructive outcome can improve your self-esteem and self-confidence.

The Danger of Anger – Foolishness...
On the other hand, a negative response can damage relationships and lead to a loss of respect and self-respect. This is particularly the case when we react instantly and angrily to what we perceive to be a threat, but where that perception is wrong. This can leave us looking very foolish.

So we need to learn to use anger positively, and manage it so that it is constructive and not destructive. Where situations are not immediately life-threatening, we need to calm down and evaluate the accuracy of our perceptions before, if necessary, channeling anger in a powerful but controlled way.

Anger management, then, is the process of learning how to “calm down” and diffuse the negative emotion of anger before it gets to a destructive level.

A Subjective Experience
People experience anger in many different ways and for many different reasons. What makes you angry may only mildly irritate one of your colleagues, and have little to no effect on another. This subjectivity can make anger difficult to understand and deal with; it also highlights that the response is down to you. So anger management focuses on managing your response (rather than specific external factors). By learning to manage your anger, you can develop techniques to deal with and expel the negative response and emotions before it causes you serious stress, anxiety and discomfort.

Despite our differences in the level of anger we feel toward something, there are some universal causes of anger that include:

- Frustration of our goals
- Hurt
- Harassment
- Personal attack (mental or physical) on ourselves
- Threat to people, things or ideas that we hold dear.

We commonly experience these potential anger triggers in our daily lives. An appropriate level of anger that is expressed correctly helps us take the right action, solve the problem that is presenting itself, or deal with the situation in a positive manner. If we can learn to manage our anger, we will learn to express it appropriately and act constructively.

How to Use the Tool

So when you’re angry, use Redford Williams’ 12 steps to calm down:

Step 1: Maintain a “Hostility Log”
Print out the Hostility Log template from your *Worksheets and Templates Supplement* and use it to monitor what triggers your anger and the frequency of your anger responses. When you know what makes you angry, you will be in a much better position to develop strategies to contain it or channel it effectively.

Step 2: If you do, acknowledge that you have a problem managing anger
It is an observed truth that you cannot change what you don’t acknowledge. So it is important to identify and accept that anger is a roadblock to your success.

Step 3: Use your support network
If anger is a problem, let the important people in your life know about the changes you are trying to make. They can be a source of motivation and their support will help you when you lapse into old behavior patterns.

Step 4: Use Anger Management techniques to interrupt the anger cycle

- Pause
- Take deep breaths
- Tell your self you can handle the situation
- Stop the negative thoughts.

Step 5: Use empathy
If another person is the source of your anger, try to see the situation from his or her perspective. Remind yourself to be objective and realize that everyone makes mistakes and it is through mistakes that people learn how to improve.

Step 6: Laugh at yourself
Humor is often the best medicine. Learn to laugh at yourself and not take everything so seriously.

The next time you feel tempted to kick the photocopier, think about how silly you would look and see the humor in your inappropriate expressions of anger.

Step 7: Relax
Angry people are often the ones who let the little things bother them. If you learn to calm down you will realize that there is no need to get uptight and you will have fewer angry episodes.

Step 8: Build Trust
Angry people can be cynical people. They believe that others are going to do something on purpose to annoy or frustrate them even before it happens. If you can build trust in people you will be less likely to become angry with them when something does go wrong and more likely to attribute the problem to something other than a malicious intent.

Step 9: Listen
Miscommunication contributes to frustrating and mistrusting situations. The better you listen to what a person is saying, the better able you will be to find a resolution that does not involve an anger response.

Step 10: Be Assertive
Remember, the word is assertive NOT aggressive. When you are angry it is often difficult to express yourself properly. You are too caught up in the negative emotion and your physiological symptoms (beating heart, red face) to put together solid arguments or appropriate responses. If you learn to assert yourself and let other people know your expectations, boundaries, issues, and so on, you will have much more interpersonal success.

Step 11: Live each day as if it is your last
This saying may be overused, but it holds a fundamental truth. Life is short and it is much better spent positively than negatively. Realize that if you spend all your time getting angry, you will miss out on the many joys and surprises that life has to offer.

Step 12: Forgive
To ensure that the changes you are making go much deeper than the surface, you need to forgive the people in your life that have angered you. It is not easy letting go of past hurts and resentments but the only way to move past your anger is to let go of these feelings and start fresh. (Depending on what, or who, is at the root of your anger, you may have to solicit the help of a professional to achieve this fully.)

These 12 steps form a comprehensive plan to get control of inappropriate and unproductive anger. And the quicker you begin the better. Anger and stress are highly correlated and the effects of stress on the body are well documented.

Even if you are not at the point where you feel your anger is a problem, it is a wise idea to familiarize yourself with the process described above. If you do not have the tools to deal with anger correctly, it has a way of building-up over time. Before you know it, you can be in a position where anger is controlling you and becoming a negative influence in your life. Being proactive with anger management will help to ensure it remains a healthy emotion that protects you from unnecessary hurt or threat.

Key Points

Anger is a powerful force, both for good and bad. Used irresponsibly, it can jeopardize your relationships, your work and your health.

Redford Williams' 12-step approach for dealing with unconstructive anger is a well-balanced system that emphasizes knowing yourself and your triggers and then using that awareness to replace negative angry behavior with more positive actions and thoughts. While you don't want to quell your anger completely, you do need to manage it if you're to use it creatively.

And remember that anger can be creative. People act when they get angry. And providing their actions are constructive, this actually helps drive change and get things done.

2.8 Burnout Self-Test
Checking Yourself for Burnout

Burnout occurs when passionate, committed people become deeply disillusioned with a job or career from which they have previously derived much of their identity and meaning. It comes as the things that inspire passion and enthusiasm are stripped away, and tedious or unpleasant things crowd in.

This tool can help you check yourself for burnout. It helps you look at the way you feel about your job and your experiences at work, so that you can get a feel for whether you are at risk of burnout.

How to Use the Tool

There are three easy ways of using the test. Either:

- Work through the table below on paper and calculate values manually; or
- Use the online test at http://www.mindtools.com/pages/article/newTCS_08.htm, and click the 'Calculate my total' button at the foot of the test; or
- Download a Microsoft Excel spreadsheet version of the test from http://www.mindtools.com/courses/SMMC/BurnoutSelfTest.xls. This will automatically calculate scores for you and interpret these scores, showing the score and interpretation in row 30.

Checking Yourself for Burnout

For each question, put a tick in the column that most applies. Put only one tick in each row.

Question	Not At All	Rarely	Some-times	Often	Very Often
Do you feel run down and drained of physical or emotional energy?					
Do you find that you are prone to negative thinking about your job?					

Question	Not At All	Rarely	Some-times	Often	Very Often
Do you find that you are harder and less sympathetic with people than perhaps they deserve?					
Do you find yourself getting easily irritated by small problems, or by your co-workers and team?					
Do you feel misunderstood or unappreciated by your co-workers?					
Do you feel that you have no-one to talk to?					
Do you feel that you are achieving less than you should?					
Do you feel under an unpleasant level of pressure to succeed?					
Do you feel that you are not getting what you want out of your job?					
Do you feel that you are in the wrong organization or the wrong profession?					
Are you becoming frustrated with parts of your job?					
Do you feel that organizational politics or bureaucracy frustrate your ability to do a good job?					
Do you feel that there is more work to do than you practically have the ability to do?					
Do you feel that you do not have time to do many of the things that are important to doing a good quality job?					
Do you find that you do not have time to plan as much as you would like to?					
TOTAL					

Score 1 for every tick in the “Not at all” column, 2 for every tick in the “Rarely column”, and so on up to 5 for every tick in the “Very often” column. Add up your total and check your result using the table below.

Score Interpretation

Score	Comment
15-18	No sign of burnout here
19-32	Little sign of burnout here, unless some factors are particularly severe
33-49	Be careful – you may be at risk of burnout, particularly if several scores are high
50-59	You are at severe risk of burnout – do something about this urgently
60-75	You are at very severe risk of burnout – do something about this urgently

Note:
This tool uses an informal approach to assessing burnout. While it may be intuitively useful, it has not been validated through controlled scientific tests and must therefore not be used as a diagnostic technique. Please, therefore, interpret the results with common sense. Also, make allowances for any recent events that may have a disproportionate influence on your mood at the time you take the test!

If you prefer rigorously validated tests, then the Maslach Burnout Inventory may be useful. This was developed by Christina Maslach, one of the leading researchers in the field of burnout. Copies can be purchased at the following site:
http://www.cpp-db.com/detail/detailprod.asp?pc=35.

Key Points
This tool helps you to assess your likelihood of burnout.

2.9 Building Self-Confidence
Develop the self-confidence you deserve!

From the quietly confident doctor whose advice we rely on, to the star-quality confidence of an inspiring speaker, self-confident people have qualities that everyone admires. Jack Welch once said: “Confidence gives you courage and extends your reach. It lets you take greater risks and achieve far more than you ever thought possible” (Capitalism Magazine, 2002). This powerfully conveys the enormous role self-confidence plays in achieving greater success in whatever you do.

Self-confidence is extremely important in almost every aspect of our lives, yet so many people struggle to find it. Sadly, this can be a vicious circle: People who lack self-confidence can find it difficult to become successful. After all, would you instinctively want to back a project that was being pitched by someone who was nervous, fumbling and overly apologetic?

On the other hand, you might be persuaded by someone who spoke clearly, who held their head high, who answered questions assuredly, and who readily admitted when he/she did not know something.

Self-confident people inspire confidence in others: Their audience, their peers, their bosses, their customers, and their friends. Gaining the confidence of others is one of the key ways in which a self-confident person finds success.

The good news is that self-confidence really can be learned and built on. And, whether you’re working on your own self-confidence or building the confidence of people around you, it’s well-worth the effort! All other things being equal, self-confidence is often the single ingredient that distinguishes a successful person from someone less successful.

So how confident do you seem to others?
Your level of self-confidence can show in many ways: Your behavior, your body language, how you speak, what you say, and so on. Look at the following comparisons of common confident behavior with behavior associated with low self-confidence. Which thoughts or actions do you recognize in yourself and people around you?

Self-Confident	Low Self-Confidence
Doing what you believe to be right, even if others mock or criticize you for it.	Governing your behavior based on what other people think.
Being willing to take risks and go the extra mile to achieve better things.	Staying in your comfort zone, fearing failure and so avoid taking risks.
Admitting your mistakes and vowing to learn from them.	Working hard to cover up mistakes and hoping that you can fix the problem before anyone is the wiser.
Waiting for others to congratulate you on your accomplishments.	Extolling your own virtues as often as possible to as many people as possible.
Accepting compliments graciously. “Thanks, I really worked hard on that prospectus. I’m pleased you recognize my efforts.”	Dismissing compliments offhandedly. “Oh that prospectus was nothing really, anyone could have done it.”

As you can see from these examples, low self-confidence can be self-destructive, and it often manifests itself as negativity. Self-confident people are generally more positive – they believe in themselves and their abilities, and they also believe in the wonders of living life to the full.

Balanced Self-Confidence

Self-confidence is about balance. At one extreme, we have people with low self-confidence. At the other end, we have people who may be over-confident.

Good self-confidence is a matter of having the right amount of confidence, founded in reality and on your true ability. With the right amount of self-confidence, you will take informed risks, stretch yourself (but not beyond your abilities) and try hard.

By contrast, if you are under-confident, you’ll avoid taking risks and stretching yourself; and you might not try at all. This means that you’ll fail to reach your potential. And if you’re over-confident, you’ll probably take too much risk, stretch yourself beyond your capabilities, and crash badly. You may also find that you’re so optimistic, that you don’t try hard enough to truly succeed.

So, self-confidence needs to be founded on reality: realistic expectations, your skills and experience, and the effort and preparation that you are willing to put in to reach your goal.

Building Self-Confidence

So how do you build this sense of balanced self-confidence, founded on a firm appreciation of reality?

The bad news is that there’s no quick fix or 5-minute solution.

The good news is that building self-confidence is readily achievable, just as long as you have the focus and determination to carry things through. And what’s even better is that the things you’ll do will build success – after all, your confidence will come from real, solid achievement. No-one can take this away from you!

So here are our three steps to self-confidence, for which we’ll use the metaphor of a journey: Preparing for your journey; setting out; and accelerating towards success.

Step 1: Preparing for Your Journey:

The first step involves getting yourself ready for your journey to self-confidence. You need to take stock of where you are, think about where you want to go, get yourself in the right mindset for your journey, and commit yourself to starting it and staying with it.

In preparing for your journey, do the following things:

Look at what you've already achieved:
Relive your life so far, and list the ten best things you've achieved in an "Achievement Log." Perhaps you came top in an important test or exam, played a key role in an important team, produced the best sales figures in a period, did something that made a key difference in someone else's life, or delivered a project that meant a lot for your business.

Put these into a smartly formatted document, which you can look at often. And then spend a few minutes each week enjoying the success you've already had!

Take a realistic look at who you are:
Use a technique like SWOT Analysis to take a look at who and where you are. Perhaps reflecting on the list you prepared above and reflecting on your recent life, think about what your friends consider to be your strengths and weaknesses. From these, think about the opportunities and threats you face.

Make sure that you enjoy a few minutes reflecting on your strengths!

Think about where you want to go:
Setting and achieving goals is a key part of building self-confidence. To do this effectively, you need the big picture of where you want to go in life. See our article on goal setting for one approach to this.

Inform your goal setting with your SWOT Analysis. Set goals that exploit your strengths, minimize your weaknesses, realize your opportunities, and control the threats you face.

And having set the major goals in your life, identify the first step in each. A tip: Make sure it's a very small step, perhaps taking no more than an hour to complete!

Start managing your mind:
At this stage, you need to start managing your mind. Learn to pick up and defeat the negative self-talk which can destroy your confidence.

And learn how to use imagery to create strong mental images of what you'll feel and experience as you achieve your major goals – there's something about doing this that makes even major goals seem achievable!

And then commit yourself to success!
The final part of preparing for the journey is to make a clear and unequivocal promise to yourself that you are absolutely committed to your journey, and that you will do all in your power to achieve it.

If as you're doing it, you find doubts starting to surface, write them down and challenge them calmly and rationally. If they dissolve under scrutiny, that's great. However if they are based on genuine risks, make sure you set additional goals to manage them appropriately.

Either way, make that promise!

Step 2: Setting Out:

Here you start, ever so slowly, moving towards your goal. By doing the right things, and starting with small, easy wins, you'll put yourself on the path to success – and the self-confidence that comes with it.

Build the knowledge you need to succeed:
Looking at your goals, identify the skills you'll need to achieve them. And then look at how you can acquire these skills confidently and well. Don't just accept a sketchy, just-good-enough solution – look for a solution, a program or a course that fully equips you to achieve what you want to achieve, and ideally gives you a certificate you can be proud of.

Focus on the basics:
When you're starting, don't try to do anything clever or elaborate. And don't reach for perfection – just enjoy doing simple things successfully and well.

Set small goals, and achieve them:
Starting with the very small goals you identified in step 1, get in the habit of setting goals, achieving them, and celebrating that achievement. Don't make goals particularly challenging at this stage, just get into the habit of achieving them and celebrating them. And little by little, start piling up the successes!

Keep managing your mind:
Stay on top of that positive thinking, keep celebrating and enjoying success, and keep those mental images strong.

And on the other side, learn to handle failure. Accept that mistakes happen when you're trying something new. In fact, if you get into the habit of treating mistakes as learning experiences, you can (almost) start to see them in a positive light. After all, there's a lot to be said for the saying "if it doesn't kill me, it makes me stronger!"

Step 3: Accelerating Towards Success:

By this stage, you'll feel your self-confidence building. You'll have completed some of the courses you started in step 2, and you'll have plenty of success to celebrate!

Now's the time to start stretching yourself. Make the goals a bit bigger, and the challenges a bit tougher. Increase the size of your commitment. And extend the skills you've proven into new, but closely related arenas.

> **Tip:**
> Keep yourself grounded – this is where people tend to get over-confident and over-stretch themselves. And make sure you don't start enjoying cleverness for its own sake…

As long as you keep on stretching yourself enough, but not too much, you'll find your self-confidence building apace. What's more, you'll have earned your self-confidence – because you'll have put in the hard graft necessary to be… successful.

Section 3: Information Skills

- Effective Note-Taking with Mind Maps
- SQ3R – Increasing Your Retention of Written Information
- Speed Reading – Substantially Increase Your Reading Speed
- Reading Strategies – Reading Efficiently by Reading Intelligently
- Reviewing Learned Information – Keeping Knowledge 'Fresh'
- Learning Styles – Learn in a way that suits you.

3. Introduction to Information Skills

The techniques in this section help you to manage information better. By using them you will be able to improve:

- Your reading skills, so that you can find the information you need quickly and easily
- The way you make notes, so that they become clear and easy to understand, and quick to review
- Your review techniques, so that you can keep information fresh in your mind.

These techniques will help you to assimilate information quickly. This may involve keeping yourself up-to-date on events within your field, absorbing information within reports or learning specialist information needed to complete a project.

These are also very useful tools for mastering course material where you are studying for exams.

They work particularly well in conjunction with the mnemonics described in the Mind Tools Memory Improvement section – used together these two sets of tools will give you a formidable advantage in organizing and remembering information. This is often what exams are about.

Techniques discussed are:

- Mind Maps – How to take notes effectively
- SQ3R – Fully absorbing written information
- Speed Reading
- Reading Strategies – Reading faster by thinking what to read
- Review Techniques – Keeping information fresh in your mind
- Learning Styles – Learn in a way that suits you

Mind Maps are powerful tools for recording and organizing information. They do this in a format that is easy to review. Once you understand and start using Mind Maps, you will never again want to take notes using conventional techniques.

The next three techniques (SQ3R, Speed Reading and use of Reading Strategies) help you to assimilate and understand written information quickly and efficiently.

The section on Review Techniques will help you to keep information that you have already learned alive in your mind.

Finally, the article on Learning Styles will not only help you develop the ways in which you can learn, but you'll be able to tailor what you do so that others can learn from you more effectively.

3.1 Mind Maps
A Powerful Approach to Note Taking

Related variants: Spray Diagrams, Spider Diagrams, Spidograms, Spidergrams and Mindmaps

Mind Map® is a trade mark of the Buzan Organization.

How to Use the Tool
Mind Mapping is an important technique that improves the way you take notes, and supports and enhances your creative problem solving. By using Mind Maps, you can quickly identify and understand the structure of a subject and the way that pieces of information fit together, as well as recording the raw facts contained in normal notes. More than this, Mind Maps provide a

structure which encourages creative problem solving, and they hold information in a format that your mind will find easy to remember and quick to review.

Popularized by Tony Buzan, Mind Maps abandon the list format of conventional note taking. They do this in favor of a two-dimensional structure. A good Mind Map shows the 'shape' of the subject, the relative importance of individual points, and the way in which facts relate to one another.

Mind Maps are more compact than conventional notes, often taking up one side of paper. This helps you to make associations easily. If you find out more information after you have drawn the main Mind Map, then you can easily integrate it with little disruption.

Mind Maps are also useful for:

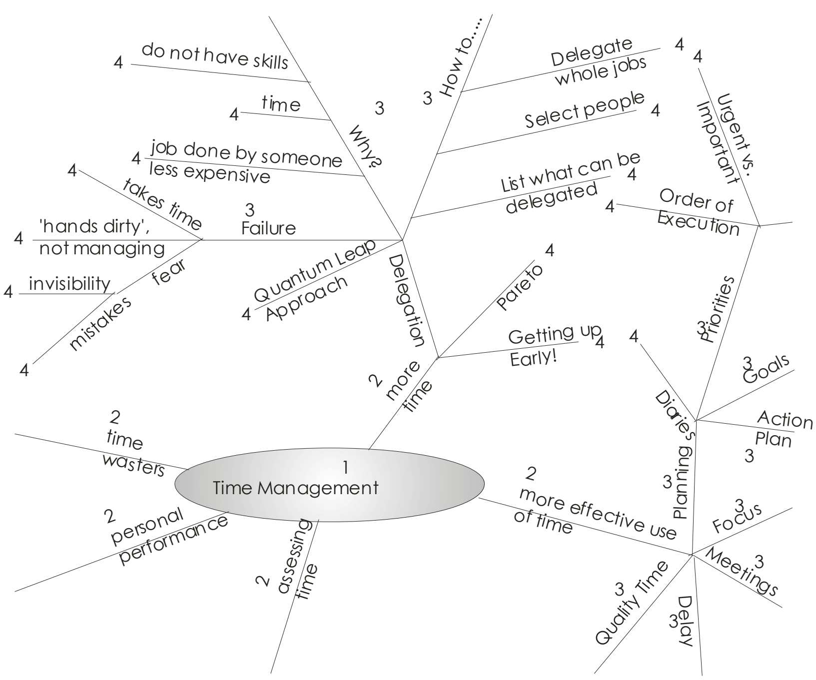
- Summarizing information;
- Consolidating information from different research sources;
- Thinking through complex problems; and
- Presenting information in a format that shows the overall structure of your subject.

They are very quick to review as you can often refresh information in your mind just by glancing at one. And in the same way, they can be effective mnemonics: Remembering the shape and structure of a Mind Map can give you the cues you need to remember the information within it. As such, they engage much more of your brain in the process of assimilating and connecting facts, compared with conventional notes.

Drawing Basic Mind Maps

The Mind Tools site was originally planned and researched using Mind Maps. They are too large to publish here, however part of one is shown below. This shows research into time management skills:

Figure 1: An Example Mind Map



To make notes on a subject using a Mind Map, draw it in the following way:

1. Write the title of the subject you're exploring in the center of the page, and draw a circle around it. This is shown by the circle marked 1 in Figure 1, above.

2. As you come across major subdivisions or subheadings of the topic (or important facts that relate to the subject) draw lines out from this circle. Label these lines with these subdivisions or subheadings. These are shown by the lines marked 2 in Figure 1.

3. As you "burrow" into the subject and uncover another level of information (further subheadings, or individual facts) belonging to the subheadings above, draw these as lines linked to the subheading lines. These are shown by the lines marked 3 in Figure 1.

4. Finally, for individual facts or ideas, draw lines out from the appropriate heading line and label them. These are shown by the lines marked 4 in Figure 1

As you come across new information, link it in to the Mind Map appropriately.

A complete Mind Map may have main topic lines radiating in all directions from the center. Sub-topics and facts will branch off these, like branches and twigs from the trunk of a tree. You do not need to worry about the structure produced, as this will evolve of its own accord.

Note that the idea of numbered 'levels' in Figure 1 is only used to help show how the Mind Map was created. All we are showing is that major headings radiate from the center, with lower level headings and facts branching off from the higher level headings.

While drawing Mind Maps by hand is appropriate in many cases, software tools like MindGenius improve the process by helping to you to produce high quality Concept Maps, which can easily be edited and redrafted.

Improving your Mind Maps

Your Mind Maps are your own property: once you understand how to make notes in the Mind Map format, you can develop your own conventions to take them further. The following suggestions may help to increase their effectiveness:

- **Use single words or simple phrases for information:** Most words in normal writing are padding, as they ensure that facts are conveyed in the correct context, and in a format that is pleasant to read. In your own Mind Maps, single strong words and meaningful phrases can convey the same meaning more potently. Excess words just clutter the Mind Map.
- **Print words:** Joined up or indistinct writing can be more difficult to read.
- **Use color to separate different ideas:** This will help you to separate ideas where necessary. It also helps you to visualize of the Mind Map for recall. Color also helps to show the organization of the subject.
- **Use symbols and images:** Where a symbol or picture means something to you, use it. Pictures can help you to remember information more effectively than words.
- **Using cross-linkages:** Information in one part of the Mind Map may relate to another part. Here you can draw in lines to show the cross-linkages. This helps you to see how one part of the subject affects another.

Key Points

Mind Mapping is an extremely effective method of taking notes. Mind Maps show not only facts, but also the overall structure of a subject and the relative importance of individual parts of it. They help you to associate ideas and make connections that might not otherwise make.

If you do any form of research or note taking, try experimenting with Mind Maps. You will find them surprisingly effective!

3.2 SQ3R
Increasing Your Retention of Written Information

SQ3R is a useful technique for fully absorbing written information. It helps you to create a good mental framework of a subject, into which you can fit facts correctly. It helps you to set study goals. It also prompts you to use the review techniques that will help to fix information in your mind.

By using SQ3R to actively read a document, you can get the maximum benefit from your reading time.

How to Use the Tool

The acronym SQ3R stands for the five sequential techniques you should use to read a book:

- **Survey:**
  Survey the document: scan the contents, introduction, chapter introductions and chapter summaries to pick up a shallow overview of the text. Form an opinion of whether it will be of any help. If it does not give you the information you want, discard it.
- **Question:**
  Make a note of any questions on the subject that come to mind, or particularly interest you following your survey. Perhaps scan the document again to see if any stand out. These questions can be considered almost as study goals – understanding the answers can help you to structure the information in your own mind.
- **Read:**
  Now read the document. Read through useful sections in detail, taking care to understand all the points that are relevant. In the case of some texts this reading may be very slow. This will particularly be the case if there is a lot of dense and complicated information. While you are reading, it can help to take notes in Concept Map format.
- **Recall:**
  Once you have read appropriate sections of the document, run through it in your mind several times. Isolate the core facts or the essential processes behind the subject, and then see how other information fits around them.
- **Review:**
  Once you have run through the exercise of recalling the information, you can move on to the stage of reviewing it. This review can be by rereading the document, by expanding your notes, or by discussing the material with colleagues. A particularly effective method of reviewing information is to have to teach it to someone else!

Key Points

SQ3R is a useful technique for extracting the maximum amount of benefit from your reading time. It helps you to organize the structure of a subject in your mind. It also helps you to set study goals and to separate important information from irrelevant data.

SQ3R is a 5 stage active reading technique. The stages are:

- Survey
- Question
- Read
- Recall
- Review

If you use SQ3R, you will significantly improve the quality of your study time.

3.3 Speed Reading
Radically Increasing Your Reading Speed

Speed Reading helps you to read and understand text more quickly. It is an essential skill in any environment where you have to master large volumes of information quickly, as is the norm in fast-moving professional environments. And it's a key technique to learn if you suffer from "Information Overload."

The Key Insight

The most important trick about speed reading is to know what information you want from a document before you start reading it: if you only want an outline of the issue that the document discusses, then you can skim the document quickly and extract only the essential facts. If you need to understand the real detail of the document, then you need to read it slowly enough to understand it fully.

You will get the greatest time savings from speed reading by learning to skim excessively detailed documents.

Technical Issues

Even when you know how to ignore irrelevant detail, there are other technical improvements you can make to your reading style which will increase your reading speed.

Most people learn to read the way young children read – either letter-by-letter, or word-by-word. As an adult, this is probably not the way you read now – think about how your eye muscles are moving as you read this. You will probably find that you are fixing your eyes on one block of words then moving your eyes to the next block of words, and so on. You are reading blocks of words at a time, not individual words one-by-one. You may also notice that you do not always go from one block to the next: sometimes you may move back to a previous block if you are unsure about something.

A skilled reader will read many words in each block. He or she will only dwell on each block for an instant, and will then move on. Only rarely will the reader's eyes skip back to a previous block of words. This reduces the amount of work that the reader's eyes have to do. It also increases the volume of information that can be examined in a period of time.

A poor reader will become bogged down, spending a lot of time reading small blocks of words. He or she will skip back often, losing the flow and structure of the text and overall understanding of the subject. This irregular eye movement makes reading tiring. Poor readers tend to dislike reading, and may find it harder to concentrate and understand written information.

How to Use the Tool

Speed reading aims to improve reading skills by:

- Increasing the number of words read in each block
- Reducing the length of time spent reading each block, and
- Reducing the number of times your eyes skip back to a previous sentence.

These are explained below.

Increasing the number of words in each block:
This needs a conscious effort. Try to expand the number of words that you read at a time: With practice, you'll find you read faster. You may also find that you can increase the number of words in each block by holding the text a little further from your eyes. The more words you can read in each block, the faster you will read!

Reducing fixation time:
The minimum length of time needed to read each block is probably only a quarter of a second. By pushing yourself to reduce the time you take, you will get better at picking up information quickly. Again, this is a matter of practice and confidence.

Reducing skip back:
To reduce the number of times that your eyes skip back to a previous sentence, run a pointer along the line as you read. This could be a finger, or a pen or pencil. Your eyes will follow the tip of your pointer, smoothing the flow of your reading. The speed at which you read using this method will largely depend on the speed at which you move the pointer.

You will be able to increase your reading speed a certain amount on your own by applying speed reading techniques.

What you don't get out of self-study is the use of specialist reading machines and the confidence gained from successful speed-reading – this is where a good one-day course can revolutionize your reading skills.

Key Points
By speed reading you can read information more quickly. You may also get a better understanding of it as you will hold more of it in short term memory.

To improve the speed of your reading, read more words in each block and reduce the length of time spent reading each block. Use a pointer to smooth the way your eyes move and reduce skip-back.

3.4 Reading Strategies
Reading Efficiently by Reading Intelligently

Good reading strategies help you to read in a very efficient way. Using them, you aim to get the maximum benefit from your reading with the minimum effort. This section will show you how to use six different strategies to read intelligently.

Strategy 1: Knowing what you want to know
The first thing to ask yourself is: Why you are reading the text? Are you reading with a purpose or just for pleasure? What do you want to know after reading it?

Once you know this, you can examine the text to see whether it is going to move you towards this goal.

An easy way of doing this is to look at the introduction and the chapter headings. The introduction should let you know whom the book is targeted at, and what it seeks to achieve. Chapter headings will give you an overall view of the structure of the subject.

Ask yourself whether the book meets your needs. Ask yourself if it assumes too much or too little knowledge. If the book isn't ideal, would it be better to find a better one?

Strategy 2: Knowing how deeply to study the material
Where you only need the shallowest knowledge of the subject, you can skim material. Here you read only chapter headings, introductions and summaries.

If you need a moderate level of information on a subject, then you can scan the text. Here you read the chapter introductions and summaries in detail. You may then speed read the contents of the chapters, picking out and understanding key words and concepts. At this level of looking at the document it is worth paying attention to diagrams and graphs.

Only when you need detailed knowledge of a subject is it worth studying the text. Here it is best to skim the material first to get an overview of the subject. This gives you an understanding of its structure, into which you can fit the detail gained from a full, receptive reading of the material. SQ3R is a good technique for getting a deep understanding of a text.

Strategy 3: Active Reading

When you are reading a document in detail, it often helps if you highlight, underline and annotate it as you go on. This emphasizes information in your mind, and helps you to review important points later.

Doing this also helps to keep your mind focused on the material and stops it wandering.

This is obviously only something to do if you own the document! If you own the book and find that active reading helps, then it may be worth photocopying information in more expensive texts. You can then read and mark the photocopies.

If you are worried about destroying the material, ask yourself how much your investment of time is worth. If the benefit you get by active reading reasonably exceeds the value of the book, then the book is disposable.

Strategy 4: How to study different sorts of material

Different sorts of documents hold information in different places and in different ways. They have different depths and breadths of coverage. By understanding the layout of the material you are reading, you can extract useful information much more efficiently.

Reading Magazines and Newspapers:
These tend to give a very fragmented coverage of an area. They will typically only concentrate on the most interesting and glamorous parts of a topic – this helps them to sell copies! They will often ignore less interesting information that may be essential to a full understanding of a subject. Typically areas of useful information are padded out with large amounts of irrelevant waffle or with advertising.

The most effective way of getting information from magazines is to scan the contents tables or indexes and turn directly to interesting articles. If you find an article useful, then cut it out and file it in a folder specifically covering that sort of information. In this way you will build up sets of related articles that may begin to explain the subject.

Newspapers tend to be arranged in sections. If you read a paper often, you can learn quickly which sections are useful and which ones you can skip altogether.

Reading Individual Articles:
Articles within newspapers and magazines tend to be in three main types:

- **News Articles:**
  Here the most important information is presented first, with information being less and less useful as the article progresses. News articles are designed to explain the key points first, and then flesh them out with detail.

- **Opinion Articles:**
  Opinion articles present a point of view. Here the most important information is contained in the introduction and the summary, with the middle of the article containing supporting arguments.

- **Feature Articles:**
  These are written to provide entertainment or background on a subject. Typically the most important information is in the body of the text.

If you know what you want from an article, and recognize its type, you can extract information from it quickly and efficiently.

Strategy 5: Reading 'whole subject' documents

When you are reading an important document, it is easy to accept the writer's structure of thought. This can mean that you may not notice that important information has been omitted or that irrelevant detail has been included. A good way of recognizing this is to compile your own table of contents before you open the document. You can then use this table of contents to read the document in the order that you want. You will be able to spot omissions quickly.

Strategy 6: Using glossaries with technical documents

If you are reading large amounts of difficult technical material, it may be useful to photocopy or compile a glossary. Keep this beside you as you read. It will probably also be useful to note down the key concepts in your own words, and refer to them when necessary.

Key Points

This section shows six different strategies and techniques that you can use to read more effectively.

These are:

- Knowing what you need to know, and reading appropriately
- Knowing how deeply to read the document: skimming, scanning or studying
- Using active reading techniques to pick out key points and keep your mind focused on the material
- Using the table of contents for reading magazines and newspapers, and clipping useful articles
- Understanding how to extract information from different article types
- Creating your own table of contents for reviewing material
- Using indexes, tables of contents, and glossaries to help you assimilate technical information.

3.5 Review Techniques

Keeping Knowledge in Your Short-Term Memory

Normally people's memories of things they have learned are clearest immediately after they have learned them. They will then forget more and more knowledge as time goes on. After a few months they may only be able to recall only a tiny percentage of what was initially learned. This makes relearning information difficult when it needs to be done.

If you review knowledge frequently, however, then you will be able to keep it fresh and alive in your mind. This makes it easy to recall when you need it with a minimum of effort.

This section explains how to review material in a structured and effective way.

How to Use the Tool

The first step is to spend a few minutes reviewing material immediately after the learning session. This helps you to:

- Confirm that you understand the material
- Reduce the time needed to relearn information when you need it, and
- Improve the quality of future learning, by building on a well-remembered foundation. This helps your mind to make connections and linkages that it would not otherwise make.

A good way of carrying out this review is to rewrite or tidy up notes. You can do this effectively by putting the information learned into a Concept Map.

After this, reviewing information should be relatively easy and need not take long. Carry out reviews at the following times:

- After one day
- After one week
- After one month
- After four months

Review the topic by taking a few minutes to jot down everything you can remember about the subject, and compare this with your notes.

If you review information often, it should stay fresh in your mind, and will be easily accessible when you need it.

Key Points

By reviewing information you avoid forgetting information that will be difficult and time-consuming to relearn. You also ensure that you keep information fresh in your mind so that it acts as a foundation for future learning.

The first stage in reviewing information is to rewrite and tidy up notes immediately after learning has taken place. This confirms the structure and detail of information in your mind.

After this, periodically jot down what you can remember on a subject and compare it with your notes. This will show you what you have forgotten and refresh your memory.

3.6 Learning Styles

Learn Effectively by Understanding Your Learning Preferences

Have you ever tried to learn something fairly simple, yet failed to grasp the key ideas? Or tried to teach people and found that some were overwhelmed or confused by something quite basic?

If so, you may have experienced a clash of learning styles: Your learning preferences and those of your instructor or audience may not have been aligned. When this occurs, not only is it frustrating for everyone, the communication process breaks down and learning fails.

Once you know your own natural learning preference, you can work on expanding the way you learn, so that you can learn in other ways, not just in your preferred style.

And, by understanding learning styles, you can learn to create an environment in which everyone can learn from you, not just those who use your preferred style.

Felder and Silverman's Index of Learning Styles

One of the most widely used models of learning styles is the Index of Learning Styles developed by Richard Felder and Linda Silverman in the late 1980s. According to this model (which Felder revised in 2002) there are four dimensions of learning styles. Think of these dimensions as a continuum with one learning preference on the far left and the other on the far right.

Figure 1: Learning Styles Index

Sensory ⟷	Intuitive
Sensory learners prefer concrete, practical, and procedural information. They look for the facts.	Intuitive learners prefer conceptual, innovative, and theoretical information. They look for the meaning.
Visual ⟷	Verbal
Visual learners prefer graphs, pictures, and diagrams. They look for visual representations of information.	Verbal learners prefer to hear or read information. They look for explanations with words.
Active ⟷	Reflective
Active learners prefer to manipulate objects, do physical experiments, and learn by trying. They enjoy working in groups to figure out problems.	Reflective learners prefer to think things through, to evaluate options, and learn by analysis. They enjoy figuring out a problem on their own.
Sequential ⟷	Global
Sequential learners prefer to have information presented linearly and in an orderly manner. They put together the details in order to understand the big picture emerges.	Global learners prefer a holistic and systematic approach. They see the big picture first and then fill in the details.

Once you know where your preferences lie on each of these dimensions, you can begin to stretch beyond those preferences and develop a more balanced approach to learning. Not only will you improve your learning effectiveness, you will open yourself up to many different ways of perceiving the world.

Balance is key. You don't want to get too far on any one side of the learning dimensions. When you do that you limit your ability to take in new information and make sense of it quickly, accurately, and effectively.

> **Tip:**
> This article describes one useful approach to learning styles. Other practitioners, such as David Kolb, and Peter Honey and Alan Mumford have different approaches.

Using the Learning Styles Index

You can us the learning style index to develop your own learning skills and also to help you create a rounded learning experience for other people.

(I) Developing Your Learning Skills

Step One Identify your learning preferences for each learning dimension. Read through the explanations of each learning preference and choose the one that best reflects your style. Alternatively, use an Index of Learning Styles Questionnaire like the one at http://www.engr.ncsu.edu/learning styles/ilsweb.html .

Step Two Analyze your results and identify those dimensions where you are "out of balance," meaning you have a very strong preference for one style and dislike the other.

Step Three For each out of balance area, use the information in the table below to improve your skills in areas where you need development.

Type of Learner	Tips
Sensory Learners	If you rely too much on sensing, you can tend to prefer what is familiar, and concentrate on facts you know instead of being innovative and adapting to new situations. Seek out opportunities to learn theoretical information and then bring in facts to support or negate these theories.
Intuitive Learners	If you rely too much on intuition you risk missing important details, which can lead to poor decision-making and problem solving. Force yourself to learn facts or memorize data that will help you defend or criticize a theory or procedure you are working with. You may need to slow down and look at detail you would otherwise typically skim.
Visual Learners	If you concentrate more on pictorial or graphical information than on words, you put yourself at a distinct disadvantage because verbal and written information is still the main preferred choice for delivery of information. Practice your note taking and seek out opportunities to explain information to others using words.
Verbal Learners	When information is presented in diagrams, sketches, flow charts, and so on, it is designed to be understood quickly. If you can develop your skills in this area you can significantly reduce time spent learning and absorbing information. Look for opportunities to learn through audio-visual presentations (such as CD-ROM and Webcasts.) When making notes, group information according to concepts and then create visual links with arrows going to and from them. Take every opportunity you can to create charts and tables and diagrams.
Active Learners	If you act before you think you are apt to make hasty and potentially ill-informed judgments. You need to concentrate on summarizing situations, and taking time to sit by yourself to digest information you have been given before jumping in and discussing it with others.
Reflective Learners	If you think too much you risk doing nothing… ever. There comes a time when a decision has to be made or an action taken. Involve yourself in group decision-making whenever possible and try to apply the information you have in as practical a manner as possible.

Type of Learner	Tips
Sequential Learners	When you break things down into small components you are often able to dive right into problem solving. This seems to be advantageous but can often be unproductive. Force yourself to slow down and understand why you are doing something and how it is connected to the overall purpose or objective. Ask yourself how your actions are going to help you in the long run. If you can't think of a practical application for what you are doing then stop and do some more "big picture" thinking.
Global Learners	If grasping the big picture is easy for you, then you can be at risk of wanting to run before you can walk. You see what is needed but may not take the time to learn how best to accomplish it. Take the time to ask for explanations, and force yourself to complete all problem-solving steps before coming to a conclusion or making a decision. If you can't explain what you have done and why, then you may have missed critical details.

(II) Creating a Rounded Learning Experience for Others

Whenever you are training or communicating with others, you have information and ideas that you want them to understand and learn effectively and efficiently. Your audience is likely to demonstrate a wide range of learning preferences, and your challenge is to provide variety that helps them learn quickly and well.

Your preferred teaching and communication methods may in fact be influenced by your own learning preferences. For example, if you prefer visual rather than verbal learning, you may in turn tend to provide a visual learning experience for your audience.

Be aware of your preferences and the range of preference of your audiences. Provide a balanced learning experience for the following types of learners:

- **Sensory – Intuitive:** Provide both hard facts and general concepts.
- **Visual – Verbal:** Incorporate both visual and verbal cues.
- **Active – Reflective:** Allow both experiential learning and time for evaluation and analysis.
- **Sequential – Global:** Provide detail in a structured way, as well as the big picture.

Key Points

Learning styles and preferences vary for each of us and in different situations.

By understanding this, and developing the skills that help you learn in a variety of ways, you make the most of your learning potential. And because you're better able to learn and gather information, you'll make better decisions and choose better courses of action.

And by understanding that other people can have quite different learning preferences, you can learn to communicate your message effectively in a way that many more people can understand. This is fundamentally important, particularly if you're a professional for whom communication is an important part of your job.

Take time to identify how you prefer to learn and then force yourself to break out of your comfort zone. Once you start learning in new ways you'll be amazed at how much more you catch and how much easier it is to assimilate information and make sense of what is going on.

Section 4: Communication Skills

4. Introduction to Communication Skills

Why Communications Skills Are So Important

The purpose of communication is to get your message across to others clearly and unambiguously.

Doing this involves effort from both the sender of the message and the receiver. And it's a process that can be fraught with error, with messages often misinterpreted by the recipient. When this isn't detected, it can cause tremendous confusion, wasted effort and missed opportunity.

In fact, communication is only successful when both the sender and the receiver understand the same information as a result of the communication.

By successfully getting your message across, you convey your thoughts and ideas effectively. When not successful, the thoughts and ideas that you send do not necessarily reflect your own, causing a communications breakdown and creating roadblocks that stand in the way of your goals – both personally and professionally.

In a recent survey of recruiters from companies with more than 50,000 employees, communication skills were cited as the single more important decisive factor in choosing managers. The survey, conducted by the University of Pittsburgh's Katz Business School, points out that communication skills, including written and oral presentations, as well as an ability to work with others, are the main factor contributing to job success.

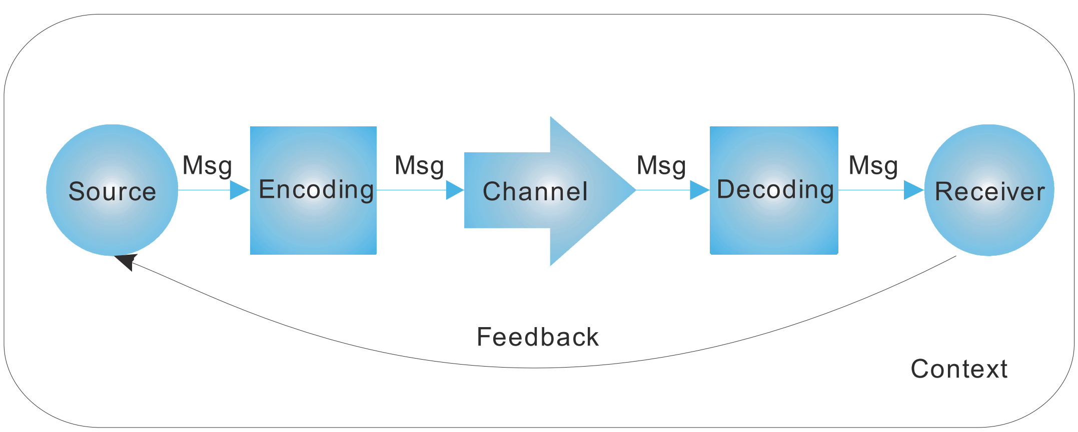
In spite of the increasing importance placed on communication skills, many individuals continue to struggle, unable to communicate their thoughts and ideas effectively – whether in verbal or written format. This inability makes it nearly impossible for them to compete effectively in the workplace, and stands in the way of career progression.

Getting your message across is paramount to progressing. To do this, you must understand what your message is, what audience you are sending it to, and how it will be perceived. You must also weigh-in the circumstances surrounding your communications, such as situational and cultural context.

The Importance of Removing Barriers

Problems with communication can pop-up at every stage of the communication process (which consists of source, encoding, channel, decoding, receiver, feedback and context – see the diagram below) and have the potential to create misunderstanding and confusion.

The Communications Process



To be an effective communicator and to get your point across without misunderstanding and confusion, your goal should be to lessen the frequency of these problems at each stage of this process with clear, concise, accurate, well-planned communications. We follow the process through below:

Source...
As the source of the message, you need to be clear about why you're communicating, and what you want to communicate. You also need to be confident that the information you're communicating is useful and accurate.

Message...
The message is the information that you want to communicate.

Encoding...
This is the process of transferring the information you want to communicate into a form that can be sent and correctly decoded at the other end. Your success in encoding depends partly on your ability to convey information clearly and simply, but also on your ability to anticipate and eliminate sources of confusion (for example, cultural issues, mistaken assumptions, and missing information.) A key part of this is knowing your audience: Failure to understand who you are communicating with will result in delivering messages that are misunderstood.

Channel...
Messages are conveyed through channels, with verbal including face-to-face meetings, telephone and videoconferencing; and written including letters, emails, memos and reports.

Different channels have different strengths and weaknesses. For example, it's not particularly effective to give a long list of directions verbally, while you'll quickly cause problems if you criticize someone strongly by email.

Decoding...
Just as successful encoding is a skill, so is successful decoding (involving, for example, taking the time to read a message carefully, or listen actively to it.) Just as confusion can arise from errors in encoding, it can also arise from decoding errors. This is particularly the case if the decoder doesn't have enough knowledge to understand the message.

Receiver...
Your message is delivered to individual members of your audience. No doubt, you have in mind the actions or reactions you hope your message will get from this audience. Keep in mind, though, that each of these individuals enters into the communication process with ideas and feelings that will undoubtedly influence their understanding of your message, and their response. To be a successful communicator, you should consider these before delivering your message, and act appropriately.

Feedback...
Your audience will provide you with feedback, verbal and nonverbal reactions to your communicated message. Pay close attention to this feedback, as it is the only thing that allows you to be confident that your audience has understood your message. If you find that there has been a misunderstanding, at least you have the opportunity to send the message a second time.

Context...
The situation in which your message is delivered is the context. This may include the surrounding environment or broader culture (i.e. corporate culture, international cultures, etc.).

Removing Barriers at All These Stages

To deliver your messages effectively, you must commit to breaking down the barriers that exist in each of these stages of the communication process.

Let's begin with the message itself. If your message is too lengthy, disorganized, or contains errors, you can expect the message to be misunderstood and misinterpreted. Use of poor verbal and body language can also confuse the message.

Barriers in context tend to stem from senders offering too much information too fast. When in doubt here, less is oftentimes more. It is best to be mindful of the demands on other people's time, especially in today's ultra-busy society.

Once you understand this, you need to work to understand your audience's culture, making sure you can converse and deliver your message to people of different backgrounds and cultures within your own organization, in your country and even abroad.

4.1 Making a Great First Impression!

It takes just a quick glance, maybe three seconds, for someone to evaluate you when you meet for the first time. In this short time, the other person forms an opinion about you based on your appearance, your body language, your demeanor, your mannerisms, and how you are dressed.

With every new encounter, you are evaluated and yet another person's impression of you is formed. These first impression can be nearly impossible to reverse or undo, making those first encounters extremely important, for they set the tone for the all the relationships that follows.

So, whether they are in your career or social life, it's important to know how to create a good first impression. This article provides some useful tips to help you do this.

Be on Time

The person you are meeting for the first time is not interested in your "good excuse" for running late. Plan to arrive a few minutes early. And allow flexibility for possible delays in traffic or taking a wrong turn. Arriving early is much better that arriving late, hands down, and is the first step in creating a great first impression.

Be Yourself, Be at Ease

If you are feeling uncomfortable and on edge, this can make the other person ill at ease and that's a sure way to create the wrong impression. If you are calm and confident, so the other person will feel more at ease, and so have a solid foundation for making that first impression a good one.

Present Yourself Appropriately

Of course physical appearance matters. The person you are meeting for the first time does not know you and your appearance is usually the first clue he or she has to go on.

But it certainly does not mean you need to look like a model to create a strong and positive first impression. (Unless you are interviewing with your local model agency, of course!)

No. The key to a good impression is to present yourself appropriately.

They say a picture is worth a thousand words, and so the "picture" you first present says much about you to the person you are meeting. Is your appearance saying the right things to help create the right first impression?

Start with the way you dress. What is the appropriate dress for the meeting or occasion? In a business setting, what is the appropriate business attire? Suit, blazer, casual? And ask yourself what the person you'll be meeting is likely to wear – if your contact is in advertising or the music industry, a pinstripe business suit may not strike the right note!

For business and social meetings, appropriate dress also varies between countries and cultures, so it's something that you should pay particular attention to when in an unfamiliar setting or country. Make sure you know the traditions and norms.

And what about your personal grooming? Clean and tidy appearance is appropriate for most business and social occasions. A good haircut or shave. Clean and tidy clothes. Neat and tidy make up. Make sure your grooming is appropriate and helps make you feel "the part".

Appropriate dressing and grooming help make a good first impression and also help you feel "the part", and so feel more calm and confident. Add all of this up and you are well on your way to creating a good first impression.

A Word about Individuality

The good news is you can usually create a good impression without total conformity or losing your individuality. Yes, to make a good first impression you do need to "fit in" to some degree. But it all goes back to being appropriate for the situation. If in a business setting, wear appropriate business attire. If at a formal evening social event, wear appropriate evening attire. And express your individuality appropriately within that context.

A Winning Smile!

"Smile and the world smiles too."* So there's nothing like a smile to create a good first impression. A warm and confident smile will put both you and the other person at ease. So smiling is a winner when it comes to great first impressions. But don't go overboard with this – people who take this too far can seem insincere and smarmy, or can be seen to be "lightweights".

*Author Unknown

Be Open and Confident

When it comes to making the first impression, body language as well as appearances speaks much louder than words.

Use your body language to project appropriate confidence and self-assurance. Stand tall, smile (of course), make eye contact, greet with a firm handshake. All of this will help you project confidence and helps both you and the other person will feel better at ease.

Almost everyone gets a little nervous when meeting someone for the first time. Which can lead to nervous habits or sweaty palms. By being aware of your nervous habit, you can try to keep them in check. And controlling a nervous jitter or a nervous laugh will give you confidence and help the other person feel at ease.

Small Talk Goes A Long Way…

Conversations are based on verbal give and take. It may help you to prepare questions you have for the person you are meeting for the first time beforehand. Or, take a few minutes to learn something about the person you meet for the first time before you get together. For instance, does he play golf? Does she work with a local charitable foundation?

Is there anything that you know of that you have in common with the person you are meeting? If so, this can be a great way to open the conversation and to keep it flowing.

Be Positive

Your attitude shows through in everything you do. Project a positive attitude, even in the face of criticism or in the case of nervousness. Strive to learn from your meeting and to contribute appropriately, maintaining an upbeat manner and a smile.

Be Courteous and Attentive

It goes without saying that good manners and polite, attentive and courteous behavior help make a good first impression. In fact, anything less can ruin the one chance you have at making that first impression. So be on your best behavior!

One modern manner worth mentioning is “turn off your mobile phone”. What first impression will you create if you are already speaking to someone other than the person you are meeting for the first time? Your new acquaintance deserves 100% of your attention. Anything less and you’ll create a less than good first impression.

Key Points

You have just a few seconds to make a good first impression and it’s almost impossible ever to change it. So it’s worth giving each new encounter your best shot. Much of what you need to do to make a good impression is common sense. But with a little extra thought and preparation, you can hone your intuitive style and make every first impression not just good but great.

4.2 The Johari Window
Creating Better Understanding Between Individuals and Groups

The Johari Window is a communication model that can be used to improve understanding between individuals within a team or in a group setting. Based on disclosure, self-disclosure and feedback, the Johari Window can also be used to improve a group's relationship with other groups.

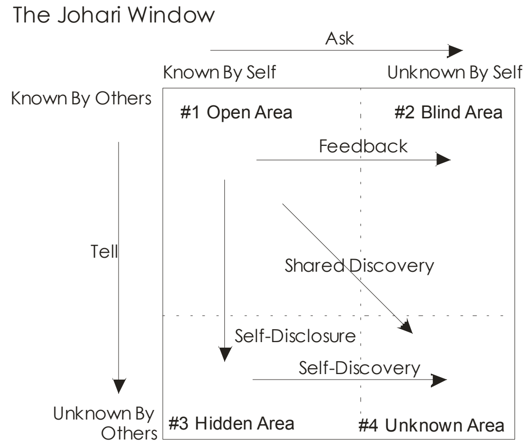
Developed by Joseph Luft and Harry Ingham (the word “Johari” comes from Joseph Luft and Harry Ingham), there are two key ideas behind the tool:

- That individuals can build trust between themselves by disclosing information about themselves; and
- That they can learn about themselves and come to terms with personal issues with the help of feedback from others.

By explaining the idea of the Johari Window to your team, you can help team members understand the value of self-disclosure, and gently encourage people to give and accept feedback. Done sensitively, this can help people build more-trusting relationships with one another, solve issues and work more effectively as a team.

Explaining the Johari Window:

The Johari Window model consists of a foursquare grid (think of taking a piece of paper and dividing it into four parts by drawing one line down the middle of the paper from top to bottom, and another line through the middle of the paper from side-to-side). This is shown in the diagram below:



Using the Johari model, each person is represented by their own four-quadrant, or four-pane, window. Each of these contains and represents personal information – feelings, motivation – about the person, and shows whether the information is known or not known by themselves or other people.

The four quadrants are:

Quadrant 1: Open Area
What is known by the person about him/herself and is also known by others.

Quadrant 2: Blind Area, or "Blind Spot"
What is unknown by the person about him/herself but which others know. This can be simple information, or can involve deep issues (for example, feelings of inadequacy, incompetence, unworthiness, rejection) which are difficult for individuals to face directly, and yet can be seen by others.

Quadrant 3: Hidden or Avoided Area
What the person knows about him/herself that others do not.

Quadrant 4: Unknown Area
What is unknown by the person about him/herself and is also unknown by others.

The process of enlarging the open quadrant vertically is called self-disclosure, a give and take process between the person and the people he/she interacts with.

As information is shared, the boundary with the hidden quadrant moves downwards. And as other people reciprocate, trust tends to build between them.

Tip 1:
Don't be rash in your self-disclosure. Disclosing harmless items builds trust. However, disclosing information which could damage people's respect for you can put you in a position of weakness.

How to Use the Tool

The process of enlarging the open quadrant horizontally is one of feedback. Here the individual learns things about him- or her-self that others can see, but he or she can't.

Tip 2:
Be careful in the way you give feedback. Some cultures have a very open and accepting approach to feedback. Others don't. You can cause incredible offence if you offer personal feedback to someone who's not used to it. Be sensitive, and start gradually.

If anyone is interested in learning more about this individual, they reciprocate by disclosing information in their hidden quadrant.

For example, the first participant may disclose that he/she is a runner. The other participant may respond by adding that he/she works out regularly at the local gym, and may then disclose that the gym has recently added an indoor jogging track for winter runners.

As your levels of confidence and self-esteem rises, it is easier to invite others to comment on your blind spots. Obviously, active listening skills are useful in this exercise.

The Johari Window in a Team Context

Keep in mind that established team members will have larger open areas than new team members. New team members start with smaller open areas because little knowledge about the new team member has yet been shared. The size of the Open Area can be expanded horizontally into the blind space, by seeking and actively listening to feedback from other group members.

Group members should strive to assist a team member in expanding their Open Area by offering constructive feedback. The size of the Open Area can also be expanded vertically downwards into the hidden or avoided space by the sender's disclosure of information, feelings, etc about himself/herself to the group and group members.

Also, group members can help a person expand their Open Area into the hidden area by asking the sender about himself/herself. Managers and team leaders play a key role here, facilitating feedback and disclosure among group members, and by providing constructive feedback to individuals about their own blind areas.

Key Points

In most cases, the aim in groups should be to develop the Open Area for every person.

Working in this area with others usually allows for enhanced individual and team effectiveness and productivity. The Open Area is the 'space' where good communications and cooperation occur, free from confusion, conflict and misunderstanding.

Self-disclosure is the process by which people expand the Open Area vertically. Feedback is the process by which people expand this area horizontally.

By encouraging healthy self-disclosure and sensitive feedback, you can build a stronger and more effective team.

4.3 Better Public Speaking and Presentation

Ensure Your Words are Always Understood

Think of the last really memorable talk or presentation that you attended. Now, was that easy to do, or did you really have to rack your brains to remember one? Sadly, too many presentations are easy to forget. And that's a big problem because the only reason the presenter gave the talk was to communicate something to you!

However, there are three basic things that you can do to ensure that your verbal messages are understood – and remembered – time and time again.

Although somewhat obvious and deceptively simple, these are:

- Understand the purpose of the presentation
- Keep the message clear and concise
- Be prepared
- Be vivid when delivering the message.

Understand What You Want to Achieve

Before you start working on your talk or presentation, it's vital that you really understand what you want to say, who you want to tell and why they might want to hear it. To do this, ask yourself: **Who? What? How? When? Where? Why?**

Who are you speaking to? What are their interests, presuppositions and values? What do they share in common with others; how are they unique?

What do you wish to communicate? One way of answering this question is to ask yourself about the 'success criteria'. How do you know if and when you have successfully communicated what you have in mind?

How can you best convey your message? Language is important here, as are the nonverbal cues discussed earlier. Choose your words and your nonverbal cues with your audience in mind. Plan a beginning, middle and end. If time and place allow, consider and prepare audio-visual aids.

When? Timing is important here. Develop a sense of timing, so that your contributions are seen and heard as relevant to the issue or matter at hand. There is a time to speak and a time to be silent. 'It's better to be silent than sing a bad tune.'

Where? What is the physical context of the communication in mind? You may have time to visit the room, for example, and rearrange the furniture. Check for availability and visibility if you are using audio or visual aids.

Why? In order to convert hearers into listeners, you need to know why they should listen to you – and tell them if necessary. What disposes them to listen? That implies that you know yourself why you are seeking to communicate – the value or worth or interest of what you are going to say.

Keep it Simple

When it comes to wording your message, less is more. You're giving your audience headlines. They don't need to and are usually not expecting to become experts on the subject as a result of hearing your talk.

If you're using slides, limit the content of each one to a few bullet points, or one statement or a very simple diagram.

Be Prepared

Preparation is underrated. In fact, it is one of the most important factors in determining your communication successes. When possible, set meeting times and speaking and presentation times well in advance, thus allowing yourself the time you need to prepare your communications, mindful of the entire communication process (source, encoding, channel, decoding, receiver, feedback and context). By paying close attention to each of these stages and preparing accordingly, you ensure your communications will be more effective and better understood.

Of course, not all communications can be scheduled. In this case, preparation may mean having a good, thorough understanding of the office goings-on, enabling you to communicate with the knowledge you need to be effective, both through verbal and written communications.

Unforgettable Delivery

Your delivery of your speech or presentation will make or break it, no matter how well you've prepared and crafted your clear, concise message. Some useful tips for keeping your presentation vivid include:

- Use examples to bring your points to life
- Keep your body language up-beat – don't stay stuck behind a rostrum
- Don't talk to fast. Less is more here too. Pauses are effective.
- Use a variety of tones of voice
- Use visual aids.

4.4 Writing Skills

Before You Write It Down, Know This

Many people are intimidated by writing. Even so, there are times when writing is the best way to communicate, and often the only way to get your message across.

Write With Necessary Caution

When writing, remember that once something is in written form, it cannot be taken back. Communicating this way is concrete than verbal communications, with less room for error and even less room for mistakes. This presents written communicators with additional challenges, including spelling, grammar, punctuation, even writing style and actual wording.

Thankfully, today's technology makes memo, letter and proposal writing much easier by providing reliable tools that check and even correct misspelled words and incorrect grammar use. Unfortunately, these tools are not foolproof and will require your support, making your knowledge in this area important.

The Importance of "Style"

Some of the most basic tips to remember when writing include:

- Avoid slang words
- Try not to use abbreviations (unless appropriately defined)
- Steer away from the symbols (such as ampersands [&])
- Clichés should be avoided, or at the very least, used with caution
- Brackets are used to play down words or phrases
- Dashes are generally used for emphasis
- Great care should ALWAYS be taken to spell the names of people and companies correctly
- Numbers should be expressed as words when the number is less than 10 or is used to start a sentence (example: Ten years ago, my brother and I…). The number 10, or anything greater than 10, should be expressed as a figure (example: My brother has 13 Matchbox cars.)
- Quotation marks should be placed around any directly quoted speech or text and around titles of publications
- Keep sentences short

While these tips cover the most common mistakes made when writing letters, memos and reports, they in no way cover everything you need to know to ensure your written communications are accurate and understood.

While this takes some practice, there are many sources available to assist with writing style, including *The Elements of Style*, by Strunk and White. One glance in any newsroom or on the desk of even the most accomplished writers and you are sure to find this small, easy-to-understand, no-nonsense guide to writing. It is clear, concise and perhaps the best book of its kind. If you plan on writing a great deal of letters or even proposals, it is strongly recommended that you pick up this nifty guide, which by the way, will fit in your shirt pocket.

Letter Writing Hints

When writing letters, it is best to address the letter to an individual. And, when beginning the letter with a personal name, be sure to end it with an appropriate closing, such as 'Sincerely yours'. If you cannot obtain an individual's name, consider ending it with a more generic (less personal) closing, such as 'With kindest regards'.

For normal business letters, your letter should start with an overall summary, showing in the first paragraph why the letter is relevant to the reader. It's not a good practice to make the reader go past the first paragraph to find out why the letter was sent to them.

The body of the letter needs to explain the reason for the correspondence, including any relevant background and current information. Make sure the information flows logically, ensuring you are making your points effectively.

The closing of the letter is the final impression you leave with the reader. End with an action point, such as 'I will call you later this week to discuss this further'.

The Importance of Careful Proofing

Perhaps the most important thing to remember when writing a letter is to check it thoroughly when it is completed. Even when you think it is exactly what you want, read it one more time. This "unwritten" rule holds true for everything you write – memos, letters, proposals, etc.

Use both the grammar and spell check on your computer, paying very, very close attention to every word highlighted. Do not place total faith on your computer here. Instead, you should have both a dictionary and thesaurus (printed or online) to hand to double-check everything your computer's editing tools highlight, as these tools are certainly not always reliable, for a variety of reasons.

When checking your written communications, make sure the document is clear and concise. Is there anything in the written communication that could be misinterpreted? Does it raise unanswered questions or fail to make the point you need to get across?

Can you cut down on the number of words used? For instance, don't use 20 words when you can use 10. While you do not want to be curt or abrupt, you do not want to waste the reader's time with unnecessary words or phrases.

Is your written communication well organized? Does each idea proceed logically to the next? Would some additional headings help? Make sure your written communications are easy to read and contain the necessary information, using facts where needed and avoiding information that is not relevant. Again, outline the course of action you expect, such as a return call or visit.

Close appropriately, making sure to include your contact information. While this may seem obvious, it is sometimes overlooked and can make your written communications look amateurish. This can diminish your chances of meeting your written communication's goals.

4.5 Effective Email
How to Communicate Powerfully by Email

When you're trying to locate some information in an e-mail someone sent you a few weeks back, what helps you find it quickly? If the sender included the information you want in a long message covering lots of points, the chances are that it will take you time to find it. Worse, if the sender is someone you communicate with regularly, and he or she just pressed Reply to a previous message about a different point, the heading of the mail you need won't actually be related to the information you want.

There are a few simple rules to ensure that your emails are read in the first place and stay useful to the recipient.

Subject Lines are Headlines

The headline in a newspaper does two things: It grabs your attention and informs you what the article is about so you can decide whether you want to read further. Email subject lines need to do the same thing. Use the subject line to inform the receiver of EXACTLY what the email is about in a few well-chosen words.

Because everyone gets emails they do not want (SPAM, etc.), appropriate use of the subject line increases the chances your email will be read and not deleted without so much as a glance.

Of course, just as it would be ridiculous to publish a newspaper without headlines, never leave the subject line blank.

Make One Point per Email

The beauty of email, compared with letters, is that it doesn't cost any more to send several mails than it does to send one. So, if you need to communicate with someone about several matters, write a separate email on each subject. That way your correspondent can reply to each one in the appropriate time-frame. One topic might only require a short reply that he or she can make straight away. Another topic might require more research. By writing separate emails, you get clearer answers.

However, as with traditional business letters, the email should be clear and concise, with the purpose of the email detailed in the very first paragraph. Sentences should be kept short and to the point.

The body of the email should contain all pertinent information (see our article on Writing Skills) and should be direct and informative.

Specify the Response You Want

Make sure to include any call to action you desire, such as a phone call or follow-up appointment. Then, make sure you include your contact information, including your name, title, and phone numbers. Do this even with internal messages: The easier you make it for someone else to respond (i.e. if they don't have to look up your phone number elsewhere), the more likely they are to do so.

Be a Good Correspondent

If you regularly correspond using email, make sure to clean out your email inbox at least once each day. This is a simple act of courtesy and will also serve to encourage senders to return your emails in a timely manner.

If a lengthy response is required to an email, but you don't have the time to pull together the information required now, send a holding reply saying that you have received the message, and indicating when you will respond fully.

Always set your Out of Office agent when you are going to be away from your email for a day or more.

Internal Email

Internal email should be checked regularly throughout the working day and returned in a much quicker manner as it often involves timely projects, immediate updates, meeting notes, etc. Nonetheless, internal emails, just like other emails, should not be informal. Remember, these are written forms of communication that can be printed out and viewed by others than those originally intended for. Always use your spell checker, and avoid slang.

4.6 Active Listening
Hear What People are Really Saying

It is obvious to say that if you have poor interpersonal communications skills (which include active listening), your productivity will suffer simply because you do not have the tools needed to influence, persuade and negotiate – all necessary for workplace success. Lines of communications must be open between people who rely on one another to get work done.

Considering this, you must be able to listen attentively if you are to perform to expectations, avoid conflicts and misunderstandings, and to succeed – in any arena. Following are a few short tips to help you enhance your communications skills and to ensure you are an active listener:

1. Start by Understanding Your Own Communication Style

Good communication skills require a high level of self-awareness. Understanding your personal style of communicating will go a long way toward helping you to create good and lasting impressions on others. By becoming more aware of how others perceive you, you can adapt more readily to their styles of communicating. This does not mean you have to be a chameleon, changing with every personality you meet. Instead, you can make another person more comfortable with you by selecting and emphasizing certain behaviors that fit within your personality and resonate with another. In doing this, you will prepare yourself to become an active listener.

2. Be an Active Listener

People speak at 100 to 175 words per minute (WPM), but they can listen intelligently at up to 300 words per minute. Since only a part of our mind is paying attention, it is easy to go into mind drift – thinking about other things while listening to someone. The cure for this is active listening – which involves listening with a purpose. It may be to gain information, obtain directions, understand others, solve problems, share interest, see how another person feels, show support, etc.

If you're finding it particularly difficult to concentrate on what someone is saying, try repeating their words mentally as they say it – this will reinforce their message and help you control mind drift.

3. Use Nonverbal Communication

Use nonverbal behaviors to raise the channel of interpersonal communication. Nonverbal communication is facial expressions like smiles, gestures, eye contact, and even your posture. This shows the person you are communicating with that you are indeed listening actively and will prompt further communications while keeping costly, time-consuming misunderstandings at a minimum.

4. Give Feedback

Remember that what someone says and what we hear can be amazingly different! Our personal filters, assumptions, judgments, and beliefs can distort what we hear. Repeat back or summarize to ensure that you understand. Restate what you think you heard and ask, "Have I understood you correctly?" If you find yourself responding emotionally to what someone said, say so, and ask for more information: "I may not be understanding you correctly, and I find myself taking what you said personally. What I thought you just said is XXX; is that what you meant?"

Feedback is a verbal communications means used to clearly demonstrate you are actively listening and to confirm the communications between you and others. Obviously, this serves to further ensure the communications are understood and is a great tool to use to verify everything you heard while actively listening.

4.7 Running Effective Meetings

Meetings are wonderful tools for generating ideas, expanding on thoughts and managing group activity. But this face-to-face contact with team members and colleagues can easily fail without adequate preparation and leadership.

The Importance of Preparation

To ensure everyone involved has the opportunity to provide their input, start your meeting off on the right foot by designating a meeting time that allows all participants the time needed to adequately prepare.

Once a meeting time and place has been chosen, make yourself available for questions that may arise as participants prepare for the meeting. If you are the meeting leader, make a meeting agenda, complete with detailed notes.

In these notes, outline the goal and proposed structure of the meeting, and share this with the participants. This will allow all involved to prepare and to come to the meeting ready to work together to meet the goal(s) at hand.

The success of the meeting depends largely on the skills displayed by the meeting leader. To ensure the meeting is successful, the leader should:

- Issue an agenda
- Start the discussion and encourage active participation
- Work to keep the meeting at a comfortable pace – not moving too fast or too slow
- Summarize the discussion and the recommendations at the end of each logical section
- Ensure all participants receive minutes promptly

While these tips will help ensure your meeting is productive and well-received, there are other important areas that need to be touched on to make sure your meeting and negotiation skills are fine-tuned.

Managing a Meeting

Choosing the right participants is key to the success of any meeting. Make sure all participants can contribute and choose good decision-makers and problem-solvers. Try to keep the number of participants to a maximum of 12, preferably fewer. Make sure the people with the necessary information for the items listed in the meeting agenda are the ones that are invited.

Tip:
Stop for a minute to consider the hourly cost to your organization of the people attending your meeting. You'll realize that calling a meeting is expensive, so it's important to ensure that every person attending and every minute of your meeting adds value. So don't invite people who won't participate but will simply report back to their boss or team (sending a copy of the minutes will be a more effective way of achieving this). Equally, don't use meetings to tell people things that could be communicated just as effectively by email or memo.

If you are the leader, work diligently to ensure everyone's thoughts and ideas are heard by guiding the meeting so that there is a free flow of debate with no individual dominating and no extensive discussions between two people. As time dwindles for each item on the distributed agenda, you may find it useful to stop the discussion, then quickly summarize the debate on that agenda item and move on the next item on the agenda.

When an agenda item is resolved or action is agreed upon, make it clear who in the meeting will be responsible for this. In an effort to bypass confusion and misunderstandings, summarize the action to be taken and include this in the meeting's minutes.

Time Keeping

Meetings are notorious for eating up people's time. Here are some ways of ensuring that time is not wasted in meetings:

- Start on time.
- Don't recap what you've covered if someone comes in late: doing so sends the message that it is OK to be late for meetings, and it wastes everyone else's valuable time.
- State a finish time for the meeting and don't over-run.

To help stick to the stated finish time, arrange your agenda in order of importance so that if you have to omit or rush items at the end to make the finish time, you don't omit or skimp on important items.

Finish the meeting before the stated finish time if you have achieved everything you need to.

Issuing Minutes

Minutes record the decisions of the meeting and the actions agreed. They provide a record of the meeting and, importantly, they provide a review document for use at the next meeting so that progress can be measured – this makes them a useful disciplining technique as individuals' performance and non-performance of agreed actions is given high visibility.

The style of the minutes issued depends on the circumstances – in situations of critical importance and where the record is important, you may need to take detailed minutes. Where this is not the case, then minutes can be simple lists of decisions made and of actions to be taken (with the responsible person identified). Generally, they should be as short as possible as long as all key information is shown – this makes them quick and easy to prepare and digest.

It is always impressive if the leader of a meeting issues minutes within 24 hours of the end of the meeting – it's even better if they are issued on the same day.

4.8 Ice Breakers
Getting Everyone to Contribute at the Start of a Successful Event

Ice Breakers can be an effective way of starting a training session or team-building event. As interactive and often fun sessions run before the main proceedings, they help people get to know each other and buy into the purpose of the event.

If an ice breaker session is well-designed and well-facilitated, it can really help get things off to a great start. By getting to know each other, getting to know the facilitators and learning about the objectives of the event, people can become more engaged in the proceedings and so contribute more effectively towards a successful outcome.

But have you ever been to an event when the ice breaker session went badly? Just as a great ice breaker session can smooth the way for a great event, so a bad ice breaker session can be a recipe for disaster. A bad ice breaker session is at best simply a waste of time, or worse an embarrassment for everyone involved.

As a facilitator, the secret of a successful icebreaking session is to keep it simple: Design the session with specific objectives in mind and make sure the session is appropriate and comfortable for everyone involved.

This article helps you think through the objectives of your ice breaker session, and then suggests various types of ice breaker you might use. As a facilitator, make sure your ice breakers are remembered for the right reasons – as a great start to a great event!

When to Use Ice breakers
As the name suggests, an ice breaker session is designed to "break the ice" at an event or meeting. The technique is often used when people who do not usually work together, or may not know each other at all, meet for a specific, common purpose.

Consider using an ice breaker when:

- Participants come from different backgrounds;
- People need to bond quickly so as to work towards a common goal;
- Your team is newly formed;
- The topics you are discussing are new or unfamiliar to many people involved; or
- As facilitator you need to get to know participants and have them know you better.

So What's the "Ice"?
When designing your ice breaker, think about the "ice" that needs to be broken.

If you are bringing together liked-minded people, the "ice" may simply reflect the fact that people have not yet met.

If you are bringing together people of different grades and levels in your organization for an open discussion, the "ice" may come from the difference in status between participants.

If you are bringing together people of different backgrounds, cultures and outlooks for work within your community, then the "ice" may come from people's perceptions of each other.

You'll need to handle these differences sensitively. Only focus on what's important to your event. (Remember, you want to break some ice for your event, not uncover the whole iceberg, or bring about world peace!)

And as you move on to design and facilitate the event, it's always best to focus on similarities (rather than differences), such as a shared interest in the event's outcome.

Designing Your Ice breaker

The key to a successful ice breaker is to make sure the ice breaker is specifically focused on meeting your objectives and appropriate to the group of people involved.

Once you have established what the "ice" is, the next step is to clarify the specific objectives for your ice breaker session.

For example, when meeting to solve problems at work, the ice breaker objectives may be:

"To establish a productive working environment for today's event with good participation from everyone involved, irrespective of their level or job role in the organization."

With clear objectives, you can start to design the session. Ask yourself questions about how you will meet your objectives. For example:

- "How will people become comfortable with contributing?
- "How will you establish a level playing field for people with different levels and jobs?
- "How will you create a common sense of purpose?..."

These questions can be used as a check list once you have designed the ice breaker session:

"Will this ice breaker session help people feel comfortable… establish a level playing field… etc"

As a further check, you should also ask yourself how each person is likely to react to the session. Will participants feel comfortable? Will they feel the session is appropriate and worthwhile?

Example Ice Breakers

There are many types of ice breakers, each suited to different types of objectives. Here we look at a few of the more popular types of ice breakers and how they can be used.

Introductory Ice Breakers

Introductory ice breakers are used to introduce participants to each other and to facilitate conversation amongst the participants.

The Little Known Fact: Ask participants to share their name, department or role in the organization, length of service, and one little known fact about themselves.

This "little known fact" becomes a humanizing element that can help break down differences such as grade / status in future interaction.

True or False: Ask your participants to introduce themselves and make three or four statements about themselves, one of which is false. Now get the rest of the group to vote on which fact is false.

As well as getting to know each other as individuals, this ice breaker helps to start interaction within the group.

Interviews: Ask participants to get into twos. Each person then interviews his or her partner for a set time while paired up. When the group reconvenes, each person introduces their interviewee to the rest of the group.

Problem Solvers: Ask participants to work in small groups. Create a simple problem scenario for them to work on in a short time. Once the group have analyzed the problem and prepared their feedback, ask each group in turn to present their analysis and solutions to the wider group.

> **Tip:**
> Choose a fairly simple scenario that everyone can contribute to. The idea is not to solve a real problem but to "warm up" the group for further interaction or problem solving later in the event. The group will also learn each other's styles of problem-solving and interaction.

Team-Building Ice Breakers
Team-building ice breakers are used to bring together individuals who are in the early stages of team building. This can help the people start working together more cohesively towards shared goals or plans.

The Human Web: This ice breaker focuses on how people in the group inter-relate and depend on each other.

The facilitator begins with a ball of yarn. Keeping one end, pass the ball to one of the participants, and the person to introduce him- or her-self and their role in the organization. Once this person has made their introduction, ask him or her to pass the ball of yarn on to another person in the group. The person handing over the ball must describe how he/she relates (or expects to relate) to the other person. The process continues until everyone is introduced.

To emphasis the interdependencies amongst the team, the facilitator then pulls on the starting thread and everyone's hand should move.

Ball Challenge: This exercise creates a simple, timed challenge for the team to help focus on shared goals, and also encourages people to include other people.

The facilitator arranges the group in a circle and asks each person to throw the ball across the circle, first announcing his or her own name, and then announcing the name of the person to whom they are throwing the ball (the first few times, each person throws the ball to someone whose name they already know.) When every person in the group has thrown the ball at least once, it's time to set the challenge – to pass the ball around all group members as quickly as possible. Time the process, then ask the group to beat that timing. As the challenge progresses, the team will improve their process, for example by standing closer together. And so the group will learn to work as a team.

Hope, Fears and Expectations: Best done when participants already have a good understanding of their challenge as a team. Group people into 2s or 3s, and ask people to discuss their expectations for the event or work ahead, then what they fears and their hopes. Gather the group's response by collating 3-4 hopes, fears and expectation from pairing or threesome.

Topic exploration ice breakers
Topic exploration ice breakers can be used to explore the topic at the outset, or perhaps to change pace and re-energize people during the even.

Word association: This ice breaker helps people explore the breadth of the area under discussion. Generate a list of words related to the topic of your event or training. For example, in a health and safety workshop, ask participants what words or phrases come to mind relating to "hazardous materials". Participants may suggest: "danger," "corrosive," "flammable," "warning," "skull and crossbones," etc. Write all suggestions on the board, perhaps clustering by theme. You can use this opportunity to introduce essential terms and discuss the scope (what's in and what's out) of your training or event.

Burning questions: This ice breaker gives each person the opportunity to ask key questions they hope to cover in the event or training. Again you can use this opportunity to discuss key terminology and scope. Be sure to keep the questions and refer back to them as the event progresses and concludes.

Brainstorm: Brainstorming can be used as an ice breaker or re-energizer during an event. If people are getting bogged down in the detail during problem solving, for example, you can change pace easily by running a quick-fire brainstorming session. If you are looking for answers to customer service problems, try brainstorming how to create problems rather than solve them. This can help people think creatively again and gives the group a boost when energy levels are flagging.

4.9 Win-Win Negotiation
Finding a Fair Compromise

Worksheet

Negotiation skills help you to resolve situations where what you want conflicts with what someone else wants. The aim of negotiation is to explore the situation to find a solution that is acceptable to both parties.

There are different styles of negotiation, depending on circumstances. Where you do not expect to deal with people ever again and you do not need their goodwill, then it may be appropriate to 'play hardball', seeking to win a negotiation while the other person loses out. Many people go through this when they buy or sell a house – this is why house-buying can be such a confrontational and unpleasant experience. Similarly, where there is a great deal at stake in a negotiation (for example, in large sales negotiations), then it may be appropriate to prepare in detail and use a certain amount of subtle gamesmanship to gain advantage.

Both of these approaches are usually wrong for resolving disputes with people you have an ongoing relationship with: if one person plays hardball, then this disadvantages the other person – this may, quite fairly, lead to reprisal later. Similarly, using tricks and manipulation during a negotiation can severely undermine trust and damage teamwork. While a manipulative person may not get caught out if negotiation is infrequent, this is not the case when people work together on a frequent basis. Honesty and openness are the best policies in this case.

Preparing for a Successful Negotiation…

Depending on the scale of the disagreement, a level of preparation may be appropriate for conducting a successful negotiation.

For small disagreements, excessive preparation can be counter-productive because it takes time that is better used elsewhere. It can also be seen as manipulative because just as it strengthens your position, it can weaken the other person's.

If a major disagreement needs to be resolved, then it can be worth preparing thoroughly. Think through the following points before you start negotiating and note down your ideas on the Negotiation Worksheet from your *Worksheets and Templates Supplement*:

- **Goals:** What do you want to get out of the negotiation? What do you expect the other person to want?
- **Trades:** What do you and the other person have that you can trade? What do you each have that the other might want? What might you each be prepared to give away?
- **Alternatives:** If you don't reach agreement with the other person, what alternatives do you have? Are these good or bad? How much does it matter if you do not reach agreement?

Does failure to reach an agreement cut you out of future opportunities? What alternatives might the other person have?

- **Relationships:** What is the history of the relationship? Could or should this history impact the negotiation? Will there be any hidden issues that may influence the negotiation? How will you handle these?

- **Expected outcomes:** What outcome will people be expecting from this negotiation? What has the outcome been in the past, and what precedents have been set?

- **The consequences:** What are the consequences for you of winning or losing this negotiation? What are the consequences for the other person?

- **Power:** Who has what power in the relationship? Who controls resources? Who stands to lose the most if agreement isn't reached? What power does the other person have to deliver what you hope for?

- **Possible solutions:** Based on all of the considerations, what possible compromises might there be?

Style is Critical…

For a negotiation to be 'win-win', both parties should feel positive about the situation when the negotiation is concluded. This helps to maintain a good working relationship afterwards. This governs the style of the negotiation – histrionics and displays of emotion are clearly inappropriate because they undermine the rational basis of the negotiation and because they bring a manipulative aspect to them.

Despite this, emotion can be an important subject of discussion because people's emotional needs must fairly be met. If emotion is not discussed where it needs to be, then the agreement reached can be unsatisfactory and temporary. Be as detached as possible when discussing your own emotions – perhaps discuss them as if they belong to someone else.

Negotiating Successfully…

The negotiation itself is a careful exploration of your position and the other person's position, with the goal of finding a mutually acceptable compromise that gives you both as much of what you want as possible. People's positions are rarely as fundamentally opposed as they may initially appear – the other person may quite often have very different goals from the ones you expect!

In an ideal situation, you will find that the other person wants what you are prepared to trade, and that you are prepared to give what the other person wants.

If this is not the case and one person must give way, then it is fair for this person to try to negotiate some form of compensation for doing so – the scale of this compensation will often depend on the many of the factors we discussed above. Ultimately, both sides should feel comfortable with the final solution if the agreement is to be considered win-win.

Only consider win-lose negotiation if you don't need to have an ongoing relationship with the other party as, having lost, they are unlikely to want to work with you again. Equally, you should expect that if they need to fulfill some part of the deal in which you have "won" over them, they will probably be fairly uncooperative about it.

4.10 Speaking to an Audience
Communicate Complex Ideas Successfully

Speaking to an audience can be fun and exciting. However, lack of preparation or not clearly defining the presentation's goals and its audience can make even the best-intended presentation a complete disaster.

Preparation – The Key to Successful Speaking...

To ensure your presentation is effective, first determine your objective. Ask yourself:

- Why am I giving the presentation?
- What do I want the audience to take away from the presentation?

Second, determine your audience. Their familiarity with the presentation topic will determine the level at which you present your speech.

How to Structure Your Presentation

Once you have determined your presentation's objective and overall goal, as well as the audience, it's time to structure your presentation. You will need to start this process by determining the length of the presentation.

Take the allotted time and break it into smaller segments, with each segment tackling a specific task (all of which reflect the overall objective of the presentation). For example, the fist segment should be the presentation introduction. In this segment, you should give an overview of your presentation, or a short summary of your speech, explaining the topic, why you are covering this topic, and what you hope to accomplish.

The next segment should tackle the first item on your agenda, with the following segment tackling the following item on your agenda, and so on.

Once you have developed the introduction and outlined the following segments, spend some time thinking about the conclusion of the presentation. The introduction of the presentation and the conclusion of the presentation are the most important parts and should have the strongest impact.

Achieving Clarity and Impact

Keep your presentation short and simple. Your audience will not remember every point of your presentation, so highlight the most important parts. The longer the presentation, the higher the risk of boredom.

When in doubt, use the "tell 'em" structure:

- Tell them what you are going to tell them (For instance, "In this presentation I will show you…").
- Tell them the key points, expanding and illustrating each one, clearly and concisely.
- Tell them what you have told them (For instance, "In closing…" or "In summary…") and conclude.

Reinforce Your Message with Visual Aids

Next, consider the use of visual aids. Slide projectors, data projectors, video machines and computers should be tested out beforehand to make sure they are operating correctly and that you know how to use them.

Make sure you do not cram too much information onto any single visual. A good rule of thumb to follow is to keep each visual to six lines or less. Also, make sure any type or graphics are large enough the audience can see it clearly (from all seats) and make sure the colors used are easy on the eyes, taking into account the lighting.

A sad fact is that much of your authority will be judged by the quality of your slides – you need to make sure that their design supports the style of your message.

Overheads should be clearly marked and arranged in order beforehand. Flip charts should be prepared in advance when possible. When used during the presentation to take notes, make print large enough for all participants to see.

When using these various visuals, do not turn your back to the audience. Position yourself so you can use the visuals while facing your audience.

Arranging the Room

If possible, visit the room in which you will make the presentation well in advance. Determine seating (circle seating encourages interaction, rows of seats discourages interaction, etc.) and determine how the visual aids you choose will work. Consider lighting, space, even the temperature of the room. Consider placing notepads and pencils at each seat if participants need to take notes. Or, you may want to have glasses at each seat with a few pitchers of water if the presentation is going to last more than half of an hour. If you do this, make sure you allow time for bathroom breaks.

While you do not need to memorize your entire presentation, make yourself very, very familiar with it through several practice runs. Rehearse the presentation in its entirety as often as you can before delivering it to a live audience. The more you rehearse, the more confident you will be and the more fluent you will seem to your audience – if you know your subject matter and have adequately prepared, you will be able to deliver your message loud and clear.

When in doubt or nervous, stay focused on your purpose – helping your audience understand your message. Direct your thoughts to the subject at hand. The audience has come to hear your presentation and you will succeed!

Tips and Techniques

Tips to help make your presentation a smashing success:

- Avoid too many statistics and confusing information in your presentation. Instead, put this information in a handout for participants to refer to at a later date.

- If you forget your words, pause for a moment and remember your objective. While the words may not come right back to you, this will help keep you on track and may even help you to think of additional thoughts and ideas your audience will benefit from hearing.

- Visualize yourself succeeding.

- Begin by breathing.

- Before the presentation, focus on the needs of the audience.

- Take a public speaking course at a local college or university. These are oftentimes offered as night courses and are usually very inexpensive, while providing you with important skills that will enhance your confidence in this area.

- Videotape yourself going through the presentation. All you need to do this is a video camera and a tripod. Then, run through the video and make changes according to your thoughts on the taped presentation.

4.11 Presentation Planning Checklist

This presentation checklist will help you deliver successful presentation. This is adapted in part from *Business Communications: A Cultural and Strategic Approach* by Michael J. Rouse and Sandra Rouse.

Presentation:

- Does your introduction grab participant's attention and explain your objectives?
- Do you follow this by clearly defining the points of the presentation?
- Are these main points in logical sequence?
- Do these flow well?
- Do the main points need support from visual aids?
- Does your closing summarize the presentation clearly and concisely?
- Is the conclusion strong?
- Have your tied the conclusion to the introduction?

Delivery:

- Are you knowledgeable about the topic covered in your presentation?
- Do you have your notes in order?
- Where and how will you present (indoors, outdoors, standing, sitting, etc.)?
- Have you visited the presentation site?
- Have you checked your visual aids to ensure they are working and you know how to use them?

Appearance:

- Make sure you are dressed and groomed appropriately and in keeping with the audience's expectations.
- Practice your speech standing (or sitting, if applicable), paying close attention to your body language, even your posture, both of which will be assessed by the audience.

Visual Aids:

- Are the visual aids easy to read and easy to understand?
- Are they tied into the points you are trying to communicate?
- Can they be easily seen from all areas of the room?

Section 5: Memory Improvement

5. Introduction to Memory Improvement

The tools in this section help you to improve your memory. They help you both to remember facts accurately and to remember the structure of information.

The tools are split into two sections. Firstly you'll learn the memory techniques themselves. Secondly we'll look at how you can use them in practice to remember peoples names, languages, exam information, and so on.

As with other mind tools, the more practice you give yourself with these techniques, the more effectively you will use them. This section contains many of the memory techniques used by stage memory performers. With enough practice and effort, you may be able to have a memory as good. Even if you do not have the time needed to develop this quality of memory, many of the techniques here are useful in everyday life.

Mnemonics

'Mnemonic' is another word for memory tool. Mnemonics are techniques for remembering information that is otherwise quite difficult to recall: A very simple example is the '30 days hath September' rhyme for remembering the number of days in each calendar month.

The idea behind using mnemonics is to encode difficult-to-remember information in a way that is much easier to remember.

Our brains evolved to code and interpret complex stimuli such as images, colors, structures, sounds, smells, tastes, touch, positions, emotions and language. We use these to make sophisticated models of the world we live in. Our memories store all of these very effectively.

Unfortunately, a lot of the information we have to remember in modern life is presented differently – as words printed on a page. While writing is a rich and sophisticated medium for conveying complex arguments, our brains do not easily encode written information, making it difficult to remember.

This section of Mind Tools shows you how to use all the memory resources available to you to remember information in a highly efficient way.

Using Your Whole Mind to Remember

The key idea is that by coding information using vivid mental images, you can reliably code both information and the structure of information. And because the images are vivid, they are easy to recall when you need them.

The techniques explained later on in this section show you how to code information vividly, using stories, strong mental images, familiar journeys, and so on.

You can do the following things to make your mnemonics more memorable:

- Use positive, pleasant images. Your brain often blocks out unpleasant ones
- Use vivid, colorful, sense-laden images – these are easier to remember than drab ones
- Use all your senses to code information or dress up an image. Remember that your mnemonic can contain sounds, smells, tastes, touch, movements and feelings as well as pictures.
- Give your image three dimensions, movement and space to make it more vivid. You can use movement either to maintain the flow of association, or to help you to remember actions.
- Exaggerate the size of important parts of the image
- Use humor! Funny or peculiar things are easier to remember than normal ones.

- Similarly, rude rhymes are very difficult to forget!
- Symbols (red traffic lights, pointing fingers, road signs, etc.) can code quite complex messages quickly and effectively

Designing Mnemonics: Imagination, Association and Location

The three fundamental principles underlying the use of mnemonics are imagination, association and location. Working together, you can use these principles to generate powerful mnemonic systems.

Imagination: is what you use to create and strengthen the associations needed to create effective mnemonics. Your imagination is what you use to create mnemonics that are potent for you. The more strongly you imagine and visualize a situation, the more effectively it will stick in your mind for later recall. The imagery you use in your mnemonics can be as violent, vivid, or sensual as you like, as long as it helps you to remember.

Association: this is the method by which you link a thing to be remembered to a way of remembering it. You can create associations by:

- Placing things on top of each other
- Crashing things together
- Merging images together
- Wrapping them around each other
- Rotating them around each other or having them dancing together
- Linking them using the same color, smell, shape, or feeling

As an example, you might link the number 1 with a goldfish by visualizing a 1-shaped spear being used to spear it.

Location: gives you two things: a coherent context into which you can place information so that it hangs together, and a way of separating one mnemonic from another. By setting one mnemonic in a particular town, I can separate it from a similar mnemonic set in a city. For example, by setting one in Wimbledon and another similar mnemonic with images of Manhattan, we can separate them with no danger of confusion. You can build the flavors and atmosphere of these places into your mnemonics to strengthen the feeling of location.

5.1 The Link and Story Methods
Remembering a Simple List

The Link Method is one of the easiest mnemonic techniques available. You use it by making simple associations between items in a list, linking them with a vivid image containing the items. Taking the first image, create a connection between it and the next item (perhaps in your mind smashing them together, putting one on top of the other, or suchlike.) Then move on through the list linking each item with the next.

The Story Method is very similar, linking items together with a memorable story featuring them. The flow of the story and the strength of the images give you the cues for retrieval.

How to Use the Tools

It is quite possible to remember lists of words using association only. However it is often best to fit the associations into a story: Otherwise by forgetting just one association you can lose the whole of the rest of the list.

Given the fluid structure of this mnemonic (compared with the peg systems explained later in this section) it is important that the images stored in your mind are as vivid as possible. See the introduction to this section for further information on making images strong and memorable.
Where a word you want to remember does not trigger strong images, use a similar word that will remind you of that word.

Example

You may want to remember this list of counties in the South of England: Avon, Dorset, Somerset, Cornwall, Wiltshire, Devon, Gloucestershire, Hampshire, and Surrey.

You could do this with two approaches, the Link Method and the Story Method:

Remembering with the Link Method
This would rely on a series of images coding information:

- An AVON (Avon) lady knocking on a heavy oak DOoR (Dorset)
- The DOoR opening to show a beautiful SuMmER landscape with a SETting sun (Somerset)
- The setting sun shines down onto a field of CORN (Cornwall)
- The CORN is so dry it is beginning to WILT (Wiltshire)
- The WILTing stalks slowly droop onto the tail of the sleeping DEVil (Devon).
- On the DEVil's horn a woman has impaled a GLOSsy (Gloucestershire) HAM (Hampshire) when she hit him over the head with it
- Now the Devil feels SoRRY (Surrey) he bothered her.

Note that there need not be any reason or underlying plot to the sequence of images: only images and the links between images are important.

Remembering with the Story Method:
Alternatively you could code this information by imaging the following story vividly:

An AVON lady is walking up a path towards a strange house. She is hot and sweating slightly in the heat of high SUMMER (Somerset). Beside the path someone has planted giant CORN in a WALL (Cornwall), but it's beginning to WILT (Wiltshire) in the heat. She knocks on the DOoR (Dorset), which is opened by the DEVil (Devon).

In the background she can see a kitchen in which a servant is smearing honey on a HAM (Hampshire), making it GLOSsy (Gloucestershire) and gleam in bright sunlight streaming in through a window. Panicked by seeing the Devil, the Avon lady screams 'SoRRY' (Surrey), and dashes back down the path.

Key Points

The Link Method is probably the most basic memory technique, and is very easy to understand and use. It works by coding information to be remembered into images and then linking these images together.

The story technique is very similar. It links these images together into a story. This helps to keep events in a logical order and can improve your ability to remember information if you forget the sequence of images.

Both techniques are very simple to learn. Unfortunately they are both slightly unreliable as it is easy to confuse the order of images or forget images from a sequence.

5.2 The Number/Rhyme Mnemonic
Remembering Simple Ordered Lists (A *popular peg system)*

The Number/Rhyme technique is a very simple way of remembering lists in order.

It is an example of a peg system using – a system where information is 'pegged' to a known sequence (here the numbers one to ten) to create pegwords. By doing this you ensure that you do not forget any facts, as gaps in information are immediately obvious. It also makes remembering images easier as you always know part of the mnemonic images.

At a simple level you can use it to remember things such as a list of English Kings or American Presidents in their precise order. At a more advanced level it can be used, for example, to code lists of experiments to be recalled in a science exam.

How to Use the Tool
The technique works by helping you to build up pictures in your mind, in which you represent numbers by things that rhyme with the number. You can then link these pictures to images of the things to be remembered.

The usual rhyming scheme is:

1. Bun
2. Shoe
3. Tree
4. Paw
5. Hive
6. Bricks
7. Heaven
8. Gate
9. Line
10. Hen

If you find that these images do not attract you or stick in your mind, then change them for something more meaningful.

Link these images to ones representing the things to be remembered. Often, the sillier the compound image, the more effectively you will remember it – see the introduction to this chapter to see how you can improve the image to help it stay clearly in your mind.

Example
For example, you could remember a chronological list of ten Greek philosophers as:

1. Parmenides – a BUN topped with grated yellow PARMEsan cheese
2. Heraclitus – a SHOE worn by HERACLes (Greek Hercules) glowing with a bright LIghT
3. Empedocles – A TREE from which the M-shaped McDonalds arches hang hooking up a bicycle PEDal
4. Democritus – think of a PAW print on the voting form of a DEMOCRaTic election
5. Protagoras – A bee HIVE being positively punched through (GORed?) by an atomic PROTon
6. Socrates – BRICKS falling onto a SOCk (with a foot inside!) from a CRATe.
7. Plato – A plate with angel's wings flapping around a white cloud
8. Aristotle – a friend called hARRY clutching a bOTtLE of wine vaulting over a gate
9. Zeno – A LINE of ZEN Buddhists meditating
10. Epicurus – a HEN's egg being mixed into an EPIleptic's CURe.

Try either visualizing these images as suggested, or if you do not like them, come up with images of your own. Once you have done this, try writing down the names of the philosophers on a piece of paper. You should be able to do this by thinking of the number, then the part of the image associated with the number, and then the whole image. Finally you can decode the image to give you the name of the philosopher.

If the mnemonic has worked, you should not only recall the names of all the philosophers in the correct order, but should also be able to spot where you have left them out of the sequence. Try it – it's easier than it sounds.

You can use a peg system like this as a basis for knowledge in an entire area. The example above could form the basis for knowledge of ancient philosophy. You could now associate images representing the projects, systems and theories of each philosopher with the images coding the philosophers' names.

Key Points

The Number/Rhyme technique is a very effective method of remembering lists. It works by 'pegging' the things to be remembered to images rhyming with the numbers 0 – 9. By driving the associations with numbers you have a good starting point in reconstructing the images, you are aware if information is missing, and you can pick up and continue the sequence from anywhere within the list.

5.3 The Number/Shape Mnemonic

Remembering Simple Ordered Lists

The Number/Shape system is very similar to the Number/Rhyme system. It is a very simple and effective way of remembering a list in a specific order. It is another example of a peg system based on pegword images.

How to Use the Tool

The technique works by helping you to build up pictures in your mind, in which the numbers are represented by images shaped like the number. You can then associate these with the things you want to remember using striking images.

One image scheme is shown below:

1. Candle, spear, stick
2. Swan (beak, curved neck, body)
3. Bifocal glasses, or part of a "love heart"
4. Sail of a yacht
5. A meat hook, a sea-horse facing right
6. A golf club
7. A cliff edge
8. An egg timer
9. A balloon with a string attached, flying freely
10. A hole

If you find that these images do not attract you or stick in your mind, then change them for something more meaningful to you.

As with the Number/Rhyme scheme, link these images to ones representing the things to be remembered.

In some cases these images may be more vivid than those in the number/rhyme scheme, and in other cases you may find the number/rhyme scheme more memorable. There is no reason why you cannot mix the most vivid images of each scheme together into your own compound scheme.

Example

We can use a list of more modern thinkers to illustrate the number/shape system:

1. Spinoza – a large CANDLE wrapped around with someone's SPINe
2. Locke – a SWAN trying to pick a LOCK with its wing
3. Hume – A HUMan child BREAST feeding
4. Berkeley – A SAIL on top of a large hooked and spiked BURR in the LEE of a cliff
5. Kant – a CAN of spam hanging from a meat HOOK
6. Rousseau – a kangaROO SEWing with a GOLF CLUB
7. Hegel – a crooked trader about to be pushed over a CLIFF, HaGgLing to try to avoid being hurt
8. Kierkegaard – a large EGG TIMER containing captain KIRK and a GuARD from the starship enterprise, as time runs out
9. Darwin – a BALLOON floating upwards, being blown fAR by the WINd
10. Marx – a HOLE with white chalk MARks around its edge

Key Points

The Number/Shape technique is a very effective method of remembering lists. It works by linking things to be remembered with the images representing the numbers 0 – 9. By using it in conjunction with the Number/Rhyme system, you can build potent images that can make very effective mnemonics.

5.4 The Alphabet Technique
Remembering Middle Length Lists

The Alphabet system is a peg memory technique similar to, but more sophisticated than, the Number/Rhyme system. It is a good method for remembering longer lists of items in a specific order, in such a way that you can tell if items are missing.

It works by associating images representing letters of the alphabet with images you create for the things to be remembered.

How to Use the Tool

When you are creating images for the letters of the alphabet, create images phonetically, so that the sound of the first syllable of the word is the name of the letter. For example, you might represent the letter 'k' with the word 'cake'.

Tony Buzan in his book *Use Your Perfect Memory* suggests using a system for creating vivid images that you can reconstruct if you forget them. He suggests taking the phonetic letter sound as the first consonant, and then, for the rest of the consonants in the word, using the first letters in alphabetical order that make a memorable word. For example for the letter 'S' (root 'Es') we would first see if any strong images presented themselves when we tried to create a word starting with 'EsA', 'EsB', 'EsC', 'EsD', 'EsE', etc.).

This approach has the advantage of producing an image that you can reconstruct if you forget it. You might, however, judge that this is an unnecessary complication of a relatively simple system. In any case it is best to select the strongest image that comes to mind and stick with it.

One image scheme is shown below:

A – Ace of spades
B – Bee
C – Sea
D – Diesel engine
E – Eel
F – Effluent
G – Jeans
H – H-Bomb, itch
I – Eye
J – Jade
K – Cake
L – Elephant
M – Empty
N – Entrance
O – Oboe
P – Pea
Q – Queue
R – Ark
S – Eskimo
T – Teapot
U – Unicycle
V – Vehicle
W – WC
X – X-Ray
Y – Wire
Z – Zulu

If you find that these images do not attract you or stick in your mind, then change them for something more meaningful to you.

Once you have firmly visualized these images and have linked them to their root letters, you can associate them with information to be remembered.

See the introduction to this chapter to see how you can improve these pictures to help them stay clearly in your mind.

Example

Continuing our mnemonic example of the names of philosophers, we will use the example of remembering a list of modern thinkers:

A – Ace – Freud – a crisp ACE being pulled out of a FRying pan (FRiED)
B – Bee – Chomsky – a BEE stinging a CHiMp and flying off into the SKY
C – Sea – Genette – a GENerator being lifted in a NET out of the SEA
D – Diesel – Derrida – a DaRing RIDer surfing on top of a DIESEL train
E – Eagle – Foucault – Bruce Lee fighting off an attacking EAGLE with kung FU
F – Effluent- Joyce – environmentalists JOYfully finding a plant by an EFFLUENT pipe
G – Jeans – Nietzche – a holey pair of JEANS with a kNEe showing through
H – H-Bomb – Kafka – a grey civil service CAFe being blown up by an H-Bomb
etc.

Key Points

The Alphabet Technique links the items to be remembered with images of the letters A – Z. This allows you to remember a medium length list in the correct order. By pegging the items to be remembered to letters of the alphabet you know if you have forgotten items, and know the cues to use to trigger their recall.

5.5 The Journey System
Remembering Long Lists

The journey method is a powerful, flexible and effective mnemonic based around the idea of remembering landmarks on a well-known journey. It combines the narrative flow of the Link Method and the structure and order of the Peg Systems into one very powerful system.

How to Use the Tool

You use the Journey Method by associating information with landmarks on a journey that you know well. This could, for example, be your journey to work in the morning; the route you use to get to the front door when you get up; the route to visit your parents; or a tour around a holiday destination. Once you are familiar with the technique you may be able to create imaginary journeys that fix in your mind, and apply these.

To use this technique most effectively, it is often best to prepare the journey beforehand. In this way the landmarks are clear in your mind before you try to commit information to them. One of the ways of doing this is to write down all the landmarks that you can recall in order on a piece of paper. This allows you to fix these landmarks as the significant ones to be used in your mnemonic, separating them from others that you may notice as you get to know the route even better.

To remember a list of items, whether these are people, experiments, events or objects, all you need do is associate these things with the landmarks or stops on your journey.

This is an extremely effective method of remembering long lists of information. With a sufficiently long journey you could, for example, remember elements on the periodic table, lists of Kings and Presidents, geographical information, or the order of cards in a shuffled pack.

The system is extremely flexible: all you need do to remember many items is to remember a longer journey with more landmarks. To remember a short list, only use part of the route!

One advantage of this technique is that you can use it to work both backwards and forwards, and start anywhere within the route to retrieve information.

You can use the technique well with other mnemonics. This can be done either by building complex coding images at the stops on a journey, or by linking to other mnemonics at each stop. You could start other journeys at each landmark. Alternatively, you may use a peg system to organize lists of journeys, etc.

See the introduction to this section for information on how to enhance the images used for this technique.

Example

You may, as a simple example, want to remember something mundane like this shopping list:

Coffee, salad, vegetables, bread, kitchen paper, fish, chicken breasts, pork chops, soup, fruit, bath tub cleaner.

You could associate this list with a journey to a supermarket. Mnemonic images could be:

1. Front door: spilt coffee grains on the doormat
2. Rose bush in front garden: growing lettuce leaves and tomatoes around the roses
3. Car: with potatoes, onions and cauliflower on the driver's seat
4. End of the road: an arch of French bread over the road
5. Past garage: with its sign wrapped in kitchen roll
6. Under railway bridge: from which haddock and cod are dangling by their tails
7. Traffic lights: chickens squawking and flapping on top of lights
8. Past church: in front of which a pig is doing karate, breaking boards
9. Under office block: with a soup slick underneath: my car tires send up jets of tomato soup as I drive through it
10. Past car park: with apples and oranges tumbling from the top level
11. Supermarket car park: a filthy bath tub is parked in the space next to my car!

Key Points

The journey method is a powerful, effective method of remembering lists of information, by imagining images and events at stops on a journey.

As the journeys used are distinct in location and form, one list remembered using this technique is easy to distinguish from other lists.

To use this technique you need to invest some time in preparing journeys clearly in your mind. This investment pays off many times over by the application of the technique.

5.6 The Roman Room System
Remembering Grouped Information

The Roman Room technique, also known as the Method of Loci, is an ancient and effective way of remembering information where its structure is not important. As an example, it serves as the basis of one of the powerful mnemonic systems used to learn languages.

How to Use the Tool

To use the technique, imagine a room that you know, such as your sitting room, bedroom, office or classroom. Within the room are objects. Associate images representing the information you want to remember with the objects in the room. To recall information, simply take a tour around the room in your mind, visualizing the known objects and their associated images.

The technique can be expanded by going into more detail, and keying information to be remembered to smaller objects. Alternatively you can open doors from your room into other rooms and use the objects in them as well. As you need them, you can build extensions to your rooms in your imagination, and fill them with objects that would logically be there.

You can use other rooms to store other categories of information.

There is no need to restrict this information to rooms: you could use a landscape or a town you know well, and populate it with memory images.

The Roman Room technique is just one way of representing your cognitive map of the information in an easily accessible way.

See the introduction to this chapter for information on how to enhance the images used for this technique.

Example

For example, I can use my sitting room as a basis for the technique. In this room I have the following objects:

Table, lamp, sofa, large bookcase, small bookcase, CD rack, telephone, television, DVD player, chair, mirror, black and white photographs, etc.

I may want to remember a list of World War I war poets:

Rupert Brooke, G.K. Chesterton, Walter de la Mare, Robert Graves, Rudyard Kipling, Wilfred Owen, Siegfried Sassoon, W.B. Yates

I could visualize walking through my front door. Within this image, someone has painted a picture on it showing a scene from the Battle of the Somme. In the center of the picture is a man sitting in a trench writing in a dirty exercise book.

I walk into the sitting room, and look at the table. On the top is RUPERT the Bear sitting in a small BROOK (we do not need to worry about where the water goes in our imagination!) This codes for Rupert Brooke.

Someone seems to have done some moving: a CHEST has been left on the sofa. Some jeans (Alphabet System: G=Jeans) are hanging out of one drawer, and some cake has been left on the top (K=Cake). This codes for G K Chesterton.

The lamp has a small statuette of a brick WALL over which a female horse (MARE) is about to jumping. This codes for Walter de la Mare.

Key Points

The Roman Room technique is similar to the Journey method. It works by pegging images coding for information to known things, in this case to objects in a room.

The Roman Room technique is most effective for storing lists of unlinked information, while the journey method is better for storing lists of ordered items.

5.7 The Major System – Remembering Very Long Numbers

The Major Memory System is one of the most powerful memory systems available. It takes a lot of time to master, but once learned is very powerful. The technique often forms the basis of some of the extraordinary, almost magical, memory feats performed by stage magicians and memory performers.

The system works by converting number sequences into nouns, nouns into images, and linking images into sequences. These sequences can be very complex and detailed.

How to Use the Tool

The building blocks of the system are the association of the numbers below with the following consonant sounds:

0. s, z, soft-c – remember as 'z is first letter of zero'
1. d, t, th – remember as letters with 1 downstroke
2. n – remember as having 2 downstrokes
3. m – has three downstrokes
4. r – imagine a 4 and an R glued together back-to-back
5. L – imagine the 5 propped up against a book end (L)

6. j, sh, soft-ch, dg, soft-g – g is 6 rotated 180 degrees.
7. k, hard-ch, hard-c, hard-g, ng – imagine K as two 7s rotated and glued together
8. f, v – imagine the bottom loop of the 8 as an eFfluent pipe discharging waste (letter image of F in alphabet system)
9. p, b – b as 9 rotated 180 degrees.

These associations need to be learned thoroughly before going further with the technique.

Starting to Use the Major System

The system operates on a number of levels, depending on the amount of time you are prepared to devote to learning the system.

The first level, which involves coding single digit numbers into small words, functions almost as a poor relation of the number/rhyme system. It is at higher levels that you can unleash the real power of the system. You should, however, learn to use this first level before moving on.

The trick with converting numbers into words is to use only the consonants that code information within the word, while using vowels to pad the consonants out with meaning. If you do have to use other consonants to make up a word, use only those that do not code for numbers – i.e. h, q, w, x, and y.

At the first level we code each number into a short noun. This is made up of the consonant coding for the number, and vowels that turn the consonant into a word. On a sheet of paper, write the numbers 0 to 9, and apply these rules to create your own memory words. Some examples are shown below:

0. saw
1. toe
2. neigh
3. ma
4. ray
5. law
6. jaw
7. key
8. fee
9. pie

You can use these words in association much like the other peg technique memory words.

Moving to the Second Level

Similar rules apply to creating a standard word from two numbers. It is best not to try to use a single number word as a root, as this can confuse the image.

Write down the numbers 01 to 99, and apply the rules to create memory words for yourself.

A few examples are shown below:

09 – z, p – zap
17 – t, ch – tech
23 – n, m – name
36 – m, sh – mesh
41 – r,s – rose
52 – l, n – line
64 – ch, r – chair
75 – k, l – keel

89 – f, p – fop
98 – b, f – beef

Taking the Major System Further

Just using double number words may be enough to make this a sufficiently powerful mnemonic for you. Alternatively you may decide to use triple number words, using the same construction rules as double number words.

Examples are:

182 – d, v, n – Devon
304 – m, s, r – miser
400 – r, c, s – races
651 – j, l, d – jellied
801 – f, z, d – fazed

Even though you can construct words from first principles each time, at this level of complexity it may be worth writing them down to make them easier to remember. You can then run through them many times to strengthen the link in your mind between the numbers and the associated words. This will help you to remember the appropriate word faster.

Using Words to Remember Long Numbers

Once you have come up with words and images to link to your numbers, you can start to apply the technique to remember, for example, long numbers. A good way of doing this is to associate Major System words with stops on a journey (see 7.1.5).

Example:

The number Pi is 3.14159265359 (to 11 decimal places). Using the major system and the journey system (see example) together, I can remember this as:

0. Passing my Ma (3) by the front door of my house
1. Seeing that someone has dared (1,4,1) to sleep under the rose bush in the garden
2. Someone has tied a loop (5,9) of yellow ribbon onto the steering wheel of my car
3. I see a poster with a photo of a steaming pile of sausages and mashed potato, with the title 'glorious nosh' (2,7) at the end of the road
4. A lama (5,3) is grazing on grass outside the garage forecourt
5. Another loop (5,9) of yellow ribbon has been tied around the railway bridge. This is getting strange!

Key Points

The major memory system works by linking numbers to consonants, and then by linking these into words. By using the images these words create, and linking them together with the journey system, large amounts of information can be accurately memorized.

5.8 Using Concept Maps or Mind Maps to Remember Structured Information

"Mind Map" is a trademark of the Buzan Organization

How to Use the Tool

Mind Maps are not formally mnemonics. They do, however, help you to lay out the structure of a topic as a clear 'shape' that you can remember easily. By seeing this shape in your mind, you can prompt yourself to remember the information coded within it.

This becomes even easier if you have coded this information using striking images. See the introduction to this chapter to see how to make information as memorable as possible.

5.9 Memory Games
Have fun, while you improve your memory!

Have you ever looked up a phone number and repeated it over and over to yourself until you dialled it correctly? This draws on your working memory; however, just moments after dialling the telephone number, chances are you have forgotten it.

This is because the telephone number was not "committed" to your long-term memory. And, while working memory is reliable for quick recall of bits of information (like phone numbers), it can hold only a few pieces of information and only for a very short time.

To remember things for a longer amount of time, you must connect the new information with information you already have, "committing" it to your long-term memory, which stores more information and, for a longer period of time.

There are, of course, many 'serious' techniques for improving your memory, several of which are covered in this section. But you can also have a bit of fun "working out" with memory games. This article introduces several games to workout your memory, individually or in a team.

Story Telling

One way to remember the information you need to commit to long-term memory is to make up a story that "connects" the items or facts you need to remember, thus making them easier to recall. The idea here is that it's easier to remember more information when one fact or item connects to another.

While making up the story, create a strong mental image of what's happening. This helps to "connect" the data to an image and better cement it in your long-term memory.

For an example, read our article on the Story Method.

It's fun to practice using this technique in a group. Practice by laying out 20 or more objects on the table and trying to remember them. Each member of the group takes his or her turn to add to the story by including another object.

If the first three objects are an apple, a key and a mobile phone, here's how the story might start:

Person 1: In the orchard, ripe apples were falling from the trees.
Person 2:But the gate to the orchard was locked and John had brought the wrong key.
Person 3: So he called Sue from his mobile phone to see if she could help.
….

Once all the objects have been included in the story, remove them all from the room. See who can remember the most items. Now tell the story again as a group, taking it in turns. The group will probably be able to remember the whole story and so recall all the items.

Pexeso: Matching Pairs

Pexeso involves matching pairs of like cards or tiles from a large group, when one of each group is hidden.

You play Pexeso with a set of cards or tiles that includes pairs of picture or numbers. You can play using half a pack of standard playing cards – just remove 2 of the 4 suits, so you have just 2 aces, 2 kings, 2 queens and so on.

Start by laying out 24 of the cards, making sure the 24 cards consists of 12 matched pairs. Once face down, move the cards around so that you do not know where any single card is located. Turn one card over at a time, take a look at the number or object, and then turn it face down again. Repeat this process until you turn over a card that matches a card you turned over earlier. Now find the card's 'mate' by remembering from earlier where it is located. As you find a matched pair, remove them from the group. The number of cards dwindles until all the pairs are matched.

Time yourself and see how you improve (get faster) each time you play.

As you get better, increase the number of cards you start with, moving from the original 24 to 30, then to 36, 42 and so on.

'Blind' Jigsaw Puzzles

Another fun and inexpensive way to give your concentration and memory a boost is the good old-fashioned jigsaw puzzle. Playing it 'blind' means without referring back to the picture on the box!

First, look at a picture of the completed puzzle. Give yourself a few minutes to commit it to memory.

Next, mix up the pieces to the jigsaw puzzle.

Now, work to put it back together without looking at the picture of the completed puzzle again (until you are done).

Trivia Quizzes

A great way to improve how well you recall information is to play trivia quizzes. The trivia can be about anything – movies, history, even about your specific business.

Whilst you can easily purchase trivia quiz board games and books, you can also make up your own questions when you are playing in a group.

Each person submits a list of questions (and answers!) and then to 'quiz master' takes questions from each person's list in turn.

When you play with a new set of trivia questions, you rely on your recall of prior knowledge and experience to find the answers. If you play with the same questions in a few days or weeks later, you will also rely on memory of playing the game last time. Both new questions and re-runs are good for building you memory skills.

5.10 How to... Learn a Foreign Language

Systems Needed:

- Link Method
- Roman Room Mnemonic

How to Use the Tools

Foreign languages are the ideal subject area for the use of memory techniques. Learning vocabulary is often a matter of associating a meaningless collection of syllables with a word in your own language.

Traditionally people have associated these words by repetition – by saying the word in their own language and the foreign language time and time and time and time again. You can improve on this tedious way of learning by using three good techniques:

1. Using Mnemonics to link words

This is a simple extension of the link method. Here you are using images to link a word in your own language with a word in a foreign language.

For example, in learning English/French vocabulary:

- English: rug/carpet – French: tapis – imagine an ornate oriental carpet with a tap as the central design woven in chrome thread
- English: grumpy – French: grognon – a grumpy man groaning with irritation
- English: to tease – French: taquiner – a woman teasing her husband as she takes in the washing.

This technique was formalized by Dr Michael Gruneberg, and is known as the 'LinkWord' technique. He has produced language books (an example is German by Association) in many language pairs to help students acquire the basic vocabulary needed to get by in the language (usually about 1000 words). It is claimed that using this technique this basic vocabulary can be learned in just 10 hours.

2. The Town Language Mnemonic

This is a very elegant, effective mnemonic that fuses a sophisticated variant of the Roman Room system with the system described above.

This depends on the fact that the basic vocabulary of a language relates to everyday things: things that you can usually find in a city, town or village. To use the technique, choose a town that you are very familiar with. Use objects within that place as the cues to recall the images that link to foreign words.

Nouns in the town:
Nouns should be associated to the most relevant locations: for example, the image coding the foreign word for book could be associated with a book on a shelf in the library. You could associate the word for bread with an image of a loaf in a baker's shop. Words for vegetables could be associated with parts of a display outside a greengrocer's. Perhaps there is a farm just outside the town that allows all the animal name associations to be made.

Adjectives in the park:
Adjectives can be associated with a garden or park within the town: words such as green, smelly, bright, small, cold, etc. can be easily related to objects in a park. Perhaps there is a pond there, or a small wood, or perhaps people with different characteristics are walking around.

Verbs in the sports center:
Verbs can most easily be associated with a sports center or playing field. This allows us all the associations of lifting, running, walking, hitting, eating, swimming, driving, etc.

Remembering Genders
In a language where gender is important, a very good method of remembering this is to divide your town into two main zones. In one zone you code information on masculine gender nouns, while in the other zone you code information on feminine nouns. Where the language has a neutral gender, then use three zones. You can separate these areas with busy roads, rivers, etc. To fix the gender of a noun, simply associate its image with a place in the correct part of town. This makes remembering genders easy!

Many Languages, many towns
Another elegant spin-off of the technique comes when learning several languages: normally this can cause confusion. With the town mnemonic, all you need do is choose a different city, town or village for each language to be learned. Ideally this might be in the relevant country. Practically, however, you might just decide to use a local town with the appropriate foreign flavor.

3. The Hundred Most Common Words

Tony Buzan, in his book 'Using your Memory', points out that just 100 words comprise 50% of all words used in conversation in a language. Learning this core 100 words gets you a long way towards being able to speak in that language, albeit at a basic level. The 100 basic words used in conversation are shown below:

1. A,an	2. After	3. Again	4. All	5. Almost
6. Also	7. Always	8. And	9. Because	10. Before
11. Big	12. But	13. (I) can	14. (I) come	15. Either/or
16. (I) find	17. First	18. For	19. Friend	20. From
21. (I) go	22. Good	23. Good-bye	24. Happy	25. (I) have
26. He	27. Hello	28. Here	29. How	30. I
31. (I) am	32. If	33. In	34. (I) know	35. Last
36. (I) like	37. Little	38. (I) love	39. (I) make	40. Many
41. One	42. More	43. Most	44. Much	45. My
46. New	47. No	48. Not	49. Now	50. Of
51. Often	52. On	53. One	54. Only	55. Or
56. Other	57. Our	58. Out	59. Over	60. People
61. Place	62. Please	63. Same	64. (I) see	65. She
66. So	67. Some	68. Sometimes	69. Still	70. Such
71. (I) tell	72. Thank you	73. That	74. The	75. Their
76. Them	77. Then	78. There is	79. They	80. Thing
81. (I) think	82. This	83. Time	84. To	85. Under
86. Up	87. Us	88. (I) use	89. Very	90. We
91. What	92. When	93. Where	94. Which	95. Who
96. Why	97. With	98. Yes	99. You	100. Your

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Key Points

The three approaches to learning foreign languages shown here can be very effective. They help to point out:

- The most important words to learn
- Show how to link words in your own language to words in a foreign language, and
- Show how to structure recall of the language through use of the town mnemonic.

5.11 How to... Remember Information for Exams

Systems Needed:

- The Number/Rhyme Technique
- The Number/Shape Technique
- The Alphabet Technique
- The Journey Technique
- Concept or Memory Maps

How to Use the Tools

A very effective way of structuring information for revision is to draw up a full, cloud coded concept or memory map of a subject. This will help you to see the overall structure of the topic and show you the associations between pieces of information. A good concept map can be an effective mnemonic in its own right.

The problem with this is that you can forget the label on a line on a concept map. A more reliable method is to take your concept map, and break it down into a numbered list of important points. You can then use one of the peg techniques (see links above) to remember the items on the list. Alternatively you can use the journey technique for longer lists.

By associating items on a list with a peg system or journey, you can check that you have retrieved all items held by the mnemonic. Supporting facts can be associated into images or sub-mnemonics. These could be triggered by the pegs for the peg systems, or at landmarks if you use the journey system. Alternatively you can loosely associate this information with the facts coded.

Retrieving all the facts necessary to answer an exam essay question becomes as simple as running through the mnemonic in your mind. As you go, jot down the retrieved facts that are relevant to the question. Once you have written these down, you can apply any other mnemonics you have coded, or note any associated facts and connections that occur to you. This should ensure that you have all possible information available to you, and should help you to produce a good essay plan.

5.12 How to... Remember People's Names

Systems Needed:

- The Link Method
- The Roman Room Mnemonic

How to Use the Tools

Remembering people's names needs a slightly different approach from all the others explained so far in this section. The techniques used, though, are quite simple:

1. Face association

Examine a person's face discretely when you are introduced. Try to find an unusual feature, whether ears, hairline, forehead, eyebrows, eyes, nose, mouth, chin, complexion, etc.

Create an association between that characteristic, the face, and the name in your mind. The association may be to link the person with someone else you know with the same name. Alternatively it may be to associate a rhyme or image of the name with the person's face or defining feature.

2. Repetition

When you are introduced, ask for the person to repeat their name. Use the name yourself as often as possible (without overdoing it!). If it is unusual, ask how it is spelled or where it is comes from, and if appropriate, exchange cards. Keep in mind that the more often you hear and see the name, the more likely it is to sink in.

Also, after you have left that person's company, review the name in your mind several times. If you are particularly keen you might decide to write it down and make notes.

Key Points

The methods suggested for remembering names are fairly simple and obvious, but are useful. Association either with images of a name or with other people can really help. Repetition and review help to confirm your memory.

An important thing to stress is practice, patience, and progressive improvement.

5.13 How to... Remember Lists and Long Numbers

Systems Needed:

- Link Method
- The Number/Rhyme Technique
- The Number/Shape Technique
- The Alphabet Technique
- The Journey Technique
- The Major System

How to Use the Tools

Remembering lists are what many mnemonics are for. You can code almost any information into these mnemonic lists. All that you need is the imagination to come up with the relevant associations.

To memorize short lists, use:

- The Link or Story Methods
- The Number/Rhyme System, or
- The Number/Shape Method

To remember intermediate and longer lists, use:

- The Alphabet Technique; or
- The Journey Technique

As with lists, using mnemonic systems, remembering numbers becomes extremely simple. There are a number of approaches, depending on the types of numbers being remembered:

1. Short numbers

The easiest, but least reliable, way of remembering numbers is to use simple Number/Rhyme images associated in a story.

A better way is to use a simple peg system, where, for example, you can associate digits from the Number/Rhyme System into positions organized with the Alphabet System.

2. Long numbers (e.g. Pi)
You can store long numbers most effectively with the Journey System. At a simple level, single numbers can be stored at each stop on the journey using Number/Rhyme or Number/Shape images. At a more advanced level you can increase the number of digits stored at each stop by using the Major System.

By using all the simple techniques together you should be able to store a 100 digit number with relatively little effort. Using the more powerful systems, holding it to 1000 digits might not be too much of a challenge.

3. Telephone Numbers
These can be remembered simply by associating numbers from the Number/Rhyme system with positions in either the Alphabet Technique or the Journey System. You can then associate these with the face or name of the person whose number you are remembering.

For example, to remember that someone's phone number is 735-3458, I can imagine myself traveling to their flat: with my destination firmly in mind, I envisage the following stops on my journey:

1. Front door: the door has sprouted angel's wings, and is flying up to heaven! (7)
2. Rose bush: a small sapling (tree, 3) is growing its way through the middle of the bush.
3. Car: some bees have started to build a hive (5) under the wheel of my car. I have to move it very carefully to avoid damaging it.
4. End of road: a tree (3) has fallen into the road. I have to drive around it.
5. Past garage: Someone has nailed a door (4) to the sign. Strange!
6. Under railway bridge: the bees are building another hive (5) between the girders!
7. Beside the river: A rusty farm gate (8) is blocking the road.

Part 2: Tools and Skills for Working with Others

Section 6: Leadership Skills

- Leadership Motivation Assessment – How motivated are you to lead?
- Leadership Motivation Tools – Find the passion to lead
- Information Gathering – Information is inspiration
- Building Expert Power – Leading from the front
- Task Allocation – Picking the right person for the job
- Understanding Developmental Needs – "Different strokes for different folks"
- Leadership Styles – Using the right one for the right situation
- Conflict Resolution – Resolve conflict rationally and effectively
- Mission Statements and Vision Statements – The power of purpose
- Successful Delegation – How, when, why.

6. Introduction to Leadership Skills

> *"At the age of seven, a young boy and his family were forced out of their home. The boy had to work to support his family. At the age of nine, his mother passed away. When he grew up, the young man was keen to go to law school, but had no education.*
>
> *At 22, he lost his job as a store clerk. At 23, he ran for state legislature and lost. The same year, he went into business. It failed, leaving him with a debt that took him 17 years to repay. At 27, he had a nervous breakdown.*
>
> *Two years later, he tried for the post of speaker in his state legislature. He lost. At 31, he was defeated in his attempt to become an elector. By 35, he had been defeated twice while running for Congress. Finally, he did manage to secure a brief term in Congress, but at 39 he lost his re-election bid.*
>
> *At 41, his four-year-old son died. At 42, he was rejected as a prospective land officer. At 45, he ran for the Senate and lost. Two years later, he lost the vice presidential nomination. At 49, he ran for Senate and lost again.*
>
> *At 51, he was elected the President of the United States of America.*
>
> *The man in question: Abraham Lincoln."*
>
> Author Unknown

Many of us are acquainted with this eloquent example of persistence and determination in achieving victory. We read it, stop for a moment and then sigh and say: "Wow! That's the stuff real leaders are made off."

And in saying this, it's all too easy for us to think about leaders like Lincoln almost as "mythological creatures", separate from the rest of humanity and empowered by some mysterious quality that smoothes their path towards inevitable success. This is the view of leadership that many people have traditionally taken: That leaders are marked out for leadership from early on in their lives, and that if you're not a leader, there's little that you can do to become one.

However, that's not the way we see it now. The modern view is that through patience, persistence and hard work, you can be a highly effective leader.

This section of Mind Tools helps you make a start in finding and developing these leadership qualities within yourself.

Our first tools look at your motivation to lead – without a strong motivation to lead, you'll struggle to be an effective leader. The Leadership Motivation Assessment helps you understand the strength of your motivation to lead, while our Leadership Motivation Tools article gives you some useful techniques you can use to build it further.

We then move on to look at vision creation. This is a complex subject, however we look at one important facet of it: Information Gathering. Good information is essential if you are to build a compelling, robust vision of the future that people can believe in and want to follow.

And this is also part of Expert Power, one of the profoundly honest sources of strength and power that you can draw on as a leader, and subject of the next article.

After this, we look at the important execution skill of Task Allocation – picking the right team – before moving on to consider the different Leadership Styles that you could adopt, and the important skill of Conflict Resolution.

And we round the articles out by looking two of the main roles of leaders: giving their team direction through Mission Statements and Vision Statements, and Delegating.

6.1 The Leadership Motivation Assessment

How Motivated are You to Lead?

The first and most basic prerequisite for leadership is the desire to lead. After all, becoming an effective leader takes hard work. If you're not prepared to work hard at developing your leadership skills or if, deep down, you're really not sure whether you want to lead or not, you'll struggle to become an effective leader.

Are you motivated to lead? This assessment helps you find the answer.

How to Use the Tool

To use this tool, show the extent to which you agree with each of the following statements on a scale running from 1 (Strongly Disagree) to 5 (Strongly Agree).

For each question, tick the response column that most applies.

Question	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I am energized when people count on me for ideas.					
As a practice, I ask people challenging questions when we are working on projects together.					
I take delight in complimenting people that I work with when progress is made.					
I find it easy to be the cheerleader for others, when times are good and when times are bad.					
Team accomplishment is more important to me than my own personal accomplishments.					
People often take my ideas and run with them.					
When involved in group projects, building team cohesiveness is important to me.					
When involved in group projects, coaching others is an activity that I gravitate toward.					
I find pleasure in recognizing and celebrating the accomplishments of others.					

Question	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
When involved in group projects, my team members' problems are my problems.					
Resolving interpersonal conflict is an activity that I enjoy.					
When involved in group projects, I frequently find myself to be an "idea generator."					
When involved in group projects, I am inclined to let my ideas be known.					
I find pleasure in being a convincing person.					
TOTAL					

Calculate your overall score by giving yourself 1 point for each tick in the "Strongly Disagree" column, 2 points for each tick in the "Disagree column" and so on, up to 5 points for each tick in the "Strongly Agree" column.

Score Interpretation

Score	Comment
14 – 27	This implies a low motivation to lead
28 – 55	This implies some uncertainty over your motivation to lead
56 – 70	This implies a strong motivation to lead.

Source: This set of questions was constructed for this self-assessment and for illustrative purposes only. No prior validation work has been conducted that enables us to address the construct validity of this assessment. This self-assessment was patterned after that of A. J. DuBrin in *Leadership: Research Findings, Practice and Skills* (2nd edition) (Boston: Houghton Mifflin Co., 1998). Pp. 10-11.

6.2 Leadership Motivation Tools

Increasing Your Motivation to Lead

In the previous article we gave you a tool for assessing your motivation to lead. So what if you want to become more of a leader, but you're finding it difficult to motivate yourself?

The tools in this article will help. First we look at the "Demotivation Demolisher", next we look at the "Need-Effort Bridge" and finally we look at "Passion Propulsion".

Demotivation Demolisher – Kill the Killjoy

The first step in building motivation is to identify what demotivates you and then tackle the problem head on.

Now, here we're looking at demotivation on two levels. On one level we're looking at the fundamental motivation to lead, as we discussed in our previous article. At a second level, we look at the day-to-day irritations that frustrate you and distract you from doing a good job.

First, we look at motivation to lead.

When we asked you to complete the Leadership Motivation Assessment, we were asking you whether, deep down, you want the responsibility as well as the rewards of leadership.

Some of the benefits of leadership are obvious. But what if you find that something is holding you back? What if you find that, when you look within yourself, you're not that sure that you want to lead a team?

Example 1: The basic motivation to lead

Marcus Jackson wasn't happy. He had just been promoted to lead a product development team in a different department of the engineering company at which he worked.

He felt that he had been promoted because of his expertise and the quality of his work. And he was proud that he'd been chosen.

However, he felt profoundly uncomfortable in his new role: He was confused about what was expected from him, he had had little experience of leadership before, and he felt out of his depth in dealing with the people issues he was now expected to handle. What was worse was that he instinctively felt that the team was expecting things of him that he didn't know how to give. All in all, he was questioning whether he'd made the right move, and whether he should return to his previous job.

Fortunately, Marcus had enough insight to recognize the importance of these issues, and identify the detailed issues he was experiencing. And when he listed the points out, it all became clear: What he needed was training in basic supervisory skills, and help in applying these.

He approached his boss and put a persuasive case for a particular training course. And he also made sure that he got regular coaching on the issues he faced, which helped put the theory he learned into practice.

The second level of demotivation comes from the day-to-day irritations that distract you from doing a good job. Consider the case of Susan Mitchell, outlined below:

Example 2: Day-to-day demotivators

Susan, a marketing executive, had just joined a new firm. She had set a target for herself – within a year she would take over as the team leader. She knew she had the capability and was prepared to work hard enough.

Our girl would be the first to volunteer for a new assignment and the initial weeks saw her excitedly working late hours. But a couple of months later, she started losing steam. She was distracted, would tire easily and somehow just couldn't come up with great ideas.

Susan knew she would fail in her ambition if things went on this way. She made a conscious decision to tackle the problem. First she acknowledged that she had lost motivation. Then she tried to analyze, why. She came up with three reasons – uncooperative team members; boredom; and her office being positioned bang next to the pantry.

Susan figured she could tackle at least one problem immediately – the office placement. She asked the boss for a move to another office space and got it. The other two issues she is still grappling with. But at least she knows they exist and is consciously trying to fix them.

If you too suffer from either of these issues of motivation, take a leaf out of Marcus' and Susan's book.

Conquering Demotivators

First set aside 15 minutes to note down the things that steal your motivation, whether these are things that undermine your motivation to lead, or are general irritants that are undermining your self-motivation. List them under the column, De-motivators, in the table below.

De-Motivator	Circumstantial or Habitual	Solution

Done with the list? Now you are ready to take on the challenge of tackling the killjoys.

Start by considering whether the 'demotivation attacks' are occasional, circumstantial things, triggered by circumstantial factors (the visit of a difficult client; or being under the weather), or are they habitual, typifying your working style (leaving tasks unfinished; or saying yes to everything irrespective of whether you can do it). Mark the cause, circumstantial or habitual, in your table.

Next comes the solution column. If circumstantial factors bother you, then get a grip on exactly what is it that "switches you off" and try to neutralize the cause. For Susan, it was being next to the kitchen. She "just didn't feel like working" and was distracted by who was having how many cups of coffee. Once the de-motivator was identified, she pushed her boss to allot her another workspace. Her work improved. You may not be able to run out and fix the problem immediately, but at least list the solution.

However, if the de-motivator is a recurring habit, you have to acknowledge it as a serious handicap, which may undermine all the good work you want to accomplish. You need to make concerted effort to bring motivation and passion to the activity. Our next tools will show you how to achieve this. Zero in on the correct tools and list them in your solutions column.

Background:
One of the key figures in the development of the theory of motivation was Frederick Herzberg, who closely studied the sources of employee motivation in the 1950s and 1960s. What he discovered was that the things that demotivate people are different from the things that motivate them. Consequently, his theory is known as the Herzberg Two Factor Theory.

Herzberg's "Hygiene Factors" (the things that made people unhappy and demotivated) were obstructive company policy, unhelpful administration, intrusive supervision, bad working relationships, poor conditions, uncompetitive salaries, low status and job insecurity.

And just as these things demotivated the people who Herzberg studied, they may be the things that demotivate you. Take them seriously!

The Need-Effort Bridge – Link action to motive

Establishing a clear motive for the actions you undertake is one of the best ways to create motivation. Remember the old 'What's In It For Me' principle? You can apply it to yourself to create motivation.

Once you have figured out that the effort you make fulfils a need that you have, the effort will automatically become much more worthwhile.

The need-effort bridge can work at several levels.

At one level, the very basic level, you make an effort at your job because it fetches you money and helps you fulfill your material needs. At another level, you make an effort at your job because you feel that by performing it well, you are helping your company achieve a better goal and this makes you feel good about yourself.

Background:
Remember Frederick Herzberg above? The things that he discovered motivated people were quite different from the things he found demotivated people.
Herzberg's motivators were achievement; recognition for that achievement; an enjoyable job; responsibility; growth; and advancement.

Now, Herzberg didn't particularly believe in the power of money as a motivator. Whether you do or not depends on the way you think (and may be cultural) – pick the motivators that most motivate you!

Now, let us go back to the demotivator lists that you drew up earlier. Let us say that after identifying the demotivators, you realize that you cannot do anything much about the majority of them. Then it is time to figure out why you are putting up with these demotivators. Is it because you have established a very strong, meaningful need for your effort, or is it inertia?

If you are not sure about the answer, try and conduct the need-effort establishment exercise:

Need-Effort Establishment Exercise
Take a paper and divide it in two halves. Head up one section 'Needs' and the other 'Effort.' List the needs you have – these could be anything from owning the new BMW to finding spiritual balance. Material rewards, professional standards, or personal targets are good thinking points to identify your needs. Next, list the efforts you are making – on your job, in your community, or whatever.

Then link the effort to the need it serves. For instance, the effort you are making on the new job could link up to the need for buying the new BMW: Hopefully the extra effort will translate into a bonus, which would serve as the down payment on the BMW.

Just remember that the more meaningful the need you are seeking to satisfy, the more motivated you will feel.

Hopefully, after conducting the exercise, you can find strong motivation to justify your efforts. You may have to spend energy grappling with the killjoys, but you know the effort is worth it.

However, if you cannot find this motivation, then maybe it is time you contemplated channeling your efforts in a different direction. What should this different direction be? Our next tool, Passion Propulsion, helps you arrive at an answer to this question.

Passion Propulsion – Find your passion. Use it to inspire and enthuse.

"Nothing great is ever achieved without passion."
Ralph Waldo Emerson

Passion is a great motivator. It is what gives the ultimate meaning to your actions. Being fiercely passionate about goals and targets helps give you an edge and helps you inch closer to your leadership position.

However, passion has to be handled with precision. You don't want to fritter away the energy it gives you. A much better idea would be to identify it and then use it with laser sharp focus to achieve your goals. This tool helps you do this. It operates at two levels: Firstly, it helps you identify goals that you are passionate about; and secondly, it shows you how to direct your passion energy.

Step 1 – Define your passion:
What "fires you up"? For some people the answer to this question is very obvious. For others, it is a little more difficult.

If you are facing difficulty giving a definite answer set aside 30 minutes to answer three questions:

- What would I want my life to be like when I am 60?
- What do I want to have accomplished 5 years from now?
- What are the three things I would want to do if I only had 6 months to live?

Each question will have several answers. Choose the top three answers for each question.

Now out of the nine goals you have identified, cull out the three that look most important to you. Obviously, these three goals are things that are very important to you. You should naturally be passionate about achieving them: If not, you may need to set goals that are on a grander or more beneficial scale!

Step 2 – Harness Passion Energy
Once you have set inspirational goals, work out what you need to do to achieve them.

Identify the key information and training you need to achieve them effectively, and think through the tools you'll need and the people you'll need support from on your way.

Make a professional, rational, well thought-through plan. And then use this plan to turn your goals into reality.

6.3 Information Gathering
Information is Inspiration

Effective information gathering is the most basic perspective-widening tool an effective leader requires. Good quality information marks out the context in which the leader operates, creates the information patterns from which ideas emerge, and provides the criteria by which ideas are screened and assessed.

Effective leaders gather two main types of information:

- Background Data, and
- Task-Related Data

Leaders gather background data to build their view of the world in which they operate.

This information is made up of the countless facts, trends and opinions that they encounter and the observations they make on a daily basis. The higher the quality of background data they gather and the more effectively they prioritize it, the more accurate their view of the world will be, and the better their judgment and "common sense".

By contrast with the steady, slow gathering of background data, task-related information is gathered for a specific purpose. Perhaps you're preparing a five-year business plan and you want a reliable growth forecast from your country's central bank. Or maybe you want specific information about the number and disposable incomes of a certain group of consumers. Or perhaps you need to know projected labor market trends for people with a key skill on which you depend.

Gathering Background Information

What is certain, however, is that task-related information on its own is not enough: While arguments created with it can be persuasive, they are "brittle" and can often be knocked down with previously unknown facts that just don't fit. This is where ideas need to be tested with the common sense that comes with diligently acquired background information.

There are a number of things you can do to build background information:

- Read a newspaper or news website respected for the quality and accuracy of its journalism (for example, "The Economist");
- Where possible, talk to your customers and get a deep understanding of what they want and don't want from you, and what they're getting or not getting from you and your competitors;
- Read industry magazines and newsletters for both your own and your customers' industries, keeping an eye on customers, competitors, suppliers, industry associations, activist groups, new technologies and so on;
- Talk to experts in the fields in which you operate and knowledgeable people within your organization, and understand their perspectives on the key trends and features of interest;
- Read brochures and talk to product teams to make sure you understand your organization's products and services, their strengths and weaknesses, and what your customers like or dislike about them;
- Have a good understanding of company or business unit strategy – i.e. what your company says it wants to do, who it wants its customers to be, and how it plans to serve them; and
- Take the time to "tune in" to what's going on in your organization: Through both the formal and informal "grapevines".

What is necessary here is to take the time to gather this information: It's all too easy for these activities to be lost under the pressures of a hectic schedule.

Gathering Task-Related Information

It's much easier to justify the time spent gathering task-related information: Information-gathering actions are clearly identified steps in the projects you undertake.

There are three key factors here:

- Understanding how much research you should do;
- Making sure you ask the right questions; and
- Gathering the information you need.

The amount of research you take depends on the scale of the decision, the time available, and the consequences of getting it wrong. If it's a small decision, or the consequences of getting it wrong are small, then don't waste too much time on it. On the other hand, if the consequences are severe, take time to make a good decision, and make sure you make an appropriate risk management plan in case things don't work out.

Making sure you ask the right questions is of key importance. Start by brainstorming these questions, ideally with your boss or client or with experts in the field or within your organization. Then make sure you draw on any predefined frameworks you can find, where people have tried to make a system or process for solving this type of problem. For example, if you're gathering information as part of researching a business plan, then buy a good book on business planning from Amazon.com and adapt the framework it proposes for your own use.

Finally, make a plan for gathering the key information needed, and think about how much you're prepared to spend to get it.

A lot of information is relatively freely available, within your organization or in good business, academic or institutional libraries. Some information is packaged and for sale (for example, detailed competitor financial reports).

Other information you may need to gather yourself, for example in interviewing clients or conducting market research surveys. And in other cases (for example, in taking legal advice) it makes sense to pay a qualified expert to answer your questions.

And at the end of all this research, make sure you take a step back and look at the answers you've gained through the filter of common sense. Ask yourself if any information seems to be missing, or if anything you've uncovered jars with your instincts and experience.

Finally, while information gathering is an essential skill for an effective leader, bear in mind that the information is not an end in itself. It is useful because it serves as an input towards generating ideas and building vision. Later on in this section, we'll look at how to process information to build this vision.

6.4 Expert Power
Leading from the Front

There are many different power bases that a leader can use and exploit.

These include problematic ones such as the power of position, the power to give rewards, the power to punish and the power to control information. While these types of power do have some strength, they put the person being lead in an unhealthy position of weakness, and can leave leaders using these power bases looking autocratic and out of touch.

More than this, society has changed hugely over the last 50 years. Citizens are individually more powerful, and employees are more able to shift jobs. Few of us enjoy having power exerted over us, and many will do what they can to undermine people who use these sorts of power.

However there are three types of positive power that effective leaders use: charismatic power, expert power and referent power.

This article teaches the technique of building expert power.

How to Use the Tool

Expert power is essential because as a leader, your team looks to you for direction and guidance. Team members need to believe in your ability to set a worthwhile direction, give sound guidance and co-ordinate a good result.

If your team perceives you as a true expert, they will be much more receptive when you try to exercise influence tactics such as rational persuasion and inspirational appeal.

And if your team sees you as an expert you will find it much easier to guide them in such a way as to create high motivation:

- If your team members respect your expertise, they'll know that you can show them how to work effectively;
- If your team members trust your judgment, they'll trust you to guide their good efforts and hard work in such a way that you'll make the most of their hard work; and
- If they can see your expertise, team members are more likely to believe that you have the wisdom to direct their efforts towards a goal that is genuinely worthwhile.

Taken together, if your team sees you as an expert, you will find it much easier to motivate team members to perform at their best.

So how do you build expert power?

- **Gain expertise:** The first step is fairly obvious (if time consuming) – gain expertise. And, if you are already using tools like the information gathering tool in the previous article, the chances are that you have already progressed well ahead in this direction.

But just being an expert isn't enough, it is also necessary for your team members to recognize your expertise and see you to be a credible source of information and advice. Gary A. Yukl, in his book "Leadership in Organizations," details some steps to build expert power. A summary of these steps follows:

- **Promote an image of expertise:** Since perceived expertise in many occupations is associated with a person's education and experience, a leader should (subtly) make sure that subordinates, peers, and superiors are aware of his or her formal education, relevant work experience, and significant accomplishments.

  One common tactic to make this information known is to display diplomas, licenses, awards, and other evidence of expertise in a prominent location in one's office – after all, if you've worked hard to gain knowledge, it's fair that you get credit for it. Another tactic is to make subtle references to prior education or experience (e.g., "When I was chief engineer at GE, we had a problem similar to this one"). Beware, however, this tactic can easily be overdone.

- **Maintain credibility:** Once established, one's image of expertise should be carefully protected. The leader should avoid making careless comments about subjects on which he or she is poorly informed, and should avoid being associated with projects with a low likelihood of success.

- **Act confidently and decisively in a crisis:** In a crisis or emergency, subordinates prefer a “take charge” leader who appears to know how to direct the group in coping with the problem. In this kind of situation, subordinates tend to associate confident, firm leadership with expert knowledge. Even if the leader is not sure of the best way to deal with a crisis, to express doubts or appear confused risks the loss of influence over subordinates.

- **Keep informed:** Expert power is exercised through rational persuasion and demonstration of expertise. Rational persuasion depends on a firm grasp of up-to-date facts. It is therefore essential for a leader to keep well-informed of developments within the team, within the organization, and in the outside world.

- **Recognize subordinate concerns:** Use of rational persuasion should not be seen as a form of one-way communication from the leader to subordinates. Effective leaders listen carefully to the concerns and uncertainties of their team members, and make sure that they address these in making a persuasive appeal.

- **Avoid threatening the self-esteem of subordinates:** Expert power is based on a knowledge differential between leader and team members. Unfortunately, the very existence of such a differential can cause problems if the leader is not careful about the way he exercises expert power.

  Team members can dislike unfavorable status comparisons where the gap is very large and obvious. They are likely to be upset by a leader who acts in a superior way, and arrogantly flaunts his greater expertise.

  In the process of presenting rational arguments, some leaders lecture their team members in a condescending manner and convey the impression that the other team members are “ignorant.” Guard against this.

6.5 Task Allocation
Picking the Right Player for the Right Job

In any team sport, a lot of time is spent choosing the players who will play in each game. The selection process also involves deciding the position where each team member will play, based on the player’s skill, form (current ability to perform well) and the likely opposition that the team will face.

Just as this is true in sport, it is true in business. Leaders need to select the right people for the right jobs, and assign them tasks that fit with their skills and proficiencies. This provides structure.

So how do you do this? To field a match-winning team, first you need to understand the game that has to be played and the skills and abilities required to play it: There’s no point asking a football team to play baseball if you want to win at the top level.

Then you have to place the correct player in the correct position. Mere common sense, you would think – but then, as the old quip goes, “common sense is often quite uncommon”.

How to Use the Tool
Here we give you the four-step “BALM” method to achieve correct role allocation:

- Break down the broader team goals into specific, individual tasks. List all tasks, and then rank each task in terms of importance;
- Analyze and list the competencies required to perform each task;
- List the competencies of each team member;
- Match individuals to task competencies.

Tip 1:
An easy way of doing this is to write down the competencies needed for each task on one color of Post-It® Note, and the competencies of each team member on another color of Post-It Note. You can then move these around as you match people to roles.

Post-It® is a trademark of 3M Corporation.

This is great as a starting point, but in the real world you'll most-likely find lots of overlaps and lots of gaps. In such cases you have to take considered decisions.

Overlaps and Gaps

Where you have overlaps, you have two choices: Either allotting better qualified individuals to more important tasks, or allocating the task to the person at the lowest organizational level who is qualified to do the job. Both approaches have their virtues, but in different situations: One allows you to do the job with a higher level of certainty, the other allows you to do it more efficiently and at a lower cost.

Where you have a gap, you may need to train existing team members, or recruit to fill the gap. Often, training is the best option: Not only is it usually cheaper, you also know more about the individual's talents and working methods. On the downside, a newly trained person usually has plenty of theory, but lacks the experience of putting that training into practice.

Recruitment often takes a very long time (time to agree the role internally, advertise it, screen resumes, interview candidates, select, wait for notice periods to be served, train the individual in organizational methods, and so on) and can be very expensive. It is also risky: Even using the best interviewing and testing methods, it's possible for candidates to cover up failings that only become obvious once someone's been in a role for several months.

Tip 2:
A useful piece of advice handed down from generation to generation of manager is to "never underestimate the value of team spirit, motivation and hard work". (This advice usually also concludes "And never over-estimate people's knowledge and understanding".)

However if someone is letting the team down, you need to be active in managing this. Non-performers set a poor example to the team, and block performance of activities that are essential for success.

Make sure that you talk to the person who is failing to perform to make them aware of the situation. And make sure that you quickly understand and remove any blocks on performance. Give a controlled number of short but fair opportunities to perform as required (being "hard nosed" about this, correcting a situation bears results much more quickly than recruiting new team members). However, if performance doesn't improve to satisfactory levels, then the non-performer needs to be moved off the team.

Briefing Each Team Member

Having decided which team member will fill each role, you have to communicate the decision to your team.

Each team member should know his or her position within the team. The roles of each person should be clearly defined, with individual responsibilities, authority and accountability clearly spelled out (it's often best to do this in writing).

A hint to remember is that no member of your team should be thinking:

- What are we here for?
- What are we supposed to do?
- What part can I play?

Tip 3:
Keep your team lean, but make sure you have back-ups or substitutes for key roles. It is important to have 'a few good people' rather than have 'too many people'. But remember to have back-ups in case you lose key people.

Tip 4:
Research shows that diverse teams can be more successful than teams with a very similar background. People in diverse teams bring different experiences, are less prone to "group-think" and tend to suffer less from the conflicts that can arise when similar people work together.

(That said, be careful with some of the team design schemes in common use – the research base for some them is quite weak).

6.6 Leadership Styles
Using the Right One for Your Situation

From Mahatma Gandhi to Jack Welch and Martin Luther King to Rudolph Giuliani, there are as many leadership styles as there are leaders. Fortunately, business people and psychologists have developed useful, shorthand ways of describing the main leadership styles that can help aspiring leaders to understand and adapt their own styles and leadership impact.

Whether you are managing a team at work, captaining your sports team or leading a major corporation, you leadership style is crucial to your success. Consciously, or subconsciously, you will no doubt use some of the leadership styles featured, at least some of the time. Understanding these leadership styles and their impact can help you develop and adapt your own leadership style and so help you become a more effective leader.

This article helps you understand 10 of the most frequently talked-about leadership styles, some good, some bad.

Tip:
We're stressing that in this article we're looking at "popular" leadership styles, not necessarily those that fit within a particular system.

Understanding Leadership Styles
The leadership styles we look at here are:

- Autocratic leadership
- Bureaucratic leadership
- Charismatic leadership
- Democratic leadership or Participative leadership

- Laissez-faire leadership
- People-oriented leadership or Relations-oriented leadership
- Servant leadership
- Task-oriented leadership
- Transactional leadership
- Transformational leadership

Autocratic Leadership

Autocratic leadership is an extreme form of transactional leadership, where leader has absolute power over his or her employees or team. Employees and team members have little opportunity for making suggestions, even if these would be in the team or organization's interest.

Most people tend to resent being treated like this. Because of this, autocratic leadership usually leads to high levels of absenteeism and staff turnover. For some routine and unskilled jobs, the style can remain effective where the advantages of control outweigh the disadvantages.

Bureaucratic Leadership

Bureaucratic leaders work "by the book", ensuring that their staff follow procedures exactly. This is a very appropriate style for work involving serious safety risks (such as working with machinery, with toxic substances or at heights) or where large sums of money are involved (such as cash-handling).

Charismatic Leadership

A charismatic leadership style can appear similar to a transformational leadership style, in that the leader injects huge doses of enthusiasm into his or her team, and is very energetic in driving others forward. However, a charismatic leader tends to believe more in him- or herself than in their team. This can create a risk that a project, or even an entire organization, might collapse if the leader were to leave: In the eyes of their followers, success is tied up with the presence of the charismatic leader. As such, charismatic leadership carries great responsibility, and needs long-term commitment from the leader.

Democratic Leadership or Participative Leadership

Although a democratic leader will make the final decision, he or she invites other members of the team to contribute to the decision-making process. This not only increases job satisfaction by involving employees or team members in what's going on, but it also helps to develop people's skills. Employees and team members feel in control of their own destiny, such as the promotion they desire, and so are motivated to work hard by more than just a financial reward.

As participation takes time, this approach can lead to things happening more slowly, but often the end result is better. The approach can be most suitable where team working is essential, and quality is more important than speed to market or productivity.

Laissez-faire Leadership

This French phrase means "leave it be" and is used to describe a leader who leaves his or her colleagues to get on with their work. It can be effective if the leader monitors what is being achieved and communicates this back to his or her team regularly. Most often, laissez-faire leadership works for teams in which the individuals are very experienced and skilled self-starters. Unfortunately, it can also refer to situations where managers are not exerting sufficient control.

People-Oriented Leadership or Relations-Oriented Leadership

The style of leadership is the opposite of task-oriented leadership: the leader is totally focused on organizing, supporting and developing the people in the leader's team. A participative style, it tends to lead to good teamwork and creative collaboration.

In practice, most leaders use both task-oriented and people-oriented styles of leadership.

Servant Leadership

This term, coined by Robert Greenleaf in the 1970s, describes a leader who is often not formally recognized as such. When someone, at any level within an organization, leads simply by virtue of meeting the needs of his or her team, he or she is described as a "servant leader".

In many ways, servant leadership is a form of democratic leadership, as the whole team tends to be involved in decision-making.

Supporters of the servant leadership model suggest it is an important way ahead in a world where values are increasingly important, in which servant leaders achieve power on the basis of their values and ideals. Others believe that in competitive leadership situations, people practicing servant leadership will often find themselves left behind by leaders using other leadership styles.

Task-Oriented Leadership

A highly task-oriented leader focuses only on getting the job done, and can be quite autocratic. He or she will actively define the work and the roles required, put structures in place, plan, organize and monitor. However, as task-oriented leaders spare little thought for the well-being of their teams, this approach can suffer many of the flaws of autocratic leadership, with difficulties in motivating and retaining staff.

Transactional Leadership

This style of leadership starts with the idea that team members agree to obey their leader totally when they take on a job: the "transaction" is (usually) that the organization pays the team members in return for their effort and compliance. You have a right to "punish" the team members if their work doesn't meet the pre-determined standard.

Team members can do little to improve their job satisfaction under transactional leadership. The leader could give team members some control of their income/reward by using incentives that encourage even higher standards or greater productivity. Alternatively a transactional leader could practice "management by exception", whereby, rather than rewarding better work, he or she would take corrective action if the required standards were not met.

Transactional leadership is really just a way of managing rather a true leadership style as the focus is on short-term tasks. It has serious limitations for knowledge-based or creative work, but remains a common style in many organizations.

Transformational Leadership

A person with this leadership style is a true leader who inspires his or her team constantly with a shared vision of the future. Transformational leaders are highly visible, and spend a lot of time communicating. They don't necessarily lead from the front, as they tend to delegate responsibility amongst their team. While their enthusiasm is often infectious, they generally need to be supported by "details people".

In many organizations, both transactional and transformational leadership are needed. The transactional leaders (or managers) ensure that routine work is done reliably, while the transformational leaders look after initiatives that add value.

Using the Right Style – Situational Leadership

While the Transformation Leadership approach is often highly effective, there is no one "right" way to lead or manage that suits all situations. To choose the most effective approach for you, you must consider:

- The skill levels and experience of your team
- The work involved (routine or new and creative)
- The organizational environment (stable or radically changing, conservative or adventurous)

- You own preferred or natural style.

A good leader will find him- or herself switching instinctively between styles according to the people and work they are dealing with. This is often referred to as “situational leadership”. For example, the manager of a small factory trains new machine operatives using a bureaucratic style to ensure operatives know the procedures that achieve the right standards of product quality and workplace safety. The same manager may adopt a more participative style of leadership when working on production line improvement with his or her team of supervisors.

6.7 Conflict Resolution

Resolving conflict rationally and effectively

In many cases, conflict in the workplace just seems to be a fact of life. We've all seen situations where different people with different goals and needs have come into conflict. And we've all seen the often-intense personal animosity that can result.

The fact that conflict exists, however, is not necessarily a bad thing: As long as it is resolved effectively, it can lead to personal and professional growth.

In many cases, effective conflict resolution skills can make the difference between positive and negative outcomes.

The good news is that by resolving conflict successfully, you can solve many of the problems that it has brought to the surface, as well as getting benefits that you might not at first expect:

- **Increased understanding:** The discussion needed to resolve conflict expands people's awareness of the situation, giving them an insight into how they can achieve their own goals without undermining those of other people;
- **Increased group cohesion:** When conflict is resolved effectively, team members can develop stronger mutual respect, and a renewed faith in their ability to work together; and
- **Improved self-knowledge:** Conflict pushes individuals to examine their goals in close detail, helping them understand the things that are most important to them, sharpening their focus, and enhancing their effectiveness.

However, if conflict is not handled effectively, the results can be damaging. Conflicting goals can quickly turn into personal dislike. Teamwork breaks down. Talent is wasted as people disengage from their work. And it's easy to end up in a vicious downward spiral of negativity and recrimination.

If you're to keep your team or organization working effectively, you need to stop this downward spiral as soon as you can. To do this, it helps to understand two of the theories that lie behind effective conflict resolution techniques:

Understanding the Theory: Conflict Styles

In the 1970s Kenneth Thomas and Ralph Kilmann identified five main styles of dealing with conflict that vary in their degrees of cooperativeness and assertiveness. They argued that people typically have a preferred conflict resolution style. However they also noted that different styles were most useful in different situations. The Thomas-Kilmann Conflict Mode Instrument (TKI) helps you to identify which style you tend towards when conflict arises.

Thomas and Kilmann's styles are:

- **Competitive:** People who tend towards a competitive style take a firm stand, and know what they want. They usually operate from a position of power, drawn from things like position, rank, expertise, or persuasive ability. This style can be useful when there is an emergency and a decision needs to be make fast; when the decision is unpopular; or when defending against someone who is trying to exploit the situation selfishly. However it can leave people feeling bruised, unsatisfied and resentful when used in less urgent situations.

- **Collaborative:** People tending towards a collaborative style try to meet the needs of all people involved. These people can be highly assertive but unlike the competitor, they cooperate effectively and acknowledge that everyone is important. This style is useful when you need to bring together a variety of viewpoints to get the best solution; when there have been previous conflicts in the group; or when the situation is too important for a simple trade-off.

- **Compromising:** People who prefer a compromising style try to find a solution that will at least partially satisfy everyone. Everyone is expected to give up something, and the compromiser him- or herself also expects to relinquish something. Compromise is useful when the cost of conflict is higher than the cost of losing ground, when equal strength opponents are at a standstill and when there is a deadline looming.

- **Accommodating:** This style indicates a willingness to meet the needs of others at the expense of the person’s own needs. The accommodator often knows when to give in to others, but can be persuaded to surrender a position even when it is not warranted. This person is not assertive but is highly cooperative. Accommodation is appropriate when the issues matter more to the other party, when peace is more valuable than winning, or when you want to be in a position to collect on this “favor” you gave. However people may not return favors, and overall this approach is unlikely to give the best outcomes.

- **Avoiding:** People tending towards this style seek to evade the conflict entirely. This style is typified by delegating controversial decisions, accepting default decisions, and not wanting to hurt anyone’s feelings. It can be appropriate when victory is impossible, when the controversy is trivial, or when someone else is in a better position to solve the problem. However in many situations this is a weak and ineffective approach to take.

Once you understand the different styles, you can use them to think about the most appropriate approach (or mixture of approaches) for the situation you're in. You can also think about your own instinctive approach, and learn how you need to change this if necessary.

Ideally you can adopt an approach that meets the situation, resolves the problem, respects people's legitimate interests, and mends damaged working relationships.

Understanding the Theory: The "Interest-Based Relational Approach"

The second theory is commonly referred to as the "Interest-Based Relational (IBR) Approach". This conflict resolution strategy respects individual differences while helping people avoid becoming too entrenched in a fixed position.

In resolving conflict using this approach, you follow these rules:

- **Make sure that good relationships are the first priority:** As far as possible, make sure that you treat the other calmly and that you try to build mutual respect. Do your best to be courteous to one-another and remain constructive under pressure;

- **Keep people and problems separate:** Recognize that in many cases the other person is not just "being difficult" – real and valid differences can lie behind conflictive positions. By separating the problem from the person, real issues can be debated without damaging working relationships;

- **Pay attention to the interests that are being presented:** By listening carefully you'll most-likely understand why the person is adopting his or her position;
- **Listen first; talk second:** To solve a problem effectively you have to understand where the other person is coming from before defending your own position;
- **Set out the "Facts":** Agree and establish the objective, observable elements that will have an impact on the decision; and
- **Explore options together:** Be open to the idea that a third position may exist, and that you can get to this idea jointly.

By following these rules, you can often keep contentious discussions positive and constructive. This helps to prevent the antagonism and dislike which so-often causes conflict to spin out of control.

Using the Tool: A Conflict Resolution Process

Based on these approaches, a starting point for dealing with conflict is to identify the overriding conflict style employed by yourself, your team or your organization.

Over time, people's conflict management styles tend to mesh, and a "right" way to solve conflict emerges. It's good to recognize when this style can be used effectively, however make sure that people understand that different styles may suit different situations.

Look at the circumstances, and think about the style that may be appropriate.

Then use the process below to resolve the conflict:

Step One: Set the Scene
If appropriate to the situation, agree the rules of the IBR Approach (or at least consider using the approach yourself.) Make sure that people understand that the conflict may be a mutual problem, which may be best resolved through discussion and negotiation rather than through raw aggression.

If you are involved in the conflict, emphasize the fact that you are presenting your perception of the problem. Use active listening skills to ensure you hear and understand other's positions and perceptions.

- Restate
- Paraphrase
- Summarize

And make sure that when you talk, you're using an adult, assertive approach rather than a submissive or aggressive style.

Step Two: Gather Information
Here you are trying to get to the underlying interests, needs, and concerns. Ask for the other person's viewpoint and confirm that you respect his or her opinion and need his or her cooperation to solve the problem.

Try to understand his or her motivations and goals, and see how your actions may be affecting these.

Also, try to understand the conflict in objective terms: Is it affecting work performance? Damaging the delivery to the client? Disrupting team work? Hampering decision-making? or so on. Be sure to focus on work issues and leave personalities out of the discussion.

- Listen with empathy and see the conflict from the other person's point of view
- Identify issues clearly and concisely
- Use "I" statements
- Remain flexible
- Clarify feelings

Step Three: Agree the Problem
This sounds like an obvious step, but often different underlying needs, interests and goals can cause people to perceive problems very differently. You'll need to agree the problems that you are trying to solve before you'll find a mutually acceptable solution.

Sometimes different people will see different but interlocking problems – if you can't reach a common perception of the problem, then at the very least, you need to understand what the other person sees as the problem.

Step Four: Brainstorm Possible Solutions
If everyone is going to feel satisfied with the resolution, it will help if everyone has had fair input in generating solutions. Brainstorm possible solutions, and be open to all ideas, including ones you never considered before.

Step Five: Negotiate a Solution
By this stage, the conflict may be resolved: Both sides may better understand the position of the other, and a mutually satisfactory solution may be clear to all.

However you may also have uncovered real differences between your positions. This is where a technique like win-win negotiation can be useful to find a solution that, at least to some extent, satisfies everyone.

There are three guiding principles here: Be Calm, Be Patient, Have Respect…

Key Points

Conflict in the workplace can be incredibly destructive to good teamwork.

Managed in the wrong way, real and legitimate differences between people can quickly spiral out of control, resulting in situations where co-operation breaks down and the team's mission is threatened. This is particularly the case where the wrong approaches to conflict resolution are used.

To calm these situations down, it helps to take a positive approach to conflict resolution, where discussion is courteous and non-confrontational, and the focus is on issues rather than on individuals. If this is done, then, as long as people listen carefully and explore facts, issues and possible solutions properly, conflict can often be resolved effectively.

6.8 Mission Statements and Vision Statements
Unleashing the Power of Purpose

Mission Statements and Vision Statements are the inspiring words chosen by successful leaders to clearly and concisely convey the direction of the organization. By crafting a clear mission statement and vision statement, you can powerfully communicate your intentions and motivate your team or organization to realize an attractive and inspiring common vision of the future.

"Mission Statements" and "Vision Statements" do two distinctly different jobs.

A Mission Statement defines the organization's purpose and primary objectives. Its prime function is internal – to define the key measure or measures of the organization's success – and its prime audience is the leadership team and stockholders.

Vision Statements also define the organizations purpose, but this time they do so in terms of the organization's values rather than bottom line measures (values are guiding beliefs about how things should be done.) The vision statement communicates both the purpose and values of the organization. For employees, it gives direction about how they are expected to behave and inspires them to give their best. Shared with customers, it shapes customers' understanding of why they should work with the organization.

Tip:
Mission Statements and Vision Statements usually refer to an organization or an organizational unit. Team Charters can have a similar role when briefing teams.

First we look at creating mission statements. Then we create vision statements.

Mission Statement Creation

To create your mission statement, first identify your organization's "winning idea".

This is the idea or approach that will make your organization stand out from its competitors, and is the reason that customers will come to you and not your competitors (see tip below).

Next identify the key measures of your success. Make sure you choose the most important measures (and not too many of them!)

Combine your winning idea and success measures into a tangible and measurable goal.
Refine the words until you have a concise and precise statement of your mission, which expresses your ideas, measures and desired result.

Tip:
OK, so we're a bit glib here talking about the "winning idea" – this is a prime subject of the discipline of business strategy, and it can take a lot of effort to find, shape and test. See our articles on USP Analysis and SWOT Analysis for starting points, and make sure you do the homework needed!

Example
Take the example of a produce store whose winning idea is "farm freshness". The owner identifies two keys measures of her success: freshness and customer satisfaction. She creates her mission statement – which is the action goal that combines the winning idea and measures of success.

The mission statement of Farm Fresh Produce is:
"To become the number one produce store in Main Street by selling the highest quality, freshest farm produce, from farm to customer in under 24 hours on 75% of our range and with 98% customer satisfaction."

Vision Statement Creation

Once you've created your mission statement, move on to create your vision statement:

1. First identify your organization's mission. Then uncover the real, human value in that mission.

2. Next, identify what you, your customers and other stakeholders will value most about how your organization will achieve this mission. Distil these into the values that your organization has or should have.
3. Combine your mission and values, and polish the words until you have a vision statement inspiring enough to energize and motivate people inside and outside your organization.

Using the example mission statement developed for Farm Fresh Produce, the owner examines what she, her customers and her employees value about her mission.

The four most important things she identifies are: freshness, healthiness, tastiness and "local-ness" of the produce. Here's the Vision Statement she creates and shares with employees, customers and farmers alike:

"We help the families of Main Town live happier and healthier lives by providing the freshest, tastiest and most nutritious local produce: From local farms to your table in under 24 hours."

6.9 Successful Delegation: How, When and Why

Even "Super-You" needs help and support. There is no shame in asking for assistance. Push aside the pride and show respect for the talent others can bring to the table.

And, remember that there is no such thing as a single-handed success: When you include and acknowledge all those in your corner, you propel yourself, your teammates and your supporters to greater heights.

– Author Unknown

The most effective, respected, successful leaders realize early on that, just as they themselves must continue to grow, they must help their team members to reach their fullest potential.

This requires ongoing coaching and delegation.

Delegate to Take Control of Your Time

Because of this, we take a closer look at delegation in this article. Delegation helps you by freeing you up to focus on the matters that really do require your attention (this is where it's important for good time and stress management). And it helps you develop your people by freeing them up to use their abilities to the greatest extent (this is where it's important for effective leadership).

And Delegate to Build Your People

As you probably already know, delegation means giving a certain amount of power to make decisions and complete activities to someone else. What you may not know is that by sharing this responsibility, you enable individuals to grow and to further develop their knowledge, skills and abilities.

Sure, there will be times when, as a leader, you feel that you may save time or effort by simply completing a task or project on your own. After all, by delegating it, you know you'll have to set aside the time to monitor progress, offer support, communicate, and so on. But, as any successful leader knows, you must resist the urge to do this, for it will thwart even your best leadership efforts and in the long run is sure to spell F-A-I-L-U-R-E!

This article discusses the nuts and bolts of delegation, or the How, When and Why behind this strong leadership tool.

Perhaps it is best to start by explaining that good delegation (which takes a certain amount of know-how and practice) stimulates your team members, while allowing you to focus on the high value issues that only you can deal with. This is what we are referring to when we say delegation is a strong win-win tool, without which no leader can be truly successful.

Prepare to Delegate Effectively

Prior to delegating, you need to think some important things through. Use the Delegation Log template from your *Worksheets and Templates Supplement* to record the key points from:

1. The specifics of the task or job to be delegated.
2. The experience, knowledge and skills of the individual as they apply to the delegated task.
3. How this person works best (including what he or she wants from his or her job, how he or she views the work, and so on.)
4. The current workload of this person.
5. The project's timelines/deadlines, including:
    a) How much time is there available to do the job?
    b) Is there time to redo the job if it's not done properly the first time?
    c) What are the consequences of not completing the job on time?
6. Resources for this person as he/she works to complete the task.
7. Your expectations or goals for the project or task(s), including:
    a) How important is it that the results are of the highest possible quality?
    b) Is an "adequate" result good enough?
    c) Would a failure be crucial?
    d) How much would failure impact other things?
8. The role you play as the person who is delegating in ensuring the project's success, through ongoing monitoring, support, coaching, the providing of resources, and so on.
9. Appropriate mechanisms for controlling the project: For example, precisely when should you set checkpoints and report-backs to make sure that things are going smoothly?

In thoroughly considering these key points prior to delegating, you will find that you will delegate more successfully.

Keeping Effective Control

Now, once you have worked through the above steps, make sure you brief your team member appropriately. Take time to explain why they were chosen for the job, what's expected from them during the project, the goals you have for the project, all timelines and deadlines and the resources on which they can draw. And agree a schedule for checking-in with progress updates.

Lastly, make sure that the team member knows that you want to know if any problems occur, and that you are available for any questions or guidance needed as the work progresses.

We all know that as managers, we shouldn't micro-manage. However, this doesn't mean we must abdicate control altogether: In delegating effectively, we have to find the sometimes-difficult balance between giving enough space for people to use their abilities to best effect, while still monitoring and supporting closely enough to ensure that the job is done correctly and effectively.

Providing that you stick to the checkpoints agreed, you should find out early on, for example, if tasks you are delegating to Team Member A would be better delegated to Team Member B. Alternatively, you may find that the deadlines set for the delegated project are not realistic: This means you have plenty of time either to accelerate the project (for example by allocating more effort to it) or to manage the expectations of the customer of the project to expect a later delivery.

The Importance of Full Acceptance

When delegated work is delivered back to you, set aside enough time to review it thoroughly.

If possible, only accept good quality, fully-complete work. If you accept work you are not satisfied with, your team member does not learn to do the job properly.

Worse than this, you accept a whole new tranche of work that you will probably need to complete yourself. Not only does this overload you, it means that you don't have the time to do your own job properly.

Of course, when good work is returned to you, make sure to both recognize and reward the effort.

As a leader, you should get in the practice of complimenting members of your team every time you are impressed by what they have done. This effort on your part will go a long way toward building team member's self-confidence and efficiency, both of which will be improved on the next delegated task; hence, you both win.

Just a word of caution: When you first start to delegate to someone, you may notice that he or she takes longer than you do to complete tasks. This is because you are an expert in the field and the person you have delegated to is still learning. Be patient, for if you have chosen the right person to delegate to, and you are delegating correctly, you will find that he or she quickly becomes competent and reliable.

Section 7: Problem Solving

- Appreciation – Extracting All Most Information From Facts
- Drill-Down – Breaking Problems Down into Manageable Parts
- Cause and Effect Diagrams – Identifying Likely Causes of Problems
- Flow Charts – Understanding Process Flows
- Systems Diagrams – Understanding How Factors Affect Each Other
- SWOT – Analyzing Your Strengths, Weaknesses, Opportunities and Threats
- Cash Flow Forecasting With Spreadsheets – Analyzing Whether an Idea is Financially Viable
- Risk Analysis
- Porter's Five Forces – Understanding the Balance of Power in a Situation
- PEST Analysis – Understanding "Big Picture" Forces of Change
- Value Chain Analysis – Achieving Excellence in the Things That Matter
- USP Analysis – Finding Your Competitive Edge.

7. Introduction to Problem Solving

The tools in this section help you understand complicated, difficult situations. Without them problems might seem huge, overwhelming and excessively complex.

These techniques help you conduct a rigorous analysis of the problems you face, helping you look at as many factors as possible in a structured and methodical way. They give you a starting point in business problem solving (and other problem solving situations) where other people would just feel helpless and intimidated by the situation.

We look at the following tools:

- Appreciation – Extracting All Most Information From Facts
- Drill-Down – Breaking Problems Down into Manageable Parts
- Cause and Effect Diagrams – Identifying Likely Causes of Problems
- Flow Charts – Understanding Process Flows
- Systems Diagrams – Understanding How Factors Affect Each Other
- SWOT – Analyzing Your Strengths, Weaknesses, Opportunities and Threats
- Cash Flow Forecasting With Spreadsheets – Analyzing Whether an Idea is Financially Viable
- Risk Analysis
- Porter's Five Forces – Understanding the Balance of Power in a Situation
- PEST Analysis – Understanding "Big Picture" Forces of Change
- Value Chain Analysis – Achieving Excellence in the Things That Matter
- USP Analysis – Finding Your Competitive Edge.

The first half of the section covers general approaches. Appreciation is a useful technique for extracting good information from dry facts. Drill-Down helps you to break large, seemingly unmanageable problems down into achievable parts. It also helps you to see where you need more information. Cause and Effect Diagrams are very useful for making sure that you have considered all factors relating to a problem, while Systems Diagrams are hugely powerful tools for showing how factors interact in complex situations.

The second half of the section discusses specific tools for specific situations. SWOT Analysis helps you to work out a survival and success strategy in a competitive environment. Forecasting with Spreadsheets shows you how to make financial models of your organization or projects. You can use these to work out whether projects are viable and use them to forecast the effects of changes in underlying factors. Risk Analysis provides a formal framework for identifying the risks you face, and helps you to work out a strategy for controlling them.

7.1 Appreciation
Extracting Maximum Information from Facts

Appreciation is a very simple but powerful technique for extracting the maximum amount of information from a simple fact.

How to Use the Tool
Starting with a fact, ask the question 'So what?' – i.e. what are the implications of that fact? Keep on asking that question until you have drawn all possible inferences.

Example
Appreciation is a technique used by military planners, so we will take a military example:

Fact	It rained heavily last night.
So What?	The ground will be wet
So What?	It will turn into mud quickly
So What?	If many troops and vehicles pass over the same ground, movement will be progressively slower and more difficult as the ground gets muddier and more difficult.
So What?	Where possible, stick to paved roads. Otherwise expect movement to be much slower than normal.

While it would be possible to reach this conclusion without the use of a formal technique, Appreciation provides a framework within which you can extract information quickly, effectively and reliably.

Key Points

Asking 'so what?' repeatedly helps you to extract all important information implied by a fact.

7.2 Drill-Down
Breaking Problems Down Into Manageable Parts

Drill-Down is a simple technique for breaking complex problems down into progressively smaller parts.

How to Use the Tool

To use the technique, start by writing the problem down on the left-hand side of a large sheet of paper. Next, write down the points that make up the next level of detail on the problem a little to the right of this. These may be factors contributing to the problem, information relating to it, or questions raised by it. This process of breaking the problem down into its component part is called 'drilling down'.

For each of these points, repeat the process. Keep on drilling down into points until you fully understand the factors contributing to the problem. If you cannot break them down using the knowledge you have, then carry out whatever research is necessary to understand the point.

Drilling into a question helps you to get a much deeper understanding of it. The process helps you to recognize and understand the factors that contribute to it. Drill-Down prompts you to link in information that you had not initially associated with a problem. It also shows exactly where you need further information.

Example

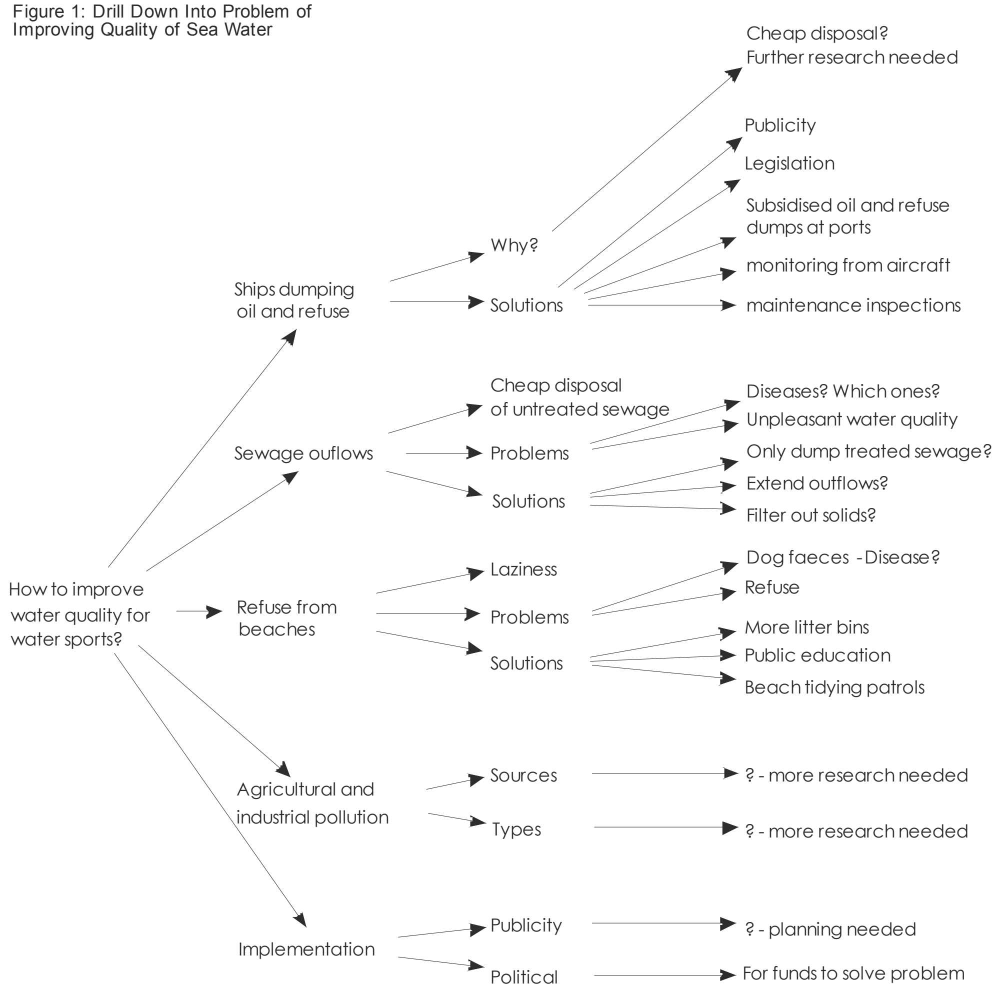
The owner of a windsurfing club is having complaints from its members about the unpleasant quality of the water close to the clubhouse. This seems like a huge problem. She carries out the analysis in Figure 1:

This gives her a starting point in which to begin thinking about the problem. It highlights where she does not fully understand the problem, and shows where she needs to carry out further research.

Key Points

'Drill-Down' helps you to break a large and complex problem down into its component parts, so that you can develop plans to deal with these parts. It also shows you which points you need to research in more detail.

Figure 1: Drill Down Into Problem of Improving Quality of Sea Water



7.3 Cause and Effect Diagrams
Identifying the Likely Causes of Problems

Related variants: Fish or Fishbone Diagrams, and Ishikawa Diagrams

Cause and Effect analysis helps you to think through causes of a problem thoroughly. Their major benefit is that they push you to consider all possible causes of the problem, rather than just the ones that are most obvious.

The approach combines brainstorming with use of a type of Concept Map.

Cause and Effect Diagrams are also known as Fishbone Diagrams. The box and line can be thought of as the head and spine of the fish.

How to Use the Tool
Follow these steps to solve a problem with a Cause and Effect Diagram:

1. **Identify the problem:**
   Write down the exact problem you face in detail. Where appropriate identify who is involved, what the problem is, and when and where it occurs. Write the problem in a box

on the left hand side of a large sheet of paper. Draw a line across the paper horizontally from the box. This gives you space to develop ideas.

2. **Work out the major factors involved:**
Next identify the factors that may contribute to the problem. Draw lines off the spine for each factor, and label it. These may be people involved with the problem, systems, equipment, materials, external forces, etc. Try to draw out as many possible factors as possible. If you are trying to solve the problem as part of a group, then this may be a good time for some brainstorming! Using the 'fish bone' analogy, the factors you find can be thought of as the bones of the fish.

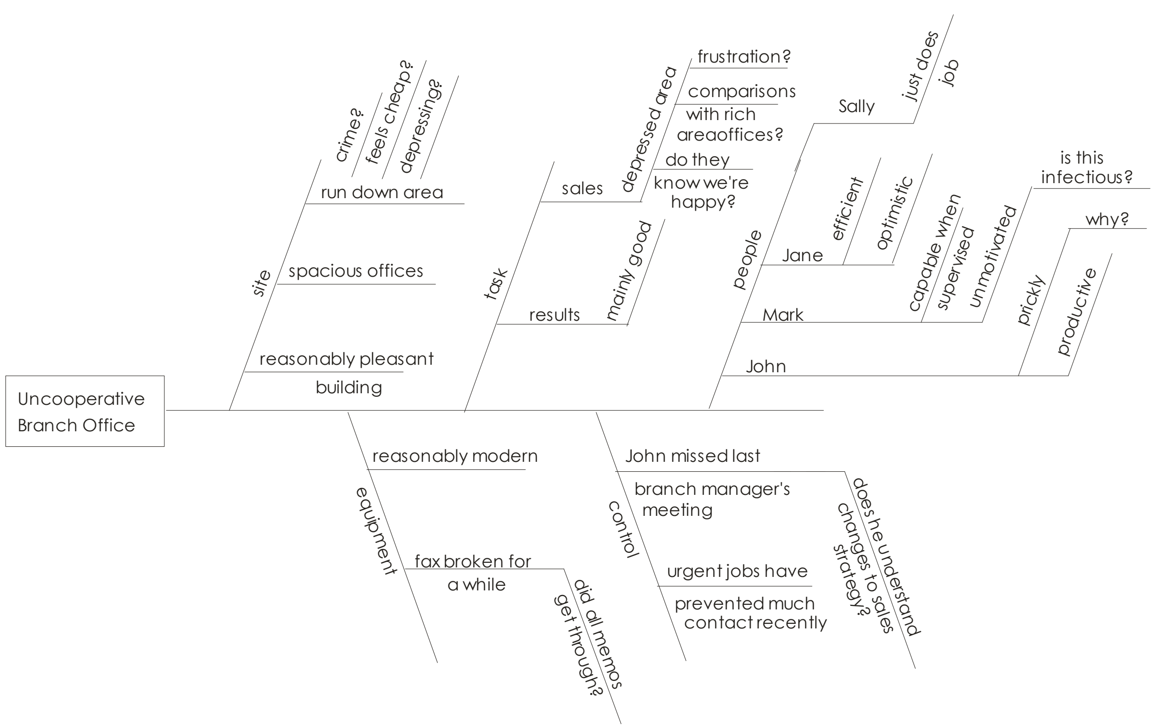
3. **Identify possible causes:**
For each of the factors you considered in stage ii, brainstorm possible causes of the problem that may be related to the factor. Show these as smaller lines coming off the 'bones' of the fish. Where a cause is large or complex, then it may be best to break the it down into sub-causes. Show these as lines coming off each cause line.

4. **Analyze your diagram:**
By this stage you should have a diagram showing all the possible causes of your problem. Depending on the complexity and importance of the problem, you can now investigate the most likely causes further. This may involve setting up investigations, carrying out surveys, etc. These will be designed to test whether your assessments are correct.

Example

The example below shows a Cause and Effect Diagram drawn by a manager who is having trouble getting cooperation from a branch office:

Figure 1: Cause & Effect Diagram Example:
A Manager's Analysis of Problems with a Branch Office



If the manager had not thought the problem through, he might have dealt with the problem by assuming that people were being difficult. Instead he might think that the best approach is to arrange a meeting with the Branch Manager. This would allow him to brief the manger fully, and talk through any problems that he may be facing.

Key Points

Cause and Effect Diagrams provide a structured way to help you think through all possible causes of a problem. This helps you to carry out a thorough analysis of a situation.

7.4 Flow Charts

Understanding and Communicating How a Process Works

Related variants: Process Maps and Process Flow Diagrams

Flow charts are easy-to-understand diagrams showing how steps in a process fit together. This makes them useful tools for communicating how processes work, and for clearly documenting how a particular job is done. Furthermore, the act of mapping a process out in flow chart format helps you clarify your understanding of the process, and helps you think about where the process can be improved.

A flow chart can therefore be used to:

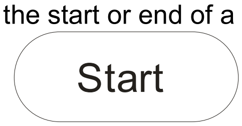
- Define and analyze processes;
- Build a step-by-step picture of the process for analysis, discussion, or communication; and
- Define, standardize or find areas for improvement in a process.

Also, by conveying the information or processes in a step-by-step flow, you can then concentrate more intently on each individual step, without feeling overwhelmed by the bigger picture.

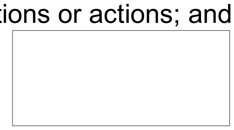
How to Use the Tool

Most flow charts are made up of three main types of symbol:

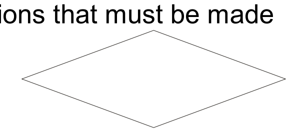
- Elongated circles, which signify the start or end of a process;



- Rectangles, which show instructions or actions; and



- Diamonds, which show decisions that must be made



Within each symbol, write down what the symbol represents. This could be the start or finish of the process, the action to be taken, or the decision to be made.

Symbols are connected one to the other by arrows, showing the flow of the process.

Tip:
There are many different flowchart symbols that can be used (see http://www.nos.org/htm/basic2.htm for more.) However, remember that an important use of flow charts is in communication: If you use obscure symbols that only part of your audience understands, there's a good chance that your communication will fail. As ever, keep things simple!

To draw the flow chart, brainstorm process tasks, and list them in the order they occur. Ask questions such as "What really happens next in the process?" and "Does a decision need to be made before the next step?" or "What approvals are required before moving on to the next task?"

Start the flow chart by drawing the elongated circle shape, and labeling it "Start".

Then move to the first action or question, and draw a rectangle or diamond appropriately. Write the action or question down, and draw an arrow from the start symbol to this shape.

Work through your whole process, showing actions and decisions appropriately in the order they occur, and linking these together using arrows to show the flow of the process. Where a decision needs to be made, draw arrows leaving the decision diamond for each possible outcome, and label them with the outcome. And remember to show the end of the process using an elongated circle labeled "Finish".

Finally, challenge your flow chart. Work from step to step asking yourself if you have correctly represented the sequence of actions and decisions involved in the process.

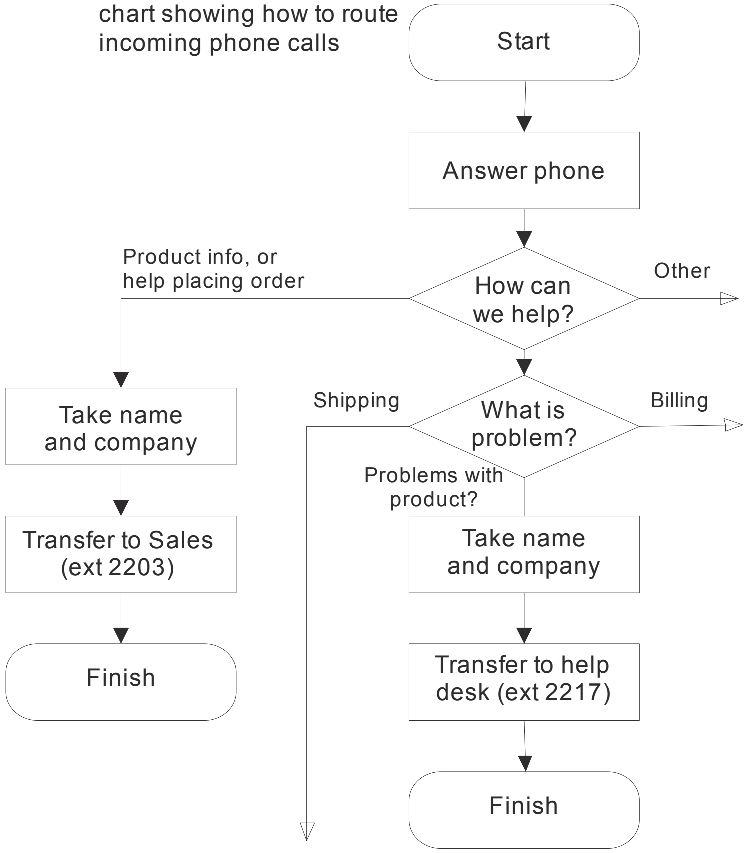
And then (if you're looking to improve the process) look at the steps identified and think about whether work is duplicated, whether other steps should be involved, and whether the right people are doing the right jobs.

Tip:
Flow charts can quickly become so complicated that you can't show them on one piece of paper. This is where you can use "connectors" (shown as numbered circles) where the flow moves off one page, and where it moves onto another. By using the same number for the off-page connector and the on-page connector, you show that the flow is moving from one page to the next.

Example

The example below shows part of a simple flow chart which helps receptionists route incoming phone calls to the correct department in a company:

Figure 1: Part of an example flow chart showing how to route incoming phone calls



Key Points

Flow charts are simple diagrams that map out a process so that it can easily be communicated to other people.

To draw a flowchart, brainstorm the tasks and decisions made during a process, and write them down in order.

Then map these out in flow chart format using appropriate symbols for the start and end of a process, for actions to be taken and for decisions to be made.

Finally, challenge your flow chart to make sure that it's an accurate representation of the process, and that that it represents the most efficient way of doing the job.

7.5 Systems Diagrams
Understanding How Factors Affect One-Another

Also known as Causal Loop Diagrams or CLDs

System diagrams are powerful tools that help you to understand how complex systems work. Systems analyzed may be anything from businesses, through biological population models, to the impact of social policy, etc.

System diagrams are particularly helpful in showing you how a change in one factor may impact elsewhere. They are excellent tools for flushing out the long term impacts of a change. Importantly, a good system diagram will show how changing a factor may feed back to affect itself!

Drawing a system diagram is a good way of starting to build a computer model. The technique helps you to map out the structure of the system to be modeled. It shows the factors and relationships that are important, and helps you to start quantifying the linkages between factors.

How to Use the Tool

Relationships between factors:
At the heart of the use of system diagrams is the idea of linking factors to show a relationship between them.

For example a company may link the factors of product quality and customer satisfaction. It believes that as the quality of its goods change, so will customers' happiness with them. We show this as an arrow linking the two factors:

Figure 1: A Simple Same Way Relationship Between Two Factors

The S shows that the factors move in the Same way – as quality improves, so will the happiness of customers. The arrow shows the direction of the relationship: raising customer happiness does not necessarily raise the quality of the goods!

These relationships can also work the other way. The company may link price with the customers' perceptions of the 'good value' of its goods. This is shown below:

Figure 2: An Opposite Relationship Between Two Factors

The O shows that the relationship works in the opposite way: in this case as you raise price, customers' perceptions of good value reduce.

Feedback Loops:
Feedback is an important concept in the use of system diagrams – in very many cases changing one factor will impact on another factor, which will then affect the first.

Feedback will either reduce the impact of the change, or will amplify it.

Balancing Loops:
Where feedback reduces the impact of a change, we call this a Balancing Loop. The example below shows an example of a balancing loop, where an under-resourced service company is trying to raise quality:

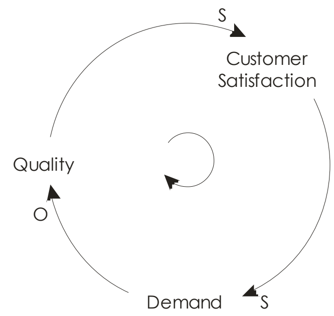


Figure 3: An Example Balancing Loop

In this situation, improving the quality of service leads to improved customer satisfaction, which leads to an increase in demand for the company's service. In trying to meet this demand, the company has less time to devote to individual customers, which reduces its ability to improve quality further.

Note the small circular arrow in the middle of the loop. This shows which way round the loop is running. In complex diagrams with many loops, this arrow will be labeled and will identify loops.

The graph below shows how quality of service might vary with time in the example above:

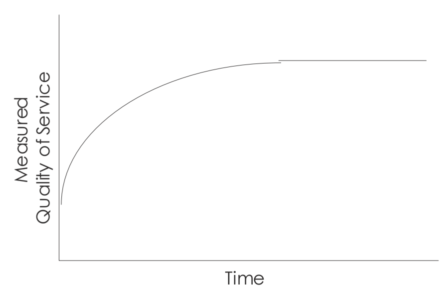


Figure 4: Graph Showing How Quality Changes Over Time in the Balancing Loop in Figure 3.

Reinforcing loops:
Where feedback increases the impact of a change, we call this a Reinforcing Loop. The example below shows an example of a theatre trying to improve its profitability by investing more in productions.

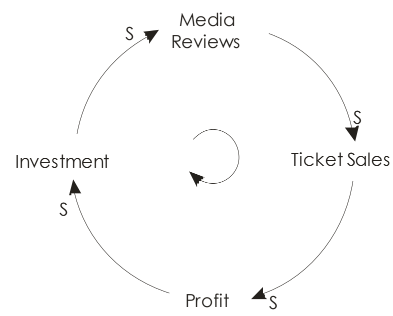


Figure 5: Reinforcing Loop Showing the Effect of Increasing Investment in a Theatre

As more investment is put into a production, the theatre is able to put on more lavish plays with more famous actors. Better plays should bring better reviews, and therefore higher ticket sales. This should lead to higher profitability, and therefore more money available to invest in future productions.

A graph showing how ticket sales might vary against time is shown below:

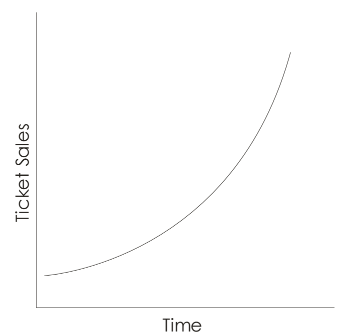


Figure 6: Graph Showing the Effect on Sales of the Reinforcing Loop in Figure 5

Note that this assumes that investment is increasing as time goes on. It also ignores some important facts: firstly that there are only a certain number of seats in the theatre, and secondly that external factors such as competition and market saturation will eventually limit growth. On a system diagram showing the way that the theatre operates, these factors would be shown as balancing loops impacting on this reinforcing loop.

External Factors:
The system diagrams we have looked at so far completely ignore the impact of these external factors on them.

In our balancing loop example above we assumed that demand was raised only as customers became more satisfied. In reality demand is just as likely to be affected by the state of the economy. This is shown in the modified diagram below:

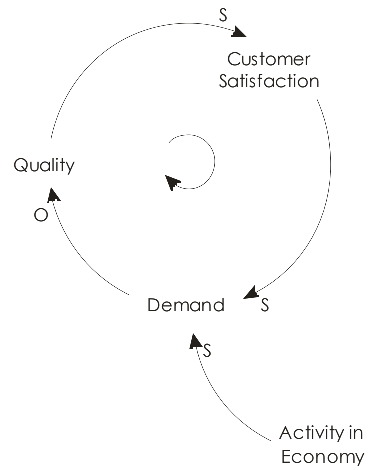


Figure 7: Diagram Showing the Effect of an External Factor on a System

We show an external factor as a labeled relationship arrow pointing to the appropriate part of the system diagram.

Gaps:
In our reinforcing loop example above we related sales of theatre seats to investment in productions. What we were not able to build into the model was the fact that there is a limited number of seats in the theatre.

Inevitably this will cap the growth of ticket sales as the theatre will seriously upset customers if it sells more tickets than it has seats available!

We build this into our model with the idea of a gap. There is a gap between the number of seats available (an external factor we have not yet built into our model), and the number of seats used (tickets sold).

As the theatre sells more tickets, the size of this gap reduces. At a particular point it cannot sell any more tickets. Increases in investment beyond this point may not yield any more profit.

We show this by modifying our diagram to both show both the external factor of the limit of the number of seats, and to show the gap:

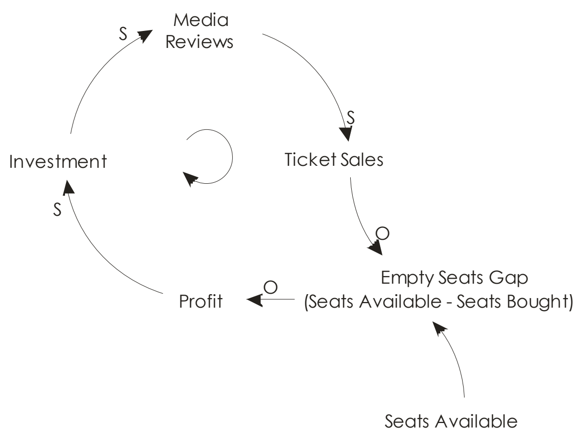


Figure 8: Systems Diagram Showing the Effect of a Gap on a Syster

When all seats are sold, i.e. when seats available – seats bought = 0, then profit will not rise any higher unless other factors are brought into the system.

Note that it is very important to get the gap definition correct for your model.

Delay:
The impact of delay is the final area we need to consider in our system diagrams.

Ideally when we make a change to a system it should adjust immediately to its new state. In reality there is almost always a delay before other factors adjust. This delay may occur in a mechanical system simply as a result of inertia and friction. In a human system it will occur as people take time to communicate, get used to new ideas, and implement change.

We can show this delay in a simple model using antelopes and cheetahs. As the number of antelopes rises, more food is available for the cheetahs. More cheetahs will therefore survive, and will be able to breed.

One part of the delay within this system is given by the length of time it takes for a cheetah to be born and grow to maturity. The other part occurs as starving cheetahs take time to die.

Feedback occurs as cheetahs kill antelopes. The higher the number of cheetahs, the greater will be their impact on the antelope population.

The system below shows this:

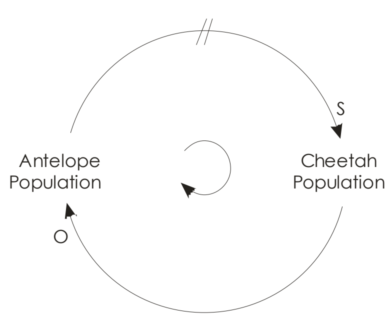


Figure 9: Diagram Showing Delay in a Systen

Note the double slash on the line showing the relationship between the antelope and cheetah populations. This shows that some form of delay is slowing the change of the related factor.

If there was no delay within the system, we might expect to see a graph showing the number of cheetahs over time like the one below:

Figure 10: Graph Showing the Adjustment in Cheetah Population in the Example in Figure 9 if there was no Delay

Here adjustment would be immediate. Any change in the antelope population would be instantly matched by an increase in the cheetah population. These additional cheetahs would eat the additional antelopes, and then die immediately.

The delay in the system causes it to behave in a different way:

- Firstly the cheetah population will take time to increase.
- Next, the large population of cheetahs will continue to breed as food starts to become scarce.
- This number of cheetahs will cause a big reduction in the number of antelopes.
- This will then lead to a crash in cheetah population as animals starve.
- The antelope population will then recover as there will be fewer cheetahs to restrict their numbers.

If nothing else has any impact on this system, then cheetah numbers may oscillate as shown below:

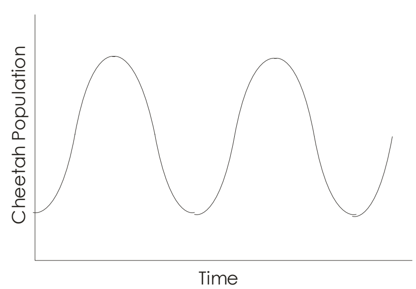


Figure 11: Graph Showing the Effect on Cheetah Populations when Delay is Considered in Figure 9.

This occurs as the cheetah population continually over-adjusts, first in growth, and then in decline. In this system, the longer it takes for a cheetah to breed and starve – i.e. the greater the delay – the greater will be the variations in cheetah populations.

Improving the Systems Model

The models we have looked at so far have been simple – they have ignored many possible impacts on each system. For example, in our model of antelopes and cheetahs, we have ignored the impact of disease, drought, human activity, etc.

We improve the model by building in as many of these external factors as we can think of. We can then simplify it by eliminating those factors that have a negligible impact.

External factors might be:

- Natural – weather, natural resources, disease, environmental change, etc.
- Technological – new technologies, changes in technology, etc.
- Human – psychological, emotional, ambitions, expectations, etc.
- Political – ideology, corruption, effectiveness, interest, etc.
- Social – values, social inertia, traditions, philosophies, etc.
- Financial – state of the economy, capital available, etc.
- Etc.

Ultimately you may end up with a model made up of a number of reinforcing loops, balancing loops and external factors. The example below shows a more sophisticated diagram of the antelopes and cheetahs system:

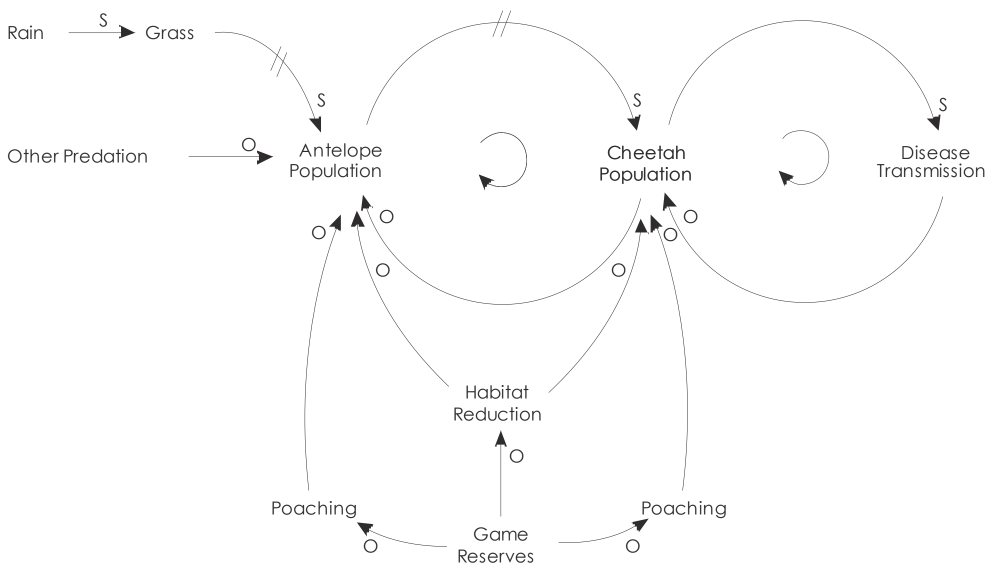


Figure 12: The Completed Systems Model Showing the Way in Which Antelope and Cheetah Populations Vary

Note: This diagram is an example only and does not necessarily reflect how antelope and cheetah populations operate in real life.

Systems Diagrams as the Basis of Computer Models

Once you have established the relationships between factors on your diagram, you can look to see if you can put numbers to the relationships. In the example above you may find that if drought halves the amount of grass available to antelopes, the antelope population reduces by one third.

You can build this relationship into a computer model. A useful way of starting this with simple and moderately complex models is to build the model on a spreadsheet.

You can use this model to make predictions by changing factors within it. This would allow you to assess the likely impact on your system of external changes, and investigate the effect of changes you might make within the system.

Key Points

Systems diagrams allow you to model the way in which complex systems work. They help you to think through the way in which the factors within a system interact and feed back upon themselves.

You should now be able to analyze:

- How factors are related, and how one factor will change when another changes
- How factors may feed back in either balancing loops or reinforcing loops
- How external factors impact on the system
- How gaps operate
- How delay affects the system
- All the complexities of a system.

Worksheet

7.6 SWOT Analysis

Discover New Opportunities. Manage and Eliminate Threats.

SWOT Analysis is a powerful technique for understanding your Strengths and Weaknesses, and for looking at the Opportunities and Threats you face.

Used in a business context, it helps you carve a sustainable niche in your market.

What makes SWOT particularly powerful is that, with a little thought, it can help you uncover opportunities that you are well placed to take advantage of. And by understanding the weaknesses of your business, you can manage and eliminate threats that would otherwise catch you unawares.

More than this, by looking at yourself and your competitors using the SWOT framework, you can start to craft a strategy that helps you distinguish yourself from your competitors, so that you can compete successfully in your market.

How to Use the Tool

To carry out a SWOT Analysis, print off the SWOT Analysis worksheet from your *Worksheets and Templates Supplement*, and write down answers to the following questions:

Strengths:

- What advantages does your company have?
- What do you do better than anyone else?
- What unique or lowest-cost resources do you have access to?
- What do people in your market see as your strengths?

Consider this from an internal perspective, and from the point of view of your customers and people in your market. And be realistic: It's far too easy to fall prey to "not invented here syndrome". Also, if you are having any difficulty with this, try writing down a list of your characteristics. Some of these will hopefully be strengths!

In looking at your strengths, think about them in relation to your competitors – for example, if all your competitors provide high quality products, then a high quality production process is not a strength in the market, it is a necessity.

Weaknesses:

- What could you improve?
- What should you avoid?
- What are people in your market likely to see as weaknesses?

Again, consider this from an internal and external basis: Do other people seem to perceive weaknesses that you do not see? Are your competitors doing any better than you? It is best to be realistic now, and face any unpleasant truths as soon as possible.

Opportunities:

- Where are the good opportunities facing you?
- What are the interesting trends you are aware of?

Useful opportunities can come from such things as:

- Changes in technology and markets on both a broad and narrow scale
- Changes in government policy related to your field
- Changes in social patterns, population profiles, lifestyle changes, etc.
- Local Events

A useful approach to looking at opportunities is to look at your strengths and ask yourself whether these open up any opportunities.

Alternatively, look at your weaknesses and ask yourself whether you could open up opportunities by eliminating them.

Threats:

- What obstacles do you face?
- What is your competition doing?
- Are the required specifications for your job, products or services changing?
- Is changing technology threatening your position?
- Do you have bad debt or cash-flow problems?
- Could any of your weaknesses seriously threaten your business?

Carrying out this analysis will often be illuminating – both in terms of pointing out what needs to be done, and in putting problems into perspective.

Strengths and weaknesses are often internal to your organization. **Opportunities and threats** often relate to external factors. For this reason the SWOT Analysis is sometimes called Internal-External Analysis and the SWOT Matrix is sometimes called an IE Matrix Analysis Tool.

You can also apply SWOT Analysis to your competitors. As you do this, you'll start to see how and where you should compete against them.

Example

A start-up small consultancy business might draw up the following SWOT matrix:

Strengths:

- We are able to respond very quickly as we have no red tape, no need for higher management approval, etc.
- We are able to give really good customer care, as the current small amount of work means we have plenty of time to devote to customers
- Our lead consultant has strong reputation within the market

- We can change direction quickly if we find that our marketing is not working
- We have little overhead, so can offer good value to customers

Weaknesses:
- Our company has no market presence or reputation
- We have a small staff with a shallow skills base in many areas
- We are vulnerable to vital staff being sick, leaving, etc.
- Our cash flow will be unreliable in the early stages

Opportunities:
- Our business sector is expanding, with many future opportunities for success
- Our local council wants to encourage local businesses with work where possible
- Our competitors may be slow to adopt new technologies

Threats:
- Will developments in technology change this market beyond our ability to adapt?
- A small change in focus of a large competitor might wipe out any market position we achieve

The consultancy may therefore decide to specialize in rapid response, good value services to local businesses. Marketing would be in selected local publications, to get the greatest possible market presence for a set advertising budget. The consultancy should keep up-to-date with changes in technology where possible.

Key Points
SWOT Analysis is a simple but powerful framework for analyzing your company's Strengths and Weaknesses, and the Opportunities and Threats you face. This helps you to focus on your strengths, minimize threats, and take the greatest possible advantage of opportunities available to you.

Worksheet

7.7 Personal SWOT Analysis
Discover new opportunities. Manage and eliminate threats.

Although SWOT analysis was originally developed to analyze organizations and opportunities, you can also carry out a SWOT analysis on yourself.

Used in a personal context, it helps you develop your career in a way that takes best advantage of your talents, abilities and opportunities.

What makes SWOT particularly powerful is that with a little thought, it can help you uncover opportunities that you are well placed to take advantage of. And by understanding your weaknesses, you can manage and eliminate threats that would otherwise catch you unawares.

More than this, by looking at yourself using the SWOT framework, you can start to distinguish yourself from your peers, developing the specialized talents and abilities needed to accelerate your career.

How to Use the Tool
To carry out a SWOT Analysis, print out the SWOT Analysis worksheet from your *Worksheets and Templates Supplement*, and write down answers to the following questions:

Strengths:
- What advantages (for example, skills, education or connections) do you have that others don't have?

- What do you do better than anyone else?
- What personal resources do you have access to?
- What do other people (and your boss in particular) see as your strengths?

Consider this from your own perspective, and from the point of view of the people around you. And don't be modest, be as objective as you can. If you are having any difficulty with this, try writing down a list of your characteristics. Some of these will hopefully be strengths!

In looking at your strengths, think about them in relation to the people around you – for example, if you're a great mathematician and the people around you are great at math, then this is not likely to be a strength in your current role, it is likely to be a necessity.

Weaknesses:

- What could you improve?
- What should you avoid?
- What things are the people around you likely to see as weaknesses?

Again, consider this from a personal and external basis: Do other people perceive weaknesses that you do not see? Do co-workers consistently out-perform you in key areas? It is best to be realistic now, and face any unpleasant truths as soon as possible.

Opportunities:

- Where are the good opportunities facing you?
- What are the interesting trends you are aware of?
- Useful opportunities can come from such things as:
- Changes in technology, markets and your company on both a broad and narrow scale;
- Changes in government policy related to your field;
- Changes in social patterns, population profiles, lifestyle changes, etc.; or
- Local Events

A useful approach to looking at opportunities is also to look at your strengths and ask yourself whether these open up any opportunities.

Alternatively, look at your weaknesses and ask yourself whether you could open up opportunities by eliminating them.

Threats:

- What obstacles do you face?
- What are the people around you doing?
- Is your job (or the demand for the things you do) changing?
- Is changing technology threatening your position?
- Could any of your weaknesses seriously threaten you?

Carrying out this analysis will often be illuminating – both in terms of pointing out what needs to be done, and in putting problems into perspective.

Key Points

A SWOT matrix is a framework for analyzing your strengths and weaknesses, and the opportunities and threats you face. This helps you to focus on your strengths, minimize weaknesses, and take the greatest possible advantage of opportunities available.

7.8 Cash Flow Forecasting
Forecasting the Viability of a Financial Decision

Cash Flow Forecasts help you to build a model of the way in which cash moves within a project or organization. They help you to predict whether the sales or income you forecast will cover the costs of operation and generate enough profit to justify the effort put into it. They also allow you to analyze whether a project that is profitable over its lifetime has negative cash flow at any point during its implementation.

Cash flow forecasts can also be useful for analyzing your own personal finances. This is useful when you are about to make difficult financial decisions.

By carrying out a Cash Flow forecast on a spreadsheet package you can investigate the impact of changing factors within the forecast. If you have structured the spreadsheet correctly then you will be able to see, more or less instantly, the effect that changes will have.

Normally we structure Cash Flow Forecasts in a standard way. This is explained below. Other sorts of forecasting can be carried out with spreadsheets. A good way of structuring these is to firstly analyze the system being forecasted with a systems diagram. This system diagram will show the relationships between factors. You can then quantify these relationships, and build a model based on them. The structure of the model will depend on the system being modeled.

How to Use the Tool

We structure the Cash Flow Forecast as a table. On the table we have columns for each period (normally a month) within the forecast. Rows show individual cash movements such as sales of a product, sales costs, and particular expenses.

We create the table for the forecast in three stages. Refer to the example in Figure 1 (below) as we run through the stages:

1. Set Up Column Headings:
Decide the period of time over which you want to run your forecast, and the length of the periods within it. Typically the forecast will run over 1-2 years, with the periods as months.

Head up one column with the title 'Cash Movement'. Then enter the periods of the forecast as the next column headings.

This will give you column headings of, for example, Cash Movement, January, February, March, April…. etc.

2. Set Up Row Titles:
We organize rows into three main groups:

- **Income:**
  These rows show income expected during the period. Set up a separate row for each source of income. Examples might be:
    - Sales of ABC product
    - Sales of BCD service
    - Investment income
    - Etc.

  Where costs of operation are directly dependent on the amount sold, you may decide to deduct the direct cost of the sales made within this group of rows. Put in a subtotal at the bottom of the group.

- **Outgoings:**
  These rows show all of your costs, itemized by the type of cost. Examples might be:
    - Staff salaries
    - Payroll taxes
    - Stationery
    - Telephones
    - Etc.

  Set up a subtotal at the bottom of this group.

- **Totals:**
  The next row shows the total of the income rows minus the total of the out-going rows for the month. This shows you your cash situation for the month.

  Underneath this, put in a running total. In this row add your profit or loss for the period to the previous running total. This shows your financial position at the end of the period.

3. Estimate values:
By now you should have a table marked out with column headings and row titles. Now fill in the values of the cells on your table. An easy way of doing this is to fill in the first column, and then use the spreadsheet 'Fill… Right' function to copy values across. Then adjust values in the other columns appropriately.

When you are entering projections for sales for a new business, bear in mind you will not sell much until your customers have seen mention of your business several times (often 6 or 7 times). Your estimates for sales will be much more reliable if you base them either on previous years' revenues, on trial marketing, or on good quality market research.

When you are entering values for costs, try, where possible, to base projections on costs from previous years. If this is not possible, base your estimates on real prices quoted. This keeps your estimates as realistic as possible.

4. Calculate!
On most modern spreadsheet packages this will happen automatically, providing you have set up totals correctly as described in section 2. As you enter and change the values of cells within the spreadsheet, you should see that the period totals and running totals change appropriately.

Cash Flow Forecasting is a relatively simple technique for checking the viability of a project. Cost/Benefit Analysis is another. These are good techniques for decisions involving relatively small amounts of money. Where large sums are involved (for example, in financial market transactions), project evaluation can become a complex and sophisticated art, which uses more formal techniques. The fundamentals of this are explained in *Principles of Corporate Finance* by Richard Brealey and Stewart Myers – this is something of an authority on the subject.

Example

A motorhome enthusiast has decided that he wants to set up a motorhome hire company. He has researched the costs of set up, and estimated the number of weeks of hire he can sell during the year.

Note that he has been quite optimistic in hoping to sell all the weeks of holiday available during the high season of July and August. He will charge the same price as his competitors for a holiday.

He works out the cash flow forecast below:

(Please note that these figures are provided for illustration only and are not necessarily indicative of the real figures for this type of business.)

Price of 6 berth vehicle for 1 week: 1,650 Number of vehicles on hire: 2

Cash Movement	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Income:												
OPERATIONS												
Vehicle weeks hired out	1	-	2	6	5	7	9	9	6	3	2	1
RV Hire	1,650.00	0.00	3,300.00	9,900.00	8,250.00	11,550.00	14,850.00	14,850.00	9,900.00	4,950.00	3,300.00	1,650.00
Travel Insurance	0.00	0.00	125.00	250.00	625.00	875.00	1,125.00	1,125.00	750.00	375.00	250.00	125.00
Cancellation Insurance	0.00	0.00	37.50	75.00	187.50	262.50	337.50	337.50	225.00	112.50	75.00	37.50
Support Services	0.00	0.00	495.00	1,485.00	1,237.50	1,732.50	2,227.50	2,227.50	1,485.00	742.50	495.00	247.50
Total Income	**1,650.00**	**0.00**	**3,957.50**	**11,710.00**	**10,300.00**	**14,420.00**	**18,540.00**	**18,540.00**	**12,360.00**	**6,180.00**	**4,120.00**	**2,060.00**
Outgoings:												
OPERATIONS												
Salaries	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00	2,205.00
Payroll Taxes	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50	1,102.50
Office Expenses	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00	160.00
Office Rental	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00
Parking Lot Rent	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00	800.00
Utilities	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00
Maintenance	100.00	100.00	225.40	476.20	413.50	538.90	664.30	664.30	476.20	288.10	225.40	162.70
Laundry & Cleaning	0.00	0.00	33.00	99.00	82.50	115.50	148.50	148.50	99.00	49.50	33.00	16.50
Insurance	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00	140.00
Brochures	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Advertising	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00	400.00
FINANCING												
Vehicle Purchase Loans	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00	2,100.00
Total Expenses	**8,377.50**	**7,477.50**	**7,635.90**	**7,952.70**	**7,873.50**	**8,031.90**	**8,190.30**	**8,190.30**	**7,952.70**	**7,715.10**	**7,635.90**	**7,556.70**
Monthly Total:	-6,727.50	-7,477.50	-3,678.40	3,757.30	2,426.50	6,388.10	10,349.70	10,349.70	4,407.30	-1,535.10	-3,515.90	-5,496.70
Running Total:	**-6,727.50**	**-14,205.00**	**-17,883.40**	**-14,126.10**	**-11,699.60**	**-5,311.50**	**5,038.20**	**15,387.90**	**19,795.20**	**18,260.10**	**14,744.20**	**9,247.50**

Looking at these figures, the enthusiast is very worried – although the business scheme he wants to set up will return a small profit of just under $10,000 at the end of the year, he will be nearly $18,000 in the red at the end of March. Unless he has this amount of spare cash of his own and is prepared to tie it up in the venture, or he is willing to arrange a loan or overdraft facility (which will incur further costs), his proposed business model is not viable.

He may just have saved a lot of time, money and stress by using a Cash Flow Forecast.

Key Points

Cash Flow Forecasts are important tools for investigating whether a project or business is viable. They allow you to experiment with changing factors, to see the impact that this will have. Spreadsheet packages are invaluable for cash flow forecasting.

We set up Cash Flow Forecasts in the following stages:

1. Setting out column headings for periods (normally months) during the forecast.

2. Setting out three main groups of rows:
   - Income rows, with a subtotal
   - Expenditure rows, with a subtotal
   - Period total and running total rows

3. Entering values within cells: Ideally you should do this from real data, or from formal market research information. If this is not possible, then you will have to use the best estimates you can make.

4. Calculation.

7.9 Risk Analysis and Risk Management
Evaluating and Managing the Risks You Face

Almost everything we do in today's business world involves a risk of some kind: customer habits change, new competitors appear, factors outside your control could delay your project. But formal risk analysis and risk management can help you to assess these risks and decide what actions to take to minimize disruptions to your plans. They will also help you to decide whether the strategies you could use to control risk are cost-effective.

How to Use the Tool

Here we define risk as 'the perceived extent of possible loss'. Different people will have different views of the impact of a particular risk – what may be a small risk for one person may destroy the livelihood of someone else.

One way of putting figures to risk is to calculate a value for it as:

risk = probability of event x cost of event

Doing this allows you to compare risks objectively. We use this approach formally in decision making with Decision Trees.

To carry out a risk analysis, follow these steps:

1. Identify Threats:
The first stage of a risk analysis is to identify threats facing you. Threats may be:

- **Human** – from individuals or organizations, illness, death, etc.
- **Operational** – from disruption to supplies and operations, loss of access to essential assets, failures in distribution, etc.
- **Reputational** – from loss of business partner or employee confidence, or damage to reputation in the market.
- **Procedural** – from failures of accountability, internal systems and controls, organization, fraud, etc.
- **Project** – risks of cost over-runs, jobs taking too long, of insufficient product or service quality, etc.
- **Financial** – from business failure, stock market, interest rates, unemployment, etc.
- **Technical** – from advances in technology, technical failure, etc.
- **Natural** – threats from weather, natural disaster, accident, disease, etc.
- **Political** – from changes in tax regimes, public opinion, government policy, foreign influence, etc.
- **Others** – Porter's Five Forces analysis may help you identify other risks.

This analysis of threat is important because it is so easy to overlook important threats. One way of trying to capture them all is to use a number of different approaches:

- Firstly, run through a list such as the one above, to see if any apply
- Secondly, think through the systems, organizations or structures you operate, and analyze risks to any part of those
- See if you can see any vulnerabilities within these systems or structures
- Ask other people, who might have different perspectives.

2. Estimate Risk:
Once you have identified the threats you face, the next step is to work out the likelihood of the threat being realized and to assess its impact.

One approach to this is to make your best estimate of the probability of the event occurring, and to multiply this by the amount it will cost you to set things right if it happens. This gives you a value for the risk.

3. Managing Risk:
Once you have worked out the value of risks you face, you can start to look at ways of managing them. When you are doing this, it is important to choose cost effective approaches – in most cases, there is no point in spending more to eliminating a risk than the cost of the event if it occurs. Often, it may be better to accept the risk than to use excessive resources to eliminate it.
Risk may be managed in a number of ways:

- *By using existing assets:*
  Here existing resources can be used to counter risk. This may involve improvements to existing methods and systems, changes in responsibilities, improvements to accountability and internal controls, etc.

- *By contingency planning:*
  You may decide to accept a risk, but choose to develop a plan to minimize its effects if it happens. A good contingency plan will allow you to take action immediately, with the minimum of project control if you find yourself in a crisis management situation. Contingency plans also form a key part of Business Continuity Planning (BCP) or Business Continuity Management (BCM).

- *By investing in new resources:*
  Your risk analysis should give you the basis for deciding whether to bring in additional resources to counter the risk. This can also include insuring the risk: Here you pay someone else to carry part of the risk – this is particularly important where the risk is so great as to threaten your or your organization's solvency.

4. Reviews:
Once you have carried out a risk analysis and management exercise, it may be worth carrying out regular reviews. These might involve formal reviews of the risk analysis, or may involve testing systems and plans appropriately.

Key Points
Risk analysis allows you to examine the risks that you or your organization face. It is based on a structured approach to thinking through threats, followed by an evaluation of the probability and cost of events occurring.

Risk analysis forms the basis for risk management and crisis prevention. Here the emphasis is on cost effectiveness. Risk management involves adapting the use of existing resources, contingency planning and good use of new resources.

Worksheet

7.10 Porter's Five Forces
Assessing the Balance of Power in a Business Situation

The Porter's 5 Forces tool is a simple but powerful tool for understanding where power lies in a business situation. This is useful, because it helps you understand both the strength of your current competitive position, and the strength of a position you're looking to move into.

With a clear understanding of where power lies, you can take fair advantage of a situation of strength, improve a situation of weakness, and avoid taking wrong steps. This makes it an important part of your planning toolkit.

Conventionally, the tool is used to identify whether new products, services or businesses have the potential to be profitable. However it can be very illuminating when used to understand the balance of power in other situations too.

How to Use the Tool

Five Forces Analysis assumes that there are five important forces that determine competitive power in a situation. These are:

1. **Supplier Power:** Here you assess how easy it is for suppliers to drive up prices. This is driven by the number of suppliers of each key input, the uniqueness of their product or service, their strength and control over you, the cost of switching from one to another, and so on. The fewer the supplier choices you have, and the more you need suppliers' help, the more powerful your suppliers are.

2. **Buyer Power:** Here you ask yourself how easy it is for buyers to drive prices down. Again, this is driven by the number of buyers, the importance of each individual buyer to your business, the cost to them of switching from your products and services to those of someone else, and so on. If you deal with few, powerful buyers, they are often able to dictate terms to you.

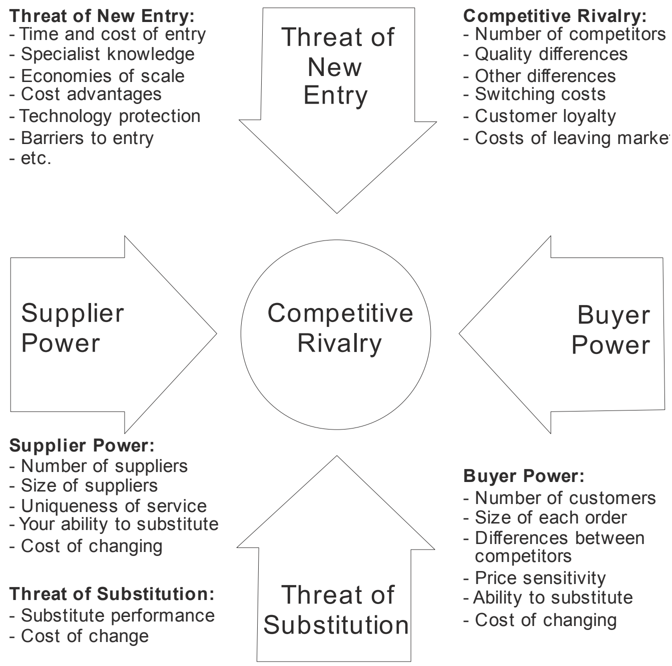
3. **Competitive Rivalry:** What is important here is the number and capability of your competitors – if you have many competitors, and they offer equally attractive products and services, then you'll most likely have little power in the situation. If suppliers and buyers don't get a good deal from you, they'll go elsewhere. On the other hand, if no-one else can do what you do, then you can often have tremendous strength.

4. **Threat of Substitution:** This is affected by the ability of your customers to find a different way of doing what you do – for example, if you supply a unique software product that automates an important process, people may substitute by doing the process manually or by outsourcing it. If substitution is easy and substitution is viable, then this weakens your power.

5. **Threat of New Entry:** Power is also affected by the ability of people to enter your market. If it costs little in time or money to enter your market and compete effectively, if there are few economies of scale in place, or if you have little protection for your key technologies, then new competitors can quickly enter your market and weaken your position. If you have strong and durable barriers to entry, then you can preserve a favorable position and take fair advantage of it.

These forces can be neatly brought together in a diagram like the one below:

Porter's Five Forces



To use the tool to understand your situation, look at each of these forces one-by-one.

Brainstorm the relevant factors for your market or situation, and then check against the factors listed for the force in the diagram above.

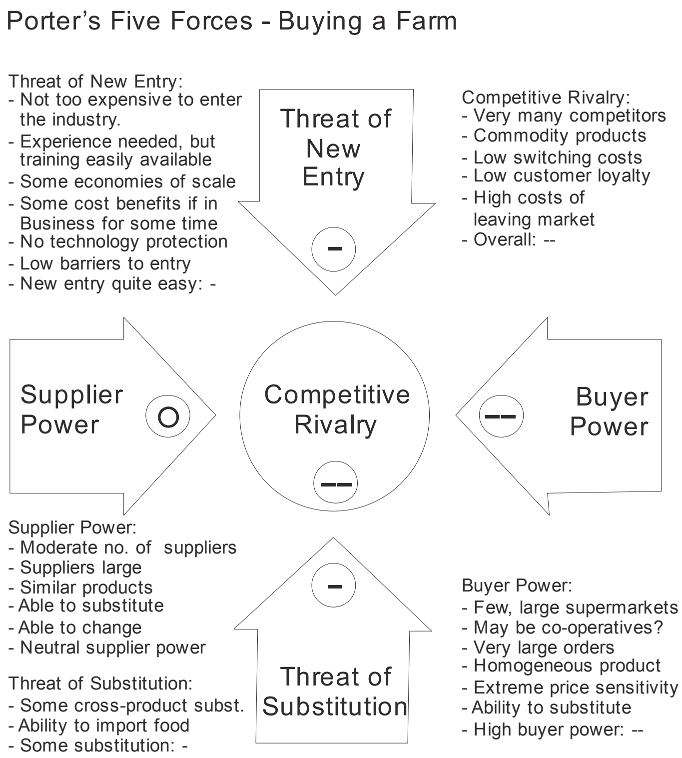
Then mark the key factors on the Porter's Five Forces template from your *Worksheets and Templates Supplement*, and summarize the size and scale of the force on the diagram. An easy way of doing this is to use, for example, a single "+" sign for a force moderately in your favor, or "--" for a force strongly against you (you can see this in the example below).

Then look at the situation you find using this analysis and think through how it affects you. Bear in mind that few situations are perfect; however use environmental scanning as a framework for thinking through what you could change to increase your power with respect to each force.

> This tool was created by Harvard Business School professor, Michael Porter, to analyze the attractiveness and likely-profitability of an industry. Since publication, it has become one of the most important business strategy tools. The classic article which introduces it is "How Competitive Forces Shape Strategy" in Harvard Business Review 57, March – April 1979, pages 86-93.

Example

Martin Johnson is deciding whether to switch career and become a farmer – he's always loved the countryside, and wants to switch to a career where he's his own boss. He creates the following Five Forces Analysis as he thinks the situation through:



This worries him:

- The threat of new entry is quite high: if anyone looks as if they're making a sustained profit, new competitors can come into the industry easily, reducing profits;
- Competitive rivalry is extremely high: if someone raises prices, they'll be quickly undercut. Intense competition puts strong downward pressure on prices;
- Buyer power is strong, again implying strong downward pressure on prices; and
- There is some threat of substitution.

Unless he is able to find some way of changing this situation, this looks like a very tough industry to survive in. Maybe he'll need to specialize in a sector of the market that's protected from some of these forces, or find a related business that's in a stronger position.

Key Points

Porter's Five Forces Analysis is an important tool for assessing the potential for profitability in an industry. With a little adaptation, it is also useful as a way of assessing the balance of power in more general situations.

It works by looking at the strength of five important forces that affect competition:

1. **Supplier Power:** The power of suppliers to drive up the prices of your inputs;
2. **Buyer Power:** The power of your customers to drive down your prices;
3. **Competitive Rivalry:** The strength of competition in the industry;
4. **The Threat of Substitution:** The extent to which different products and services can be used in place of your own; and
5. **The Threat of New Entry:** The ease with which new competitors can enter the market if they see that you are making good profits (and then drive your prices down).

By thinking through how each force affects you, and by identifying the strength and direction of each force, you can quickly assess the strength of the position and your ability to make a sustained profit in the industry.

You can then look at how you can affect each of the forces to move the balance of power more in your favor.

7.11 PEST Analysis
Understanding "Big Picture" Forces of Change

Worksheet

Related variants: PESTLE, PESTEL, PESTLIED, STEEPLE and SLEPT

PEST Analysis is a simple but important and widely-used tool that helps you understand the big picture of the Political, Economic, Socio-Cultural and Technological environment you are operating in. PEST is used by business leaders worldwide to build their vision of the future.

It is important for the following main reasons:

- Firstly, by making effective use of PEST Analysis, you ensure that what you are doing is aligned positively with the powerful forces of change that are affecting our world. By taking advantage of change, you are much more likely to be successful than if your activities oppose it;

- Secondly, good use of PEST Analysis helps you avoid taking action that is doomed to failure for reasons beyond your control; and

- Thirdly, PEST is useful when you start operating in a new country or region. Use of PEST helps you break free of unconscious assumptions, and helps you quickly adapt to the realities of the new environment.

How to Use the Tool
PEST is a simple mnemonic standing for Political, Economic, Socio-Cultural and Technological. Use the PEST Analysis worksheet in your *Worksheets and Templates Supplement* to record your analysis.

Using the tool is a three stage process:

1. Brainstorm the relevant factors that apply to you;
2. Identify the information that applies to these factors; and
3. Draw conclusions from this information.

> **Tip:**
> The important point is to move from the second step to the third step: it is sterile just to describe factors without thinking through what they mean. However, be careful not to assume that your analysis is perfect: use it as a starting point, and test your conclusions against the reality you experience.

The following factors may help as a starting point for brainstorming (but make sure you include others that may be appropriate to your situation):

Political:

- Government type and stability

- Freedom of press, rule of law and levels of bureaucracy and corruption
- Regulation and de-regulation trends
- Social and employment legislation
- Tax policy, and trade and tariff controls
- Environmental and consumer-protection legislation
- Likely changes in the political environment

Economic:

- Stage of business cycle
- Current and project economic growth, inflation and interest rates
- Unemployment and labor supply
- Labor costs
- Levels of disposable income and income distribution
- Impact of globalization
- Likely impact of technological or other change on the economy
- Likely changes in the economic environment

Socio-Cultural:

- Population growth rate and age profile
- Population health, education and social mobility, and attitudes to these
- Population employment patterns, job market freedom and attitudes to work
- Press attitudes, public opinion, social attitudes and social taboos
- Lifestyle choices and attitudes to these
- Socio-Cultural changes

Technological Environment:

- Impact of emerging technologies
- Impact of Internet, reduction in communications costs and increased remote working
- Research and Development activity
- Impact of technology transfer

Other forms of PEST – PESTLE, PESTLIED, STEEPLE and SLEPT
Some people prefer to use different flavors of PEST Analysis, using other factors for different situations. The variants are:

- PESTLE/PESTEL: Political, Economic, Sociological, Technological, Legal, Environmental;
- PESTLIED: Political, Economic, Social, Technological, Legal, International, Environmental, Demographic;
- STEEPLE: Social/Demographic, Technological, Economic, Environmental, Political, Legal, Ethical; and
- SLEPT: Social, Legal, Economic, Political, Technological

Example

We're going to avoid giving an example here, because of the huge potential for causing offense: few societies seem perfect to outsiders, and there are few things as irritating as having an outsider criticize one's own country.

However, a broad principle is that things that make activity more difficult for people or organizations raise the cost of doing business: activity is either blocked altogether, or costs more in time/money as difficulties are circumvented. The higher the cost of doing business in a region, the more project profitability is squeezed or eliminated. And given that businesspeople normally have at least some level of intelligence, businesses and projects that could otherwise operate are never launched – meaning that less economic activity takes place.

And the lower the amount of economic activity, the poorer and less capable societies tend to be.

Another broad principle is wherever there is rapid or major change in an area, there are likely to be new opportunities and threats that arise. Smart people and companies will take advantage of the opportunities and manage the threats.

And do remember that few situations are perfect: it is up to us to make the most of the situation in which we find ourselves.

Key Points

PEST Analysis is a useful tool for understanding the "big picture" of the environment in which you are operating, and the opportunities and threats that lie within it. By understanding your environment, you can take advantage of the opportunities and minimize the threats.

PEST is a mnemonic standing for Political, Economic, Social and Technological. These headings are used firstly to brainstorm the characteristics of a country or region and, from this, draw conclusions as to the significant forces of change operating within it.

This provides the context within which more detailed planning can take place to take full advantage of the opportunities that present themselves.

7.12 Value Chain Analysis

Achieving Excellence in the Things that Really Matter

Value Chain Analysis or Value Stream Mapping is a useful tool for working out how you can create the greatest possible value for your customers, as well as your best route to profit maximization.

In business, we're paid to take raw inputs, and to "add value" to them by turning them into something of worth to other people. This is easy to see in manufacturing, where the manufacturer "adds value" by taking a raw material of little use to the end-user (for example, wood pulp) and converting it into something that people are prepared to pay money for (e.g. paper). But this idea is just as important in service industries, where people use inputs of time, knowledge, equipment and systems to create services of real value to the person being served – the customer.

And remember that your customers aren't necessarily outside your organization: they can be your bosses, your co-workers, or the people who depend on you for what you do. Or all of these people could be your customers in one way or another, just as long as they (directly or indirectly) pay your wages.

Now, this is really important: In most cases, the more value you create, the more people will be prepared to pay a good price for your product or service, and the more they will they keep on buying from you. On a personal level, if you add a lot of value to your team, you will excel in what you do. You should then expect to be rewarded in line with your contribution.

So how do you find out where you, your team or your company can create value?

This is where the "Value Chain Analysis" tool is useful. Value Chain Analysis helps you identify the ways in which you create value for your customers, and then helps you think through how you can maximize this value: whether through superb products, great services, or jobs well done.

Note:
The idea of the Value Chain was developed by Michael Porter (also creator of the 5 Forces tool) in his book Competitive Advantage. We strongly recommend Competitive Advantage if you want to take your knowledge further.

How to Use the Tool

Value Chain Analysis is a three-step process:

1. **Activity Analysis:** Firstly, you identify the activities you undertake to deliver your product or service;
2. **Value Analysis:** Secondly, for each activity, you think through what you would do to add the greatest value for your customer; and
3. **Evaluation and Planning:** Thirdly you evaluate whether it is worth making changes, and then plan for action.

We follow these through one-by-one:-

1. Activity Analysis:
The first step to take is to brainstorm the activities that you, your team or your company undertakes that in some way contribute towards your customer's experience.

At an organizational level, this will include the step-by-step business processes that you use to serve the customer – Michael Porter calls these "Primary Activities". These will include marketing of your products or services; sales and order-taking; operational processes; delivery; support; and so on (this will may also involve many other steps or processes specific to your industry).

At a personal of team level, it will involve the step-by-step flow of work that you carry out.

But this will also involve other things as well (Porter's "Support Activities"). For example:

- How you recruit people with the skills to give the best service;
- How you motivate yourself or your team to perform well;
- How you keep up-to-date with the most efficient and effective techniques;
- How you select and develop the technologies that give you the edge; and
- How you get feedback from your customer on how you're doing, and how you can improve further.

Tip:
If you carry out the brainstorming behind the Activity Analysis and Value Analysis with your team, you'll almost certainly get a richer answer than if you do it on your own. You may also find that your team is more likely to "buy into" any conclusions you draw from the exercise. After all: the conclusions will be as much theirs as yours.

Once you've brainstormed the activities which add value for your company, list them. A useful way of doing this is to lay them out as a simplified flow chart running down the page – this gives a good visual representation of your "value chain". You can see an example of this in Figure 1 below.

2. Value Analysis:
Now, for each activity you've identified, list the "Value Factors" – the things that your customers' value in the way that each activity is conducted.

For example, if you're thinking about a telephone order-taking process, your customer will value a quick answer to his or her call; a polite manner; efficient taking of order details; fast and knowledgeable answering of questions; and an efficient and quick resolution to any problems that arise.

If you're thinking about delivery of a professional service, your customer will most likely value an accurate and correct solution; a solution based on completely up-to-date information; a solution that is clearly expressed and easily actionable; and so on.

Next to each activity you've identified, write down these Value Factors.

And next to these, write down what needs to be done or changed to provide great value for each value factor.

3. Evaluate Changes and Plan for Action:
By the time you've completed your Value Analysis, you'll probably be fired up for action: you'll have generated plenty of ideas for increasing the value you deliver to customers. And if you could deliver all of these, your service could be fabulous!

Now be a bit careful at this stage: you could easily fritter your energy away on a hundred different jobs, and never really complete any of them.

So firstly, pick out the quick, easy, cheap wins – go for some of these, as this will improve your team's spirits no end.

Then screen the more difficult changes. Some may be impractical. Others will deliver only marginal improvements, but at great cost. Drop these.

And then prioritize the remaining tasks and plan to tackle them in an achievable, step-by-step way that delivers steady improvement at the same time that it keeps your team's enthusiasm going.

Tip:
If you have a strong enough relationship with one or more of your customers, it may be worth presenting your conclusions to them and getting their feedback – this is a good way of either confirming that you're right or of getting a better understanding of what they really want.

Example

Lakshmi is a software development manager for a software house. She and her team handle short software enhancements for many clients. As part of a team development day, she and her team use Value Chain Analysis to think about how they can deliver excellent service to their clients.

During the Activity Analysis part of the session, they identify the following Primary Activities that create value for clients:

- Order taking
- Enhancement specification
- Scheduling
- Software development
- Programmer testing
- Secondary testing
- Delivery
- Support

Lakshmi also identifies the following Support Activities as being important:

- Recruitment: Choosing people who will work well with the team
- Training: Helping new team members become effective as quickly as possible, and helping team members learn about new software, techniques and technologies as they are developed.

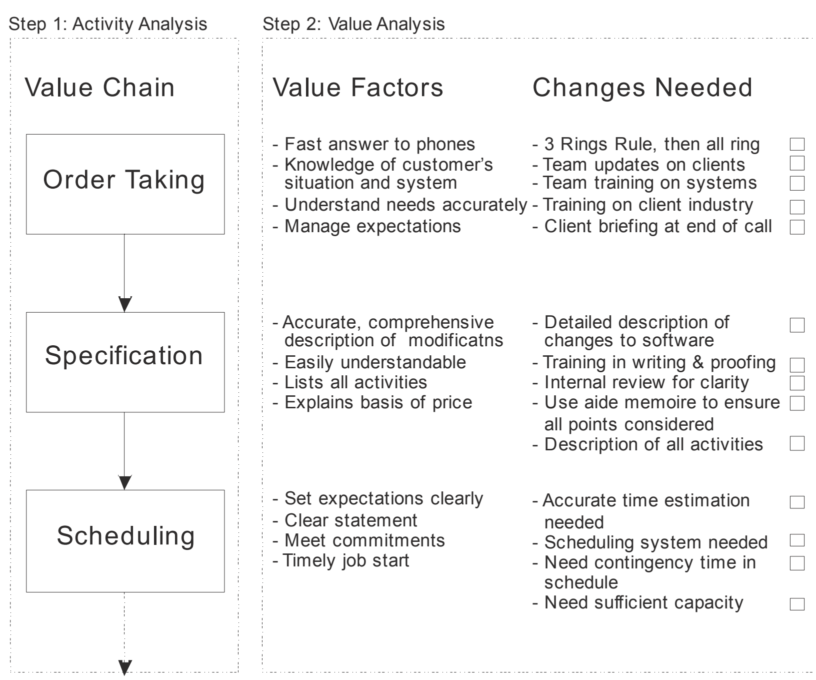
Lakshmi marks these out in a vertical value chain on her whiteboard (you can see the first three Primary Activities shown in the “Step 1: Activity Analysis” box in Figure 1).

Next, she and her team focus on the Order Taking process, and identify the factors that will give the greatest value to customers as part of this process. They identify the following Value Factors:

- Giving a quick answer to incoming phone calls;
- Having a good knowledge of the customer’s business, situation and system, so that they do not waste the customer’s time with unnecessary explanation;
- Asking all the right questions, and getting a full and accurate understanding of the customer’s needs; and
- Explaining the development process to the customer and managing his or her expectations as to the likely timetable for delivery.

You can see these in the “Value Factors” column of Figure 1.

Figure 1: Value Chain Analysis Example



They then look at what they need to do to deliver the maximum value to the customer. These things are shown in the Figure 1’s “Changes Needed” column.

They then do the same for all other processes.

Once all brainstorming is complete, Lakshmi and her team may be able to identify quick wins, reject low yield or high cost options, and agree their priorities for implementation.

Key points

Value Chain Analysis is a useful way of thinking through the ways in which you deliver value to your customers, and reviewing all of the things you can do to maximize that value.

It takes place as a three stage process:

1. Firstly with Activity Analysis, where you identify the activities that contribute to the delivery of your product or service;
2. Secondly with Value Analysis, where you identify the things that your customers value in the way you conduct each activity, and then work out the changes that are needed; and
3. Thirdly with Evaluation and Planning, where you decide what changes to make and plan how you will make them.

By using Value Chain Analysis and by following it through to action, you can achieve excellence in the things that really matter to your customers.

7.13 USP Analysis: The Unique Selling Proposition

Worksheet

Finding Your "Competitive Edge"

For years, business trainers have stressed the importance of "USPs" (Unique Selling Propositions). Your USP is the unique thing that you can offer that your competitors can't. It's your "Competitive Edge". It’s the reason that customers buy from you and you alone.

USPs have helped many companies succeed. And they can help you too when you’re marketing yourself (when seeking a promotion, finding a new job or just making sure you get the recognition you deserve.) If you don't have a USP, you're condemned to a struggle for survival – that way lies hard work and little reward.

However, USPs are often extremely difficult to find. And as soon as one company establishes a successful USP in a market, competitors rush to copy it.

This tool helps you find your USP. And it then helps you think how you’ll defend it.

How to Use the Tool

Make a copy of the USP Analysis worksheet in your *Worksheets and Templates Supplement* to record your analysis, and then follow these four steps:

1. Understand The Characteristics That Customers Value:
First, brainstorm what customers value about your product or services and those of your competitors. Move beyond the basics common to all suppliers in the industry, and look at the criteria customers use to decide which product or service to buy.

As with all brainstorming, by involving knowledgeable people in the process, you'll improve the range of characteristics you’ll identify. So talk to sales people, customer service teams and, most importantly, talk to customers themselves.

2. Rank Yourself and Your Competitors By These Criteria:
Now identify your top competitors. Being as objective as you can, score yourself and each of your competitors out of 10 for each characteristic. Where possible, base your scores on objective data. Where you can’t, do your best to see things from a customer’s perspective and make your best guess.

3. Identify Where You Rank Well:
Now plot these points on a graph. This helps you spot different competitors' strengths and weaknesses.

And from this, develop a simple, easily communicated statement of your USP.

> **Tip:**
> When you identify your USP, make sure it's something that really matters to potential customers. There's no point in being the best in industry for something they don't care about.

4. Preserve Your USP (and Use It!):
The final step is to make sure you can defend your USP. You can be sure that as soon as you start promote a USP, your competitors will do what they can to neutralize it: If you've got the best website, they'll bring in a better web designer. If you've got a great new feature in your product, you'll see it in theirs next year.

If you've established a USP, it makes sense to invest to defend it – that way, competitors will struggle to keep up: By the time they've improved, you've already moved to the next stage.
And once you've established a USP, make sure the market knows about it!

Example

Dan Jackson, the new CEO of LPC Office Supplies, was worried. He was confused by the situation he'd inherited, and felt that the company was drifting. Part of this, he felt, was that the company had no distinctive market position. He decided to use USP Analysis to find one.

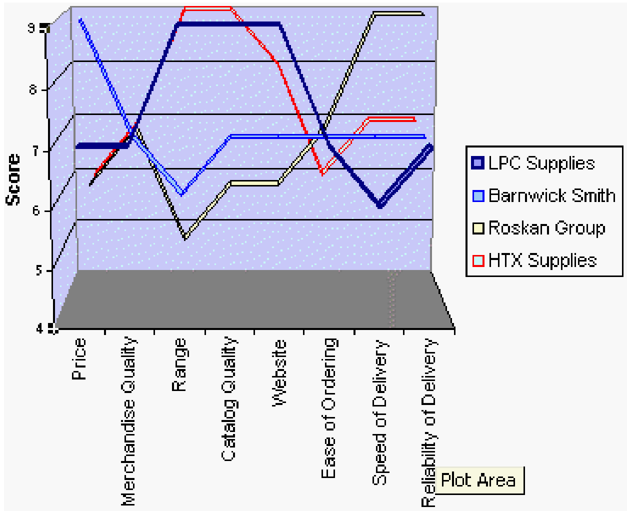
After talking to the company's biggest customers, Dan has identified the following criteria as important:

- Price
- Quality of merchandise
- Range
- Catalog quality
- Website appearance and navigation
- Ease of ordering
- Speed of delivery
- Reliability of delivery.

He then ranks LPC and its competitors using the criteria he had identified. Some criteria he assesses objectively, and on others he relies on instinct, market reputation and salespeople's reports. This gives him the table below:

	LPC Supplies	Barnwick Smith	Roskan Group	HTX Supplies
Price	7	9	6	6
Quality	7	7	7	7
Range	9	6	5	9
Catalog Quality	9	7	6	9
Website	9	7	6	8
Ease of Ordering	7	7	7	6
Speed of Delivery	6	7	9	7
Reliability	7	7	9	7

Using these rankings, Dan plots this graph:



As he does, different industry USPs start to become plain. Barnwick Smith seems to operate a “pile ‘em high and sell ‘em cheap” policy. The Roskan Group seems to focus on fast, reliable delivery, possibly of urgent, essential materials.

Looking at these, Dan is sure that LPC can compete effectively against these competitors by emphasizing the breadth of its range and the quality of its catalog. However, HTX Supplies is more problematic: Curves are quite close. Even here, though, LPC seems to have better customer service and a better website. A USP of “The easy way to buy everything you need!” seems to work well.

Dan decides to invest in LPC's website and its customer service systems, with a view to opening up a clear gap between itself and HTX. And he then launches a marketing campaign stressing LPC's USP.

Key Points

USP Analysis is a useful way of understanding how people are competing in your industry. And it's essential for identifying your USP, so that you know what to build upon and sell to your customers.

USP Analysis is a four stage process:

1. First, you list the decision criteria (explicit and hidden) that customers of your industry use in making purchase decisions;
2. Second, you rank yourself and your competitors by these criteria;
3. Third, you look at where you rank well, and craft a USP from this; and
4. Finally, you look at how you will defend and build your USP as competition evolves.

Section 8: Decision Making

- Pareto Analysis – Choosing what to change
- Paired Comparison Analysis – Working out the relative importance of different options
- Grid Analysis – Making a choice taking into account many factors
- Decision Trees – Choosing by valuing different options
- PMI – Weighing the pros and cons of a decision
- Force Field Analysis – Analyzing the pressures for and against change
- Six Thinking Hats – Looking at a decision from different perspectives
- Cost/Benefit Analysis – Seeing whether a decision makes financial sense

8. Introduction to Decision Making

The techniques in this section help you to make the best decisions possible with the information you have available. With these tools you will be able to map out the likely consequences of decisions, work out the importance of individual factors, and choose the best course of action to take.

Tools we will discuss are:

- Pareto Analysis – Choosing what to change
- Paired Comparison Analysis – Working out the relative importance of different options
- Grid Analysis – Making a choice taking into account many factors
- Decision Trees – Choosing by valuing different options
- PMI – Weighing the pros and cons of a decision
- Force Field Analysis – Analyzing the pressures for and against change
- Six Thinking Hats – Looking at a decision from different perspectives
- Cost/Benefit Analysis – Seeing whether a decision makes financial sense

In this chapter we look at Decision Making tools in two stages. Firstly we will look at a set of good techniques that help you to select between different options. These are very useful when you have to take a go/no-go decision. This part finishes by discussing Decision Trees, which are excellent Decision Making tools. If you are suffering from decision paralysis, these tools will get you moving again.

The second set helps you to decide whether a course of action is worth following.

These techniques build on the tools discussed in the section on Problem Solving Tools, in that Decision Making follows on from an understanding of the situation. The section on Practical Creativity Tools will help you to explore what alternatives that are open to you.

Do remember, though, that the tools in this chapter exist only to assist your intelligence and common sense. These are your most important assets in good Decision Making.

8.1 Pareto Analysis
Choosing the Most Important Changes to Make

Pareto analysis is a very simple technique that helps you to choose the most effective changes to make.

It uses the Pareto principle – the idea that by doing 20% of work you can generate 80% of the advantage of doing the entire job*. Pareto analysis is a formal technique for finding the changes that will give the biggest benefits. It is useful where many possible courses of action are competing for your attention.

How to Use the Tool:
To start using the tool, write out a list of the changes you could make. If you have a long list, group it into related changes.

Then score the items or groups. The scoring method you use depends on the sort of problem you are trying to solve. For example, if you are trying to improve profitability, you would score options on the basis of the profit each group might generate. If you are trying to improve customer satisfaction, you might score on the basis of the number of complaints eliminated by each change.

The first change to tackle is the one that has the highest score. This one will give you the biggest benefit if you solve it.

The options with the lowest scores will probably not even be worth bothering with – solving these problems may cost you more than the solutions are worth.

Example

A manager has taken over a failing service center. He commissions research to find out why customers think that service is poor.

He gets the following comments back from the customers:

1. Phones are only answered after many rings.
2. Staff seem distracted and under pressure.
3. Engineers do not appear to be well organized. They need second visits to bring extra parts. This means that customers have to take more holiday to be there a second time.
4. They do not know what time they will arrive. This means that customers may have to be in all day for an engineer to visit.
5. Staff members do not always seem to know what they are doing.
6. Sometimes when staff members arrive, the customer finds that the problem could have been solved over the phone.

The manager groups these problems together. He then scores each group by the number of complaints, and orders the list:

- **Lack of staff training:** items 5 and 6: 51 complaints
- **Too few staff:** items 1, 2 and 4: 21 complaints
- Poor organization and preparation: item 3: 2 complaints.

By doing the Pareto analysis above, the manager can better see that the vast majority of problems (69%) can be solved by improving staff skills.

Once this is done, it may be worth looking at increasing the number of staff members. Alternatively, as staff members become more able to solve problems over the phone, maybe the need for new staff members may decline.

It looks as if comments on poor organization and preparation may be rare, and could be caused by problems beyond the manager's control.

By carrying out a Pareto Analysis, the manager is able to focus on training as an issue, rather than spreading effort over training, taking on new staff members, and possibly installing a new computer system.

Key Points

Pareto Analysis is a simple technique that helps you to identify the most important problem to solve.

To use it:

- List the problems you face, or the options you have available
- Group options where they are facets of the same larger problem
- Apply an appropriate score to each group
- Work on the group with the highest score.

Pareto analysis not only shows you the most important problem to solve, it also gives you a score showing how severe the problem is.

**This is only one application of this important 80/20 principle. It shows the lack of symmetry that almost always appears between work put in and results achieved. This can be seen in area after area of competitive activity. The figures 80 and 20 are illustrative – for example, 13% of work could generate 92% of returns. Vilfredo Pareto was an Italian economist who noted that approximately 80% of wealth was owned by only 20% of the population. This was true in almost all the societies he studied.*

8.2 Paired Comparison Analysis

Working Out the Relative Importance of Different Options

Paired Comparison Analysis helps you to work out the importance of a number of options relative to each other. It is particularly useful where you do not have objective data to base this on.

This makes it easy to choose the most important problem to solve, or select the solution that will give you the greatest advantage. Paired Comparison Analysis helps you to set priorities where there are conflicting demands on your resources.

It is also an ideal tool for comparing "apples with oranges" – completely different options such as whether to invest in marketing, a new IT system or a new piece of machinery. These decisions are usually much harder than comparing three possible new IT systems, for example.

How to Use the Tool

To use the technique, start with the Paired Comparison Analysis worksheet from your *Worksheets and Templates Supplement*. You can use this to compare each option with each other option, one-by-one. For each comparison, you will decide which of the two options is most important, and then assign a score to show how much more important it is.

Follow these steps to use the technique:

1. List the options you will compare. Assign a letter to each option.
2. Mark the options as row and column headings on the worksheet.
3. Note that the cells on the table where you will be comparing an option with itself have been blocked out – there will never be a difference in these cells!
4. The cells on the table where you will be duplicating a comparison are also blocked out.
5. Within the remaining cells compare the option in the row with the one in the column. For each cell, decide which of the two options is more important. Write down the letter of the more important option in the cell, and score the difference in importance from 0 (no difference) to 3 (major difference).
6. Finally, consolidate the results by adding up the total of all the values for each of the options. You may want to convert these values into a percentage of the total score.

Example

As a simple example, an entrepreneur is looking at ways in which she can expand her business. She has limited resources, but also has the options she lists below:

- Expand into overseas markets
- Expand in home markets
- Improve customer service
- Improve quality

Firstly she draws up the Paired Comparison Analysis table in Figure 1:

Figure 1: Example Paired Comparison Analysis Table (not filled in):

	Overseas Market (A)	**Home Market (B)**	**Customer Service (C)**	**Quality (D)**
Overseas Market (A)	Blocked Out (Step 3)			
Home Market (B)	Blocked Out (Step 4)	Blocked Out (Step 3)		
Customer Service (C)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 3)	
Quality (D)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 3)

Then she compares options, writes down the letter of the most important option, and scores their difference in importance. An example of how she might do this is shown in Figure 2:

Figure 2: Example Paired Comparison Analysis Table (filled in):

	Overseas Market (A)	**Home Market (B)**	**Customer Service (C)**	**Quality (D)**
Overseas Market (A)		A,2	C,1	A,1
Home Market (B)			C,1	B,1
Customer Service (C)				C,2
Quality (D)				

Finally she adds up the A, B, C and D values, and converts each into a percentage of the total. This gives these totals:

A = 3 (37.5%)
B = 1 (12.5%)
C = 4 (50%)
D = 0.

Here it is most important to improve customer service (C) and then to tackle export markets (A). Quality is not a high priority – perhaps it is good already.

Key Points

Paired Comparison Analysis is a good way of weighing up the relative importance of different courses of action. It is useful where priorities are not clear, or are competing in importance.

The tool provides a framework for comparing each course of action against all others, and helps to show the difference in importance between factors.

Worksheet

8.3 Grid Analysis
Making a Choice Where Many Factors Must Be Balanced

Grid Analysis (also known as Decision Matrix analysis, Pugh Matrix analysis or MAUT which stands for Multi-Attribute Utility Theory) is a useful technique to use for making a decision. Decision matrices are most effective where you have a number of good alternatives and many factors to take into account.

How to Use the Tool
The first step is to list your options and then the factors that are important for making the decision. Then lay the options out on the Grid Analysis worksheet from your *Worksheets and Templates Supplement*, with options as the row labels, and factors as the column headings.

Next work out the relative importance of the factors in your decision. Show these as numbers. We will use these to weight your preferences by the importance of the factor. These values may be obvious. If they are not, then use a technique such as Paired Comparison Analysis to estimate them.

The next step is to work your way across your table, scoring each option for each of the important factors in your decision. Score each option from 0 (poor) to 3 (very good). Note that you do not have to have a different score for each option – if none of them are good for a particular factor in your decision, then all options should score 0.

Now multiply each of your scores by the values for your relative importance. This will give them the correct overall weight in your decision.

Finally add up these weighted scores for your options. The option that scores the highest wins!

Example
A windsurfing enthusiast is about to replace his car. He needs one that not only carries a board and sails, but also that will be good for business travel. He has always loved open-topped sports cars. No car he can find is good for all three things.

His options are:

- An SUV/4x4, hard topped vehicle
- A comfortable 'family car'
- A station wagon/estate car
- A sports car

Criteria that he wants to consider are:

- Cost
- Ability to carry a sail board at normal driving speed
- Ability to store sails and equipment securely
- Comfort over long distances
- Fun!
- Nice look and build quality to car

Firstly he draws up the table shown in Figure 1, and scores each option by how well it satisfies each factor:

Figure 1: Example Grid Analysis Showing Unweighted Assessment of How Each Type of Car Satisfies Each Factor

Factors: Weights:	**Cost**	**Board**	**Storage**	**Comfort**	**Fun**	**Look**	**Total**
Sports Car	1	0	0	1	3	3	
SUV/4x4	0	3	2	2	1	1	
Family Car	2	2	1	3	0	0	
Station Wagon	2	3	3	3	0	1	

Next he decides the relative weights for each of the factors. He multiplies these by the scores already entered, and totals them. This is shown in Figure 2:

Figure 2: Example Grid Analysis Showing Weighted Assessment of How Each Type of Car Satisfies Each Factor

Factors:	**Cost**	**Board**	**Storage**	**Comfort**	**Fun**	**Look**	**Total**
Weights:	4	5	1	2	3	4	
Sports Car	4	0	0	2	9	12	27
SUV/4x4	0	15	2	4	3	4	28
Family Car	8	10	1	6	0	0	25
Station Wagon	8	15	3	6	0	4	36

This gives an interesting result: Despite its lack of fun, a station wagon may be the best choice.

If the wind-surfer still feels unhappy with the decision, maybe he has underestimated the importance of one of the factors. Perhaps he should weight 'fun' by 7!

Key points

Grid Analysis helps you to decide between several options, while taking many different factors into account.

To use the tool, lay out your options as rows on a table. Set up the columns to show your factors. Allocate weights to show the importance of each of these factors. Score each choice for each factor using numbers from 0 (poor) to 3 (very good). Multiply each score by the weight of the factor, to show its contribution to the overall selection. Finally add up the total scores for each option. Select the highest scoring option.

Grid Analysis is the simplest form of Multiple Criteria Decision Analysis (MCDA), also known as Multiple Criteria Decision Aid or Multiple Criteria Decision Management (MCDM). Sophisticated MCDA is involves highly complex modeling of different potential scenarios and advanced mathematics.

8.4 Decision Tree Analysis

Choosing Between Options by Projecting Likely Outcomes

Decision Trees are excellent tools for helping you to choose between several courses of action. They provide a highly effective structure within which you can lay out options and investigate the possible outcomes of choosing those options. They also help you to form a balanced picture of the risks and rewards associated with each possible course of action.

How to Use the Tool

You start a Decision Tree with a decision that you need to make. Draw a small square to represent this towards the left of a large piece of paper.

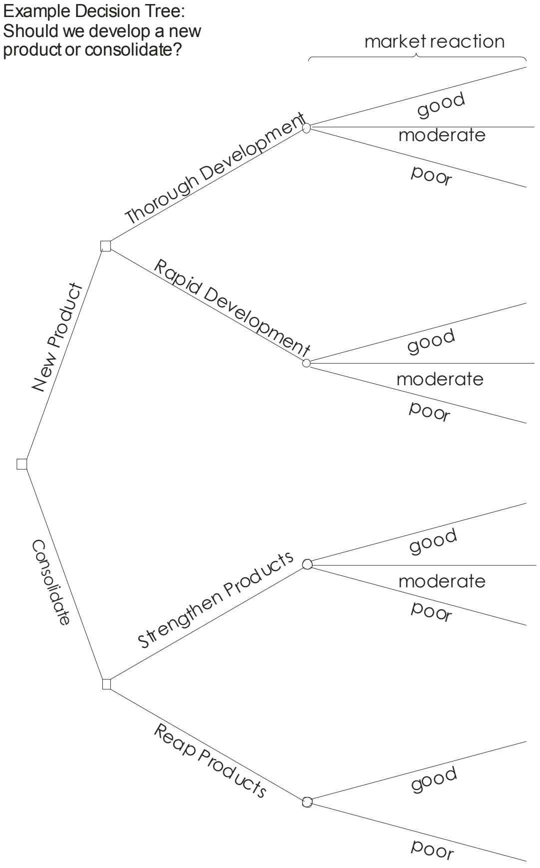
From this box draw out lines towards the right for each possible solution, and write that solution along the line. Keep the lines apart as far as possible so that you can expand your thoughts.

At the end of each line, consider the results. If the result of taking that decision is uncertain, draw a small circle. If the result is another decision that you need to make, draw another square. Squares represent decisions, and circles represent uncertain outcomes. Write the decision or factor above the square or circle. If you have completed the solution at the end of the line, just leave it blank.

Starting from the new decision squares on your diagram, draw out lines representing the options that you could select. From the circles draw lines representing possible outcomes. Again make a brief note on the line saying what it means. Keep on doing this until you have drawn out as many of the possible outcomes and decisions as you can see leading on from the original decisions.

An example of the sort of thing you will end up with is shown in Figure 1:

Figure 1:
Example Decision Tree:
Should we develop a new product or consolidate?



Once you have done this, review your tree diagram. Challenge each square and circle to see if there are any solutions or outcomes you have not considered. If there are, draw them in. If necessary, redraft your tree if parts of it are too congested or untidy. You should now have a good understanding of the range of possible outcomes of your decisions.

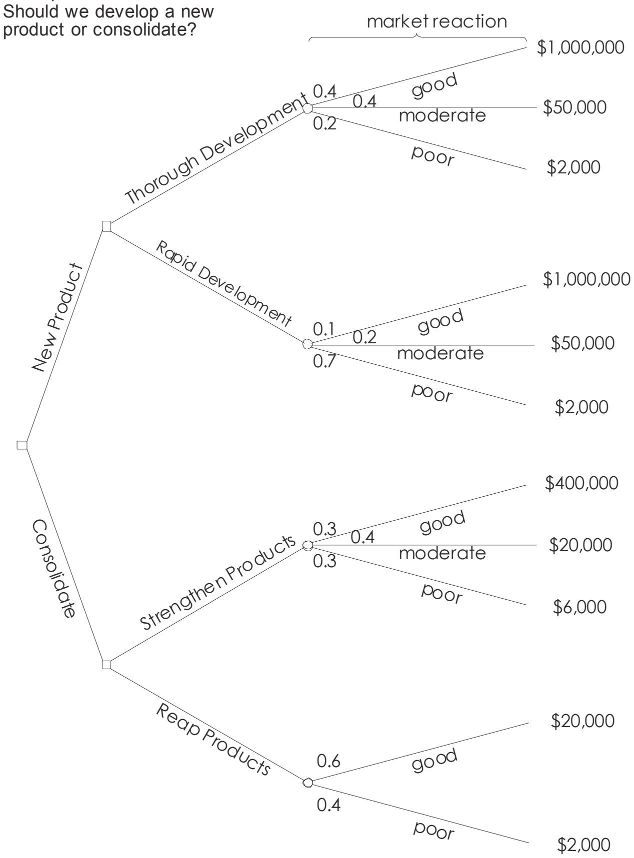
Evaluating Your Decision Tree

Now you are ready to evaluate the decision tree. This is where you can work out which option has the greatest worth to you. Start by assigning a cash value or score to each possible outcome. Estimate how much you think it would be worth to you if that outcome came about.

Next look at each circle (representing an uncertainty point) and estimate the probability of each outcome. If you use percentages, the total must come to 100% at each circle. If you use fractions, these must add up to 1. If you have data on past events you may be able to make rigorous estimates of the probabilities. Otherwise write down your best guess.

This will give you a tree like the one shown in Figure 2:

Figure 2
Example Decision Tree:
Should we develop a new product or consolidate?



Calculating Tree Values

Once you have worked out the value of the outcomes, and have assessed the probability of the outcomes of uncertainty, it is time to start calculating the values that will help you make your decision.

Start on the right hand side of the decision tree, and work back towards the left. As you complete a set of calculations on a node (decision square or uncertainty circle), all you need to do is to record the result. You can ignore all the calculations that lead to that result from then on.

Calculating the Value of Uncertain Outcome Nodes

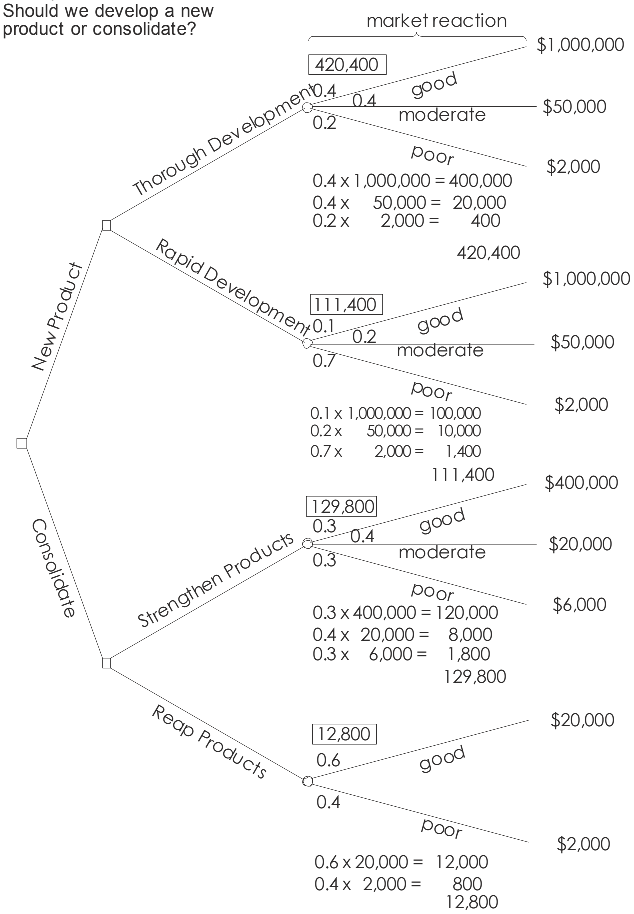
Where you are calculating the value of uncertain outcomes (circles on the diagram), do this by multiplying the value of the outcomes by their probability. The total for that node of the tree is the total of these values.

In the example in Figure 2, the value for 'new product, thorough development' is:

0.4 (probability good outcome) x £1,000,000 (value) =	£400,000
0.4 (probability moderate outcome) x £50,000 (value) =	£20,000
0.2 (probability poor outcome) x £2,000 (value) =	£400
TOTAL	**£420,400**

Figure 3 shows the calculation of uncertain outcome nodes:

Figure 3
Example Decision Tree:
Should we develop a new product or consolidate?



Note that the values calculated for each node are shown in the boxes.

Calculating the Value of Decision Nodes

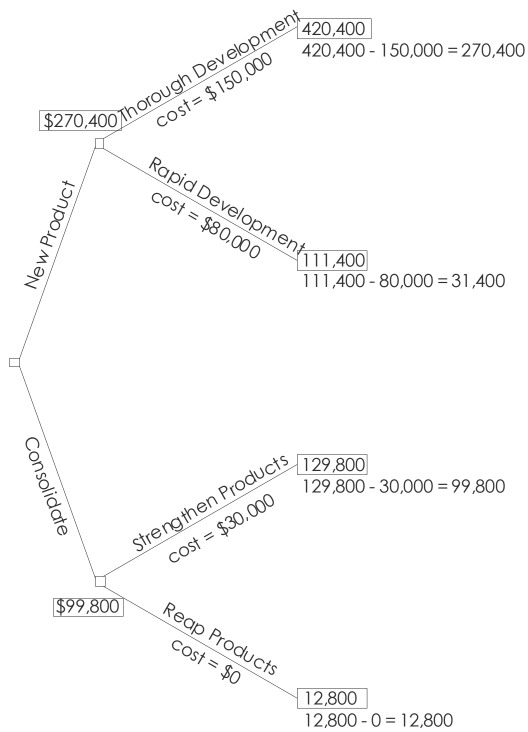
When you are evaluating a decision node, write down the cost of each option along each decision line. Then subtract the cost from the outcome value that you have already calculated. This will give you a value that represents the benefit of that decision.

Note that amounts already spent do not count for this analysis – these are 'sunk costs' and (despite emotional counter-arguments) should not be factored into the decision.

When you have calculated these decision benefits, choose the option that has the largest benefit, and take that as the decision made. This is the value of that decision node.

Figure 4 shows this calculation of decision nodes in our example:

Figure 4:
Example Decision Tree:
Should we develop a new product or consolidate?



In this example, the benefit we previously calculated for 'new product, thorough development' was $420,400. We estimate the future cost of this approach as $150,000. This gives a net benefit of $270,400.

The net benefit of 'new product, rapid development' was $31,400. On this branch we therefore choose the most valuable option, 'new product, thorough development', and allocate this value to the decision node.

Result

By applying this technique we can see that the best option is to develop a new product. It is worth much more to us to take our time and get the product right, than to rush the product to market. It is better just to improve our existing products than to botch a new product, even though it costs us less.

Key Points

Decision trees provide an effective method of Decision Making because they:

- Clearly lay out the problem so that all options can be challenged
- Allow us to analyze fully the possible consequences of a decision
- Provide a framework to quantify the values of outcomes and the probabilities of achieving them
- Help us to make the best decisions on the basis of existing information and best guesses.

As with all Decision Making methods, decision tree analysis should be used in conjunction with common sense – decision trees are just one important part of your Decision Making tool kit.

8.5 PMI
Weighing the Pros and Cons of a Decision

PMI stands for 'Plus/Minus/Interesting'. It is a valuable improvement to the 'weighing pros and cons' technique used for centuries.

PMI is an important Decision Making tool: the mind tools used so far in this section have focused on selecting a course of action from a range of options. Before you move straight to action on this course of action, it is important to check that it is going to improve the situation (it may actually be best to do nothing!) PMI is a useful tool for doing this.

How to Use the Tool

In the column underneath 'Plus', write down all the positive results of taking the action. Underneath 'Minus' write down all the negative effects. In the 'Interesting' column write down the implications and possible outcomes of taking the action, whether positive, negative, or uncertain.

By this stage it may already be obvious whether or not you should implement the decision. If it is not, consider each of the points you have written down and assign a positive or negative score to it appropriately. The scores you assign may be quite subjective.

Once you have done this, add up the score. A strongly positive score shows that an action should be taken, a strongly negative score that it should be avoided.

Example

A young professional is deciding where to live. Her question is 'Should she move to the big city?'

She draws up the PMI table below:

Plus	Minus	Interesting
More going on (+5)	Have to sell house (-6)	Easier to find new job? (+1)
Easier to see friends (+5)	More pollution (-3)	Meet more people? (+2)
Easier to get places (+3)	Less space (-3)	More difficult to get own work done? (-4)
	No countryside (-2)	
	More difficult to get to work? (-4)	
+13	-18	-1

She scores the table as 13 (Plus) – 18 (Minus) – 1 (Interesting) = – 6

For her, the comforts of a settled rural existence outweigh the call of the 'bright lights' – it would be much better for her to live outside the city, but close enough to travel in if necessary.

PMI was codified by Edward de Bono in his book Serious Creativity.

Key Points

PMI is a good way of weighing the pros, cons and implications of a decision. When you have selected a course of action, PMI is a good technique to use to check that it is worth taking.

To use the technique, draw up a table with three columns headed Plus, Minus and Interesting. Within the table write down all the positive points of following the course of action, all the negatives, and all the interesting implications and possible outcomes.

If the decision is still not obvious, you can then score the table to show the importance of individual items. The total score should show whether it is worth implementing the decision.

8.6 Force Field Analysis

Worksheet

Understanding the Pressures For and Against Change

Force Field Analysis is a useful technique for looking at all the forces for and against a decision. In effect, it is a specialized method of weighing pros and cons.

By carrying out the analysis you can plan to strengthen the forces supporting a decision, and reduce the impact of opposition to it.

How to Use the Tool

To carry out a force field analysis, take the Force Field Analysis worksheet from you *Worksheets and Templates Supplement* and then use it to follow these steps:

- Describe your plan or proposal for change in the middle.
- List all forces for change in one column, and all forces against change in another column.
- Assign a score to each force, from 1 (weak) to 5 (strong).

For example, imagine that you are a manager deciding whether to install new manufacturing equipment in your factory. You might draw up a force field analysis like the one in Figure 1.

Once you have carried out an analysis, you can decide whether your project is viable. In the example above, you might initially question whether it is worth going ahead with the plan.

Where you have already decided to carry out a project, Force Field Analysis can help you to work out how to improve its probability of success. Here you have two choices:

- To reduce the strength of the forces opposing a project, or
- To increase the forces pushing a project

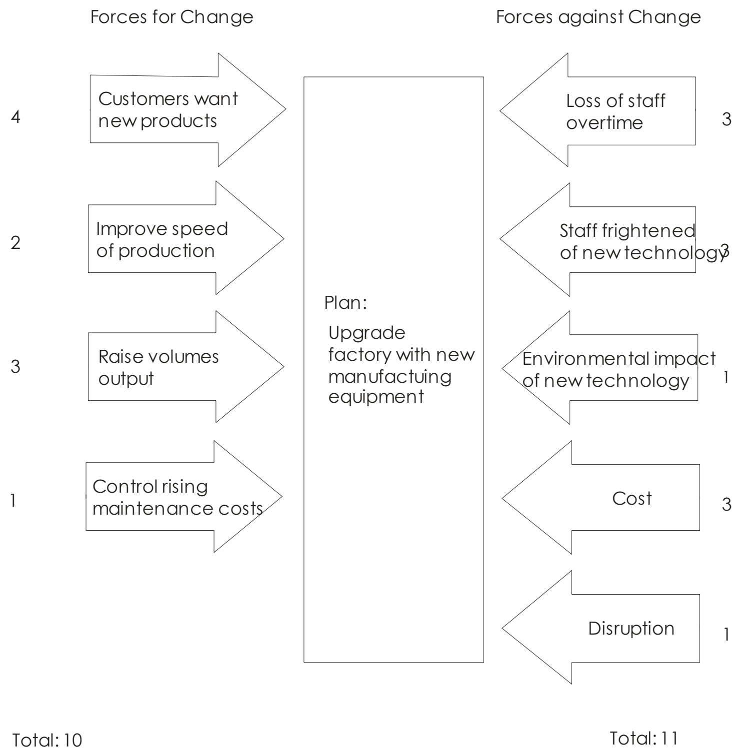
Often the most elegant solution is the first: just trying to force change through may cause its own problems. People can be uncooperative if change is forced on them.

If you had to implement the project in the example above, the analysis might suggest a number of changes to the initial plan:

- By training staff (increase cost by 1) you could eliminate fear of technology (reduce fear by 2)
- It would be useful to show staff that change is necessary for business survival (new force in favor, +2)
- Staff could be shown that new machines would introduce variety and interest to their jobs (new force, +1)
- You could raise wages to reflect new productivity (cost +1, loss of overtime -2)
- Slightly different machines with filters to eliminate pollution could be installed (environmental impact -1)

These changes would swing the balance from 11:10 (against the plan), to 8:13 (in favor of the plan).

Figure 1
Force Field Analysis Example



Key Points

Force Field Analysis is a useful technique for looking at all the forces for and against a plan. It helps you to weigh the importance of these factors and decide whether a plan is worth implementing.

Where you have decided to carry out a plan, Force Field Analysis helps you identify changes that you could make to improve it.

8.7 Six Thinking Hats

Looking at a Decision from All Points of View

'Six Thinking Hats' is a powerful technique that helps you look at important decisions from a number of different perspectives. It helps you make better decisions by forcing you to move outside your habitual ways of thinking. As such, it helps you understand the full complexity of the decision, and spot issues and opportunities to which you might otherwise be blind.
This tool was created by Edward de Bono in his book *6 Thinking Hats*.

Many successful people think from a very rational, positive viewpoint. This is part of the reason that they are successful. Often, though, they may fail to look at a problem from an emotional, intuitive, creative or negative viewpoint. This can mean that they underestimate resistance to plans, fail to make creative leaps and do not make essential contingency plans.

Similarly, pessimists may be excessively defensive, and more emotional people may fail to look at decisions calmly and rationally.

If you look at a problem with the 'Six Thinking Hats' technique, then you will solve it using all approaches. Your decisions and plans will mix ambition, skill in execution, sensitivity, creativity and good contingency planning.

How to Use the Tool

You can use the Six Thinking Hats technique in meetings or on your own. In meetings it has the benefit of blocking the confrontations that happen when people with different thinking styles discuss the same problem.

Each 'Thinking Hat' is a different style of thinking. These are explained below:

- **White Hat:**
  With this thinking hat you focus on the data available. Look at the information you have, and see what you can learn from it. Look for gaps in your knowledge, and either try to fill them or take account of them.

  This is where you analyze past trends, and try to extrapolate from historical data.

- **Red Hat:**
  'Wearing' the red hat, you look at problems using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally. Try to understand the responses of people who do not fully know your reasoning.

- **Black Hat:**
  Using black hat thinking, look at all the bad points of the decision. Look at it cautiously and defensively. Try to see why it might not work. This is important because it highlights the weak points in a plan. It allows you to eliminate them, alter them, or prepare contingency plans to counter them.

  Black Hat thinking helps to make your plans 'tougher' and more resilient. It can also help you to spot fatal flaws and risks before you embark on a course of action. Black Hat thinking is one of the real benefits of this technique, as many successful people get so used to thinking positively that often they cannot see problems in advance. This leaves them under-prepared for difficulties.

- **Yellow Hat:**
  The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it. Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.

- **Green Hat:**
  The Green Hat stands for creativity. This is where you can develop creative solutions to a problem. It is a freewheeling way of thinking, in which there is little criticism of ideas. A whole range of creativity tools can help you here.

- **Blue Hat:**
  The Blue Hat stands for process control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into Green Hat thinking. When contingency plans are needed, they will ask for Black Hat thinking, etc.

A variant of this technique is to look at problems from the point of view of different professionals (e.g. doctors, architects, sales directors, etc.) or different customers.

Example

The directors of a property company are looking at whether they should construct a new office building. The economy is doing well, and the amount of vacant office space is reducing sharply. As part of their decision they decide to use the 6 Thinking Hats technique during a planning meeting.

Looking at the problem with the White Hat, they analyze the data they have. They examine the trend in vacant office space, which shows a sharp reduction. They anticipate that by the time the office block would be completed, that there will be a severe shortage of office space. Current government projections show steady economic growth for at least the construction period.
With Red Hat thinking, some of the directors think the proposed building looks quite ugly. While it would be highly cost-effective, they worry that people would not like to work in it.

When they think with the Black Hat, they worry that government projections may be wrong. The economy may be about to enter a 'cyclical downturn', in which case the office building may be empty for a long time.

If the building is not attractive, then companies will choose to work in another better-looking building at the same rent.

With the Yellow Hat, however, if the economy holds up and their projections are correct, the company stands to make a great deal of money.

If they are lucky, maybe they could sell the building before the next downturn, or rent to tenants on long-term leases that will last through any recession.

With Green Hat thinking they consider whether they should change the design to make the building more pleasant. Perhaps they could build prestige offices that people would want to rent in any economic climate. Alternatively, maybe they should invest the money in the short term to buy up property at a low cost when a recession comes.

The Blue Hat has been used by the meeting's Chair to move between the different thinking styles. He or she may have needed to keep other members of the team from switching styles, or from criticizing other peoples' points.

It is well worth reading Edward de Bono's book *6 Thinking Hats* for more information on this technique.

Key Points

Six Thinking Hats is a good technique for looking at the effects of a decision from a number of different points of view.

It allows necessary emotion and skepticism to be brought into what would otherwise be purely rational decisions. It opens up the opportunity for creativity within Decision Making. The technique also helps, for example, persistently pessimistic people to be positive and creative.

Plans developed using the '6 Thinking Hats' technique will be sounder and more resilient than would otherwise be the case. It may also help you to avoid public relations mistakes, and spot good reasons not to follow a course of action before you have committed to it.

8.8 Cost/Benefit Analysis
Evaluating Quantitatively Whether to Follow a Course of Action

You may have been intensely creative in generating solutions to a problem, and rigorous in your selection of the best one available. However, this solution may still not be worth implementing, as you may invest a lot of time and money in solving a problem that is not worthy of this effort.

Cost Benefit Analysis or cba is a relatively* simple and widely used technique for deciding whether to make a change. As its name suggests, you simply add up the value of the benefits of a course of action, and subtract the costs associated with it.

Costs are either one-off, or may be ongoing. Benefits are most often received over time. We build this effect of time into our analysis by calculating a payback period. This is the time it takes for the benefits of a change to repay its costs. Many companies look for payback on projects over a specified period of time e.g. three years.

How to Use the Tool

In its simple form, cost-benefit analysis is carried out using only financial costs and financial benefits. For example, a simple cost benefit ratio for a road scheme would measure the cost of building the road, and subtract this from the economic benefit of improving transport links. It would not measure either the cost of environmental damage or the benefit of quicker and easier travel to work.

A more sophisticated approach to building a cost benefit models is to try to put a financial value on intangible costs and benefits. This can be highly subjective – is, for example, a historic water meadow worth $25,000, or is it worth $500,000 because of its environmental importance? What is the value of stress-free travel to work in the morning?

These are all questions that people have to answer, and answers that people have to defend.

The version of the cost benefit approach we explain here is necessarily simple. Where large sums of money are involved (for example, in financial market transactions), project evaluation can become an extremely complex and sophisticated art. The fundamentals of this are explained in Principles of Corporate Finance by Richard Brealey and Stewart Myers – this is very much an authority on the subject.

Example

A sales director is deciding whether to implement a new computer-based contact management and sales processing system. His department has only a few computers, and his salespeople are not computer literate. He is aware that computerized sales forces are able to contact more customers and give a higher quality of reliability and service to those customers. They are more able to meet commitments, and can work more efficiently with fulfillment and delivery staff.

His financial cost/benefit analysis is shown below:

Costs:
New computer equipment:
- 10 network-ready PCs with supporting software @ $2,450 each
- 1 server @ $3,500
- 3 printers @ $1,200 each
- Cabling and Installation @ $4,600
- Sales Support Software @ $15,000

Training costs:
- Computer introduction – 8 people @ $ 400 each

- Keyboard skills – 8 people @ $ 400 each
- Sales Support System – 12 people @ $700 each

Other costs:
- Lost time: 40 man days @ $ 200 / day
- Lost sales through disruption: estimate: $20,000
- Lost sales through inefficiency during first months: estimate: $20,000

Total cost: $114,000

Benefits:
- Tripling of mail shot capacity: estimate: $40,000 / year
- Ability to sustain telesales campaigns: estimate: $20,000 / year
- Improved efficiency and reliability of follow-up: estimate: $50,000 / year
- Improved customer service and retention: estimate: $30,000 / year
- Improved accuracy of customer information: estimate: $10,000 / year
- More ability to manage sales effort: $30,000 / year

Total Benefit: $180,000/year

Payback time: $114,000 / $180,000 = 0.63 of a year = approx. 8 months

Tip:
The payback time is often known as the break even point. Sometimes this is is more important than the overall benefit a project can deliver, for example because the organization has had to borrow to fund a new piece of machinery. The break even point can be found graphically by plotting costs and income on a graph of output quantity against $. Break even occurs at the point the two lines cross.

Inevitably the estimates of the benefit given by the new system are quite subjective. Despite this, the Sales Director is very likely to introduce it, given the short payback time.

Key Points

Cost/Benefit Analysis is a powerful, widely used and relatively easy tool for deciding whether to make a change.

To use the tool, firstly work out how much the change will cost to make. Then calculate the benefit you will from it.

Where costs or benefits are paid or received over time, work out the time it will take for the benefits to repay the costs.

Cost/Benefit Analysis can be carried out using only financial costs and financial benefits. You may, however, decide to include intangible items within the analysis. As you must estimate a value for these, this inevitably brings an element of subjectivity into the process.

**Larger projects are evaluated using formal finance/capital budgeting, which takes into account many of the complexities involved with financial Decision Making. This is a complex area and is beyond the scope of this site, however numerous books on capital budgeting are available.*

Section 9: Project Planning

- Estimating Time Accurately
- Scheduling Simple Projects
- Gantt Charts – Scheduling Projects with Dependent Stages
- Critical Path Analysis and PERT – Scheduling Complex Projects
- The Planning Cycle – A Planning Process for Middle-Sized Projects
- Planning Large Projects and Programs
- Stakeholder Analysis – Working Out Whose Support You Need
- Stakeholder Management – Communicating to Win Support for Your Projects

9. Introduction to Project Planning

This section discusses some of the specific skills you will need to run projects successfully. It concentrates on two main areas: scheduling skills, including use of Gantt charts and Critical Path Analysis, and overall project planning following the Planning Cycle.

We look at these tools:

- Estimating Time Accurately
- Scheduling Simple Projects
- Gantt Charts – Scheduling Projects with Dependent Stages
- Critical Path Analysis and PERT – Scheduling Complex Projects
- The Planning Cycle – A Planning Process for Middle-Sized Projects
- Planning Large Projects and Programs
- Stakeholder Analysis – Working Out Whose Support You Need
- Stakeholder Management – Communicating to Win Support for Your Projects

By the end of the section you should understand how to plan and schedule small and middle-sized projects. You will know how to complete them on time and on budget. While running a project you will know which jobs are most important, and which deadlines are most important to meet. You will also be able to decide when to take remedial action to bring a project back on course.

These skills are perfectly sufficient for running small and medium-sized projects, and will allow you to balance the triple constraints of time, cost and scope/quality which are present in all projects.

As projects become larger, however, a pragmatic general management approach can often be overwhelmed by the sheer complexity of the projects being run. Larger projects benefit from formal, methodology-based project and program management. This is a specialism in its own right – appropriate pointers are given in the final part of this section.

9.1 Estimating Time Accurately

Accurate time estimation is a skill essential to good project management. It is important to get time estimates right for two main reasons:

- Time estimates drive the setting of deadlines for delivery of projects, and hence people's assessments of your reliability
- They often determine the pricing of contracts and hence their profitability.

Usually people vastly underestimate the amount of time needed to implement projects. This is true particularly when they are not familiar with the task to be carried out.

They forget to take into account unexpected events or unscheduled high priority work. People also often simply fail to allow for the full complexity involved with a job.

This section discusses how to estimate time on small projects. Time estimates are important inputs into the other techniques used to organize and structure medium and large sized projects (Gantt charts and Critical Path Analysis). Both of these techniques reduce large projects down into a set of small projects.

How to Use the Tool

The first stage in estimating time accurately is to fully understand what you need to achieve. This involves reviewing the task in detail so that there are no unknowns. Inevitably it is the difficult-to-understand, tricky problems that take the greatest amount of time to solve.

The best way to review the job is to list all tasks in full detail. Simple techniques such as Drill-Down are useful for this.

Once you have a detailed list of all the tasks that you must achieve, make your best guess at how long each task will take to complete.

Ensure that within your estimate you also allow time for project management, detailed project planning, liaison with outside bodies, meetings, quality assurance and any supporting documentation necessary.

Also make sure that you have allowed time for:

- Other high urgency tasks to be carried out which will have priority over this one
- Accidents and emergencies
- Internal meetings
- Holidays and sickness in essential staff
- Contact with other customers, perhaps to arrange the next job
- Breakdowns in equipment
- Missed deliveries by suppliers
- Interruptions
- Quality control rejections

These factors may double (or more than double) the length of time needed to complete a project. If the accuracy of time estimates is critical, you may find it effective to develop a systematic approach to including these factors. If possible, base this on past experience.

Key Points

You can lose a great deal of credibility by underestimating the length of time needed to implement a project. If you underestimate time, not only do you miss deadlines, you also put other project workers under unnecessary stress. Projects will become seriously unprofitable, and other tasks cannot be started.

The first step towards making good time estimates is to fully understand the problem to be solved.

You can then prepare a detailed list of tasks that must be achieved. This list should include all the administrative tasks and meetings you need to carry out as well as the work itself.

Finally, allow time for all the expected and unexpected disruptions and delays to work that will inevitably happen.

9.2 Scheduling Simple Projects

Simple projects involve only one or a few people over a short time. Typically, simple projects will have few tasks dependent on other tasks, and will be relatively simple and easy to coordinate. Examples might be coordinating delivery of resources for a workshop session, implementing a small marketing plan, or delivering a simple software enhancement.

With simple projects, tools like Gantt Charts and Critical Path Diagrams may overcomplicate project scheduling and communication. Unless project team members are trained in their use, they can often 'blind people with science', leading to poor communication and muddled projects.

How to Use the Tool

Appropriate Timetables and Action Plans are often sufficient to coordinate and implement simple projects. These should be explained and negotiated with project staff to improve the plans and get staff understanding, input and buy-in.

It will often be enough to create a workback schedule, starting from the date by which the project must be completed, and listing all of the tasks in reverse order with due dates for each.

Whatever the size of your project, ensure that you have agreed its scope with its sponsor (the person who wants it done) before you start planning. This will help you to resist changes to its scope (known as "scope creep"), which will seriously affect your plans, once you have started working.

Key Points

Simple projects are often best run using simple Timetables and Action Plans. These should be prepared and negotiated with project staff to improve plans and get buy-in.

During the project these will contain sufficient control points and deliveries to monitor project progress and take any appropriate remedial action.

9.3 Gantt Charts

Planning and scheduling complex projects

Gantt Charts (sometimes misspelled "Gant Charts") are useful tools for analyzing and planning complex projects. They:

- Help you to plan out the tasks that need to be completed
- Give you a basis for scheduling when these tasks will be carried out
- Allow you to plan the allocation of resources needed to complete the project, and
- Help you to work out the critical path for a project where you must complete it by a particular date.

When a project is under way, Gantt Charts help you to monitor whether the project is on schedule. If it is not, it allows you to pinpoint the remedial action necessary to put it back on schedule.

Sequential and Parallel Activities

An essential concept behind project planning (and Critical Path Analysis) is that some activities are dependent on other activities being completed first. As a shallow example, it is not a good idea to start building a bridge before you have designed it!

These dependent activities need to be completed in a sequence, with each stage being more-or-less completed before the next activity can begin. We can call dependent activities 'sequential' or 'linear'.

Other activities are not dependent on completion of any other tasks. These may be done at any time before or after a particular stage is reached. These are nondependent or 'parallel' tasks.

How to Use the Tool

To draw up a Gantt diagram, follow these steps:

1. List all activities in the plan

For each task, show the earliest start date, estimated length of time it will take, and whether it is parallel or sequential. If tasks are sequential, show which stages they depend on.

You will end up with a task list like the one in Figure 1. This example shows the task list for a custom-written computer project. We will use this same example for both this section and the section on Critical Path Analysis and PERT. This will allow you to compare the results of the two approaches.

Figure 1. Gantt Chart Example: Planning a custom-written computer project

NB: The start week shows when resources become available. Whether a task is parallel or sequential depends largely on context.

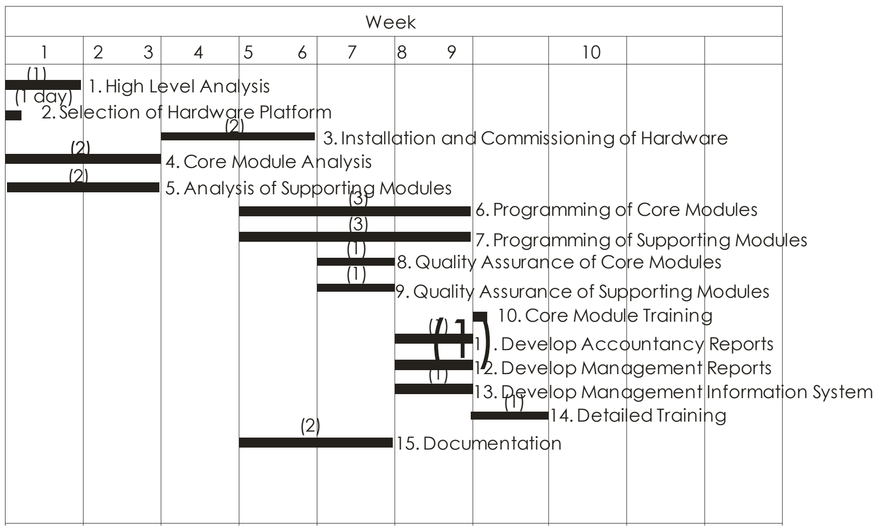
Task	Possible start	Length	Type	Dependent on...
1. High level analysis	Week 1	5 days	Sequential	
2. Selection of hardware platform	Week 1	1 day	Sequential	1
3. Installation and commissioning of hardware	Week 3	2 weeks	Parallel	2
4. Detailed analysis of core modules	Week 1	2 weeks	Sequential	1
5. Detailed analysis of supporting utilities	Week 1	2 weeks	Sequential	4
6. Programming of core modules	Week 4	3 weeks	Sequential	4
7. Programming of supporting modules	Week 4	3 weeks	Sequential	5
8. Quality assurance of core modules	Week 5	1 week	Sequential	6
9. Quality assurance of supporting modules	Week 5	1 week	Sequential	7
10.Core module training	Week 7	1 day	Parallel	6
11.Development of accounting reporting	Week 6	1 week	Parallel	5
12.Development of management reporting	Week 6	1 week	Parallel	5
13.Development of management analysis	Week 6	2 weeks	Sequential	5
14.Detailed training	Week 7	1 week	Sequential	1-13
15.Documentation	Week 4	2 weeks	Parallel	13

2. Head up graph paper with the days or weeks through to task completion

3. Plot the tasks onto the graph paper
Next draw up a rough draft of the Gantt Chart. Plot each task on the graph paper, showing it starting on the earliest possible date. Draw it as a bar, with the length of the bar being the length of the task. Above the task bars, mark the time taken to complete them. Do not worry about task scheduling yet. All you are doing is setting up the first draft of the analysis.

This will produce an untidy diagram like the one below:

Figure 2: Draft Gantt Chart: Example Computer Project



4. Schedule Activities
Now take the draft Gantt Chart, and use it to schedule actions. Schedule them in such a way that sequential actions are carried out in the required sequence. Ensure that dependent activities do not start until the activities they depend on have been completed.

Where possible, schedule parallel tasks so that they do not interfere with sequential actions on the critical path. While scheduling, ensure that you make best use of the resources you have available, and do not over-commit resource. Also allow some slack time in the schedule for holdups, overruns, quality rejections, failures in delivery, etc.

5. Presenting the Analysis
The final stage in this process is to prepare a final version of the Gantt Chart. This should combine the draft analysis (see above) with your scheduling and analysis of resources. This chart will show when you anticipate that jobs should start and finish.

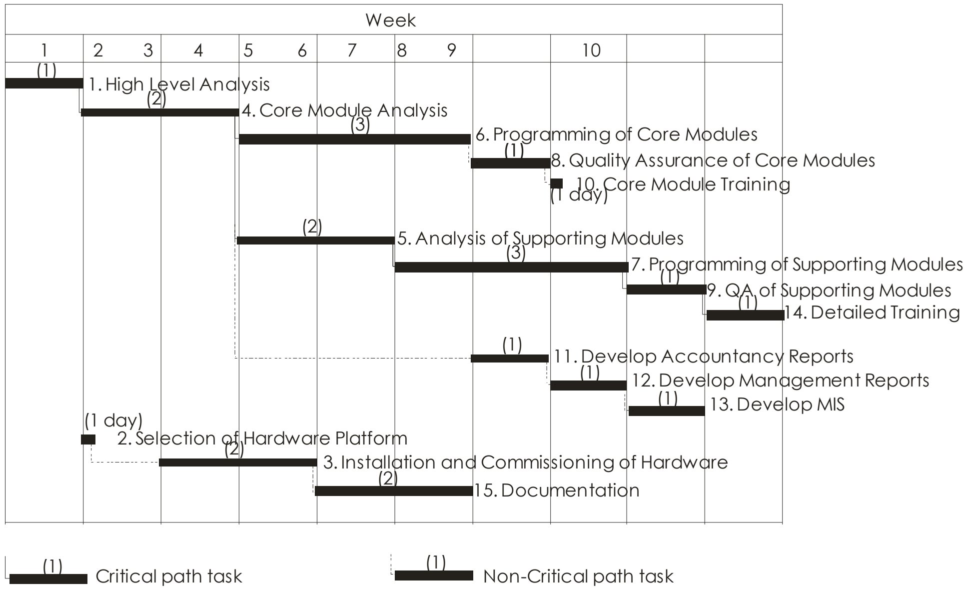
A redrawn and scheduled version of the example project is shown in Figure 3.

By drawing this example Gantt Chart, you can see that:

- If all goes well, the project can be completed in 10 weeks
- If you want to complete the task as rapidly as possible, you need:
    - 1 analyst for the first 5 weeks
    - 1 programmer for 6 weeks starting week 4
    - 1 programmer for 3 weeks starting week 6
    - Quality assurance resource for weeks 7 and 9
    - Hardware to be installed by the end of week 7

- Analysis, development and installation of supporting modules are essential activities that must be completed on time
- Hardware installation is a low priority task as long as it is completed by the end of week 7.

Figure 3: Critical Path Analysis: Activities Scheduled on a Gantt Chart



While this section describes how to draw a Gantt Chart manually, in practice project managers tend to use software tools like Microsoft Project to create Gantt Charts.

Not only do these ease the drawing of Gantt Charts, they also make modification of plans easier and provide facilities for monitoring progress against plans, as well as generating resource histograms. Microsoft Project is reviewed at the top of the left hand sidebar.

Key Points

Gantt Charts are useful tools for planning and scheduling projects. They allow you to assess how long a project should take, determine the resources needed, and lay out the order in which tasks need to be carried out. They are useful in managing the dependencies between tasks.

When a project is under way, Gantt Charts are useful for monitoring its progress. You can immediately see what should have been achieved at a point in time, and can therefore take remedial action to bring the project back on course. This can be essential for the successful and profitable implementation of the project.

Most Project Managers use tools such as Microsoft Project (see the review at the top of the left hand sidebar) to build and manage Gantt Charts. The software can also calculate resource histograms that correspond to the project activities.

9.4 Critical Path Analysis and PERT Charts

Planning and scheduling more complex projects

Critical Path Analysis and PERT are powerful tools that help you to schedule and manage complex projects. They were developed in the 1950s to control large defense projects, and have been used routinely since then.

As with Gantt Charts, Critical Path Analysis (CPA) helps you to plan all tasks that must be completed as part of a project. They act as the basis both for preparation of a schedule, and of resource planning. During management of a project, they allow you to monitor achievement of project goals. They help you to see where remedial action needs to be taken to get a project back on course.

The benefit of using CPA over Gantt Charts is that Critical Path Analysis formally identifies tasks which must be completed on time for the whole project to be completed on time, and also identifies which tasks can be delayed for a while if resource needs to be reallocated to catch up on missed tasks. The disadvantage of CPA is that the relation of tasks to time is not as immediately obvious as with Gantt Charts. This can make them more difficult to understand for someone who is not familiar with the technique.

A further benefit of Critical Path Analysis is that it helps you to identify the minimum length of time needed to complete a project. Where you need to run an accelerated project, it helps you to identify which project steps you should accelerate to complete the project within the available time. This helps you to minimize cost while still achieving your objective.

How to Use the Tool

As with Gantt Charts, the essential concept behind Critical Path Analysis is that you cannot start some activities until others are finished. These activities need to be completed in a sequence, with each stage being more-or-less completed before the next stage can begin. These are 'sequential' activities.

Other activities are not dependent on completion of any other tasks. You can do these at any time before or after a particular stage is reached. These are non-dependent or 'parallel' tasks.

Drawing a Critical Path Analysis Chart

Use the following steps to draw a CPA Chart:

1. List all activities in the plan

For each activity, show the earliest start date, estimated length of time it will take, and whether it is parallel or sequential. If tasks are sequential, show which stage they depend on.

For the project example used here, you will end up with the same task list as explained in the article on Gantt Charts (we will use the same example as with Gantt Charts to compare the two techniques). The chart is repeated in Figure 1 below:

Figure 1. Task List: Planning a custom-written computer project

NB: The start week shows when resources become available. Whether a task is parallel or sequential depends largely on context.

Task	Possible start	Length	Type	Dependent on...
1. High level analysis	Week 1	5 days	Sequential	
2. Selection of hardware platform	week 1	1 day	Sequential	1
3. Installation and commissioning of hardware	Week 3	2 weeks	Parallel	2
4. Detailed analysis of core modules	week 1	2 weeks	Sequential	1
5. Detailed analysis of supporting utilities	Week 1	2 weeks	Sequential	4

Task	Possible start	Length	Type	Dependent on...
6. Programming of core modules	week 4	3 weeks	Sequential	4
7. Programming of supporting modules	Week 4	3 weeks	Sequential	5
8. Quality assurance of core modules	week 5	1 week	Sequential	6
9. Quality assurance of supporting modules	Week 5	1 week	Sequential	7
10.Core module training	week 7	1 day	Parallel	6
11.Development of accounting reporting	Week 6	1 week	Parallel	5
12.Development of management reporting	week 6	1 week	Parallel	5
13.Development of management analysis	Week 6	2 weeks	Sequential	5
14.Detailed training	week 7	1 week	Sequential	1-13
15.Documentation	Week 4	2 weeks	Parallel	13

2. Plot the activities as a circle and arrow diagram
Critical Path Analyses are presented using circle and arrow diagrams.

In these, circles show events within the project, such as the start and finish of tasks. Circles are normally numbered to allow you to identify them.

An arrow running between two event circles shows the activity needed to complete that task. A description of the task is written underneath the arrow. The length of the task is shown above it. By convention, all arrows run left to right.

An example of a very simple diagram is shown below:

Figure 2: Simple Circle and Arrow Diagram

This shows the start event (circle 1), and the completion of the 'High Level Analysis' task (circle 2). The arrow between them shows the activity of carrying out the High Level Analysis. This activity should take 1 week.

Where one activity cannot start until another has been completed, we start the arrow for the dependent activity at the completion event circle of the previous activity. An example of this is shown below:

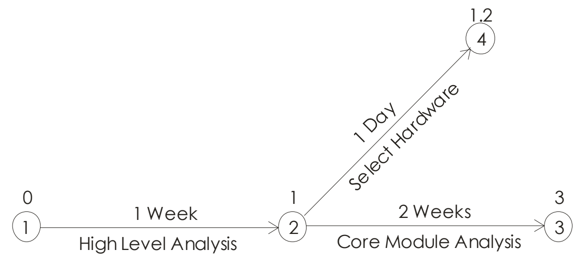


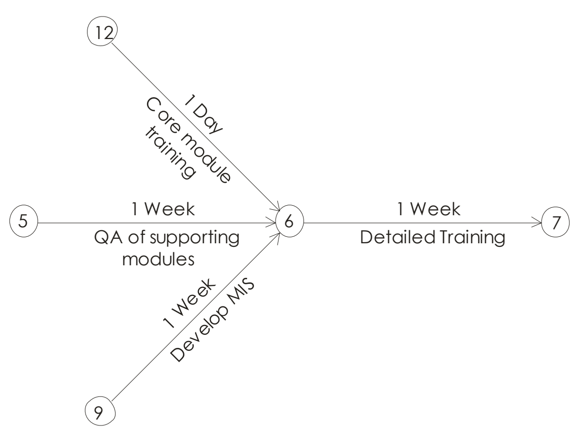
Figure 3: Circle and Arrow Diagram showing two activities that cannot be started until the first activity has been completed.

Here the activities of 'Selecting Hardware' and 'Core Module Analysis' cannot be started until 'High Level Analysis' has been completed. This diagram also brings out a number of other important points:

- Within Critical Path Analysis, we refer to activities by the numbers in the circles at each end. For example, the task 'Core Module Analysis' would be called 'activity 2 to 3'. 'Select Hardware' would be 'activity 2 to 4'.
- Activities are not drawn to scale. In the diagram above, activities are 1 week long, 2 weeks long, and 1 day long. Arrows in this case are all the same length.
- In the example above, you can see numbers above the circles. These show the earliest possible time that this stage in the project will be reached. Here units are whole weeks.

A different case is shown below:

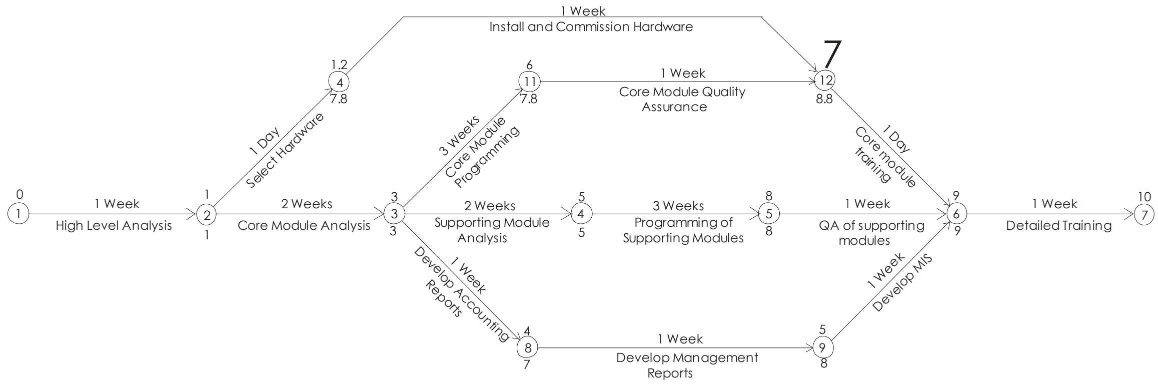
Figure 4: Circle and Arrow Diagram showing an activity (6 to 7) that cannot start until other activities (12 to 6, 5 to 6, and 9 to 6) have been completed.



Here activity 6 to 7 cannot start until the other three activities (12 to 6, 5 to 6 and 9 to 6) have been completed.

See Figure 5 for the full circle and arrow diagram for the computer project we are using as an example.

Figure 5: Critical Path Analysis for Example Computer Project



This shows all the activities that will take place as part of the project. Notice that each event circle has a figure below it as well as a figure above. This shows the latest time that it can be reached with the project still being completed in the minimum time possible. You can calculate this by starting at the last event (in this case number 7), and working backwards.

You can see that event 4 can be completed any time between 1.2 weeks in and 7.8 weeks in. The timing of this event is not critical. Events 1 to 2, 2 to 3, 3 to 4, 4 to 5, 5 to 6 and 6 to 7 must be started and completed on time if the project is to be completed in 10 weeks. This is the 'critical path' – these activities must be very closely managed to ensure that activities are completed on time. If jobs on the critical path slip, immediate action should be taken to get the project back on schedule. Otherwise completion of the whole project will slip.

'Crash Action'

You may find that you need to complete a project earlier than your Critical Path Analysis says is possible. In this case you need to take action to reduce the length of time spent on project stages. You could pile resources into every project activity to bring down time spent on each. This would probably consume huge additional resources.

A more efficient way of doing this would be to look only at activities on the critical path.

As an example, it may be necessary to complete the computer project in Figure 5 in 8 weeks rather than 10 weeks. In this case you could look at using two analysts in steps '2 to 3' and '3 to 4', and two programmers instead of one in step '4 to 5'. This would shorten the project by two weeks, but would raise the project cost – doubling resources at any stage often only improves productivity by, say, 50%. This occurs as time spent on coordinating the project consumes time gained by increasing resource.

Note that in this example, shortening the project by two weeks brings activities '3 to 11', '11 to 12' and '12 to 6' onto the critical path as well.

As with Gantt Charts, in practice project managers tend to use software tools like Microsoft Project to create CPA Charts. Not only do these ease make them easier to draw, they also make modification of plans easier and provide facilities for monitoring progress against plans. Microsoft Project is reviewed at the top of our left hand title bar.

PERT (Program Evaluation and Review Technique)

PERT is a variation on Critical Path Analysis that takes a slightly more skeptical view of time estimates made for each project stage. To use it, estimate the shortest possible time each activity will take, the most likely length of time, and the longest time that might be taken if the activity takes longer than expected.

Use the formula below to calculate the time to use for each project stage:

$$\frac{\text{shortest time} + (4 \times \text{likely time}) + \text{longest time}}{6}$$

This helps to bias time estimates away from the unrealistically short time-scales normally assumed.

Key Points

Critical Path Analysis is an effective and powerful method of assessing:

- What tasks must be carried out
- Where parallel activity can be performed
- The shortest time in which you can complete a project
- Resources needed to execute a project
- The sequence of activities, scheduling and timings involved
- Task priorities
- The most efficient way of shortening time on urgent projects.

An effective Critical Path Analysis can make the difference between success and failure on complex projects. It can be very useful for assessing the importance of problems faced during the implementation of the plan.

PERT is a variant of Critical Path Analysis that takes a more skeptical view of the time needed to complete each project stage.

9.5 The Planning Cycle

A Planning Process for Middle-Sized Projects

The Planning Cycle brings together all aspects of planning into a coherent, unified process.

By planning within this structure, you will help to ensure that your plans are fully considered, well focused, resilient, practical and cost-effective. You will also ensure that you learn from any mistakes you make, and feed this back into future planning and Decision Making.

Planning using this cycle will help you to plan and manage ongoing projects up to a certain level of complexity – this will depend on the circumstance. For projects involving many people over a long period of time, more formal methodologies and approaches are necessary (see Planning Large Projects and Programs).

How to Use the Tool

It is best to think of planning as a cycle, not a straight-through process.

Once you have devised a plan you should evaluate whether it is likely to succeed. This evaluation may be cost or number based, or may use other analytical tools. This analysis may show that your plan may cause unwanted consequences, may cost too much, or may simply not work.

In this case you should cycle back to an earlier stage. Alternatively you may have to abandon the plan altogether – the outcome of the planning process may be that it is best to do nothing!

Finally, you should feed back what you have learned with one plan into the next.

The Planning Cycle is shown in Figure 1.

The stages in this planning process are explained below:

1. Analysis of Opportunities:
The first thing to do is to do is to spot what needs to be done. You will crystallize this into a formal aim at the next stage in the process.

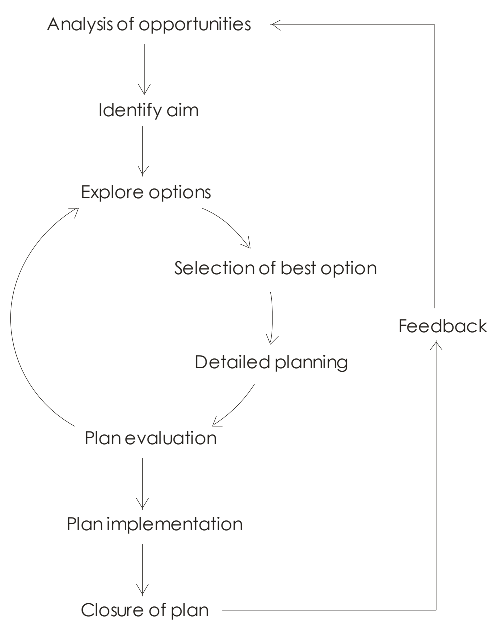
One approach to this is to examine your current position, and decide how you can improve it. There are a number of techniques that will help you to do this:

- **SWOT Analysis**
  This is a formal analysis of your strengths and weaknesses, and of the opportunities and threats that you face.

- **Risk Analysis**
  This helps you to spot project risks, weaknesses in your organization or operation, and identify the risks to which you are exposed. From this you can plan to neutralize some risks.

- **Understanding pressures for change**
  Alternatively, other people (e.g. clients) may be pressing you to change the way you do things. Alternatively your environment may be changing, and you may need to anticipate or respond to this. Pressures may arise from changes in the economy, new legislation, competition, changes in people's attitudes, new technologies, or changes in government.

Figure 1. The Planning Cycle



A different approach is to use any of a whole range of creativity tools to work out where you can make improvements. These creativity tools culminate in the powerful Simplex process.

2. Identifying the Aim of Your Plan
Once you have completed a realistic analysis of the opportunities for change, the next step is to decide precisely what the aim of your plan is. Deciding and defining an aim sharpens the focus of your plan, and helps you to avoid wasting effort on irrelevant side issues.

The aim is best expressed in a simple single sentence. This ensures that it is clear and sharp in your mind.

If you are having difficulty in formulating the aim of your plan, ask yourself:

- What do I want the future to be?
- What benefit do I want to give to my customers?
- What returns do I seek?
- What standards am I aiming at?
- What values do I and my organization believe in?

You can present this aim as a 'Vision Statement' or 'Mission Statement'. Vision Statements express the benefit that an organization will provide to its customers. For example, the vision statement for Mind Tools™ is*: 'To enrich the quality of our customers' lives by providing the tools to help them to think in the most productive and effective way possible'.* While this is wordy, it explains what this site aims to do.

Mission statements give concrete expression to the Vision statement, explaining how it is to be achieved. The mission statement for this site is: *'To provide a well structured, accessible, concise survey of the best and most appropriate mind tools available'.*

3. Exploring Options
By this stage you should know where you are and what you want to do. The next thing to do is to work out how to do it. The Creativity Tools section of this site explains a wide range of powerful creativity tools that will help you to generate options.

At this stage it is best to spend a little time generating as many options as possible, even though it is tempting just to grasp the first idea that comes to mind. By taking a little time to generate as many ideas as possible you may come up with less obvious but better solutions. Just as likely, you may improve your best ideas with parts of other ideas.

4. Selecting the Best Option
Once you have explored the options available to you, it is time to decide which one to use. If you have the time and resources available, then you might decide to evaluate all options, carrying out detailed planning, costing, risk assessment, etc. for each. Normally you will not have this luxury.

Two useful tools for selecting the best option are Grid Analysis and Decision Trees. Grid Analysis helps you to decide between different options where you need to consider a number of different factors. Decision Trees help you to think through the likely outcomes of following different courses of action.

5. Detailed Planning
By the time you start detailed planning, you should have a good picture of where you are, what you want to achieve and the range of options available to you. You may well have selected one of the options as the most likely to yield the best results.

Detailed planning is the process of working out the most efficient and effective way of achieving the aim that you have defined. It is the process of determining who will do what, when, where, how and why, and at what cost.

When drawing up the plan, techniques such as use of Gantt Charts and Critical Path Analysis can be immensely helpful in working out priorities, deadlines and the allocation of resources.

While you are concentrating on the actions that need to be performed, ensure that you also think about the control mechanisms that you will need to monitor performance. These will include the activities such as reporting, quality assurance, cost control, etc. that are needed to spot and correct any deviations from the plan.

A good plan will:

- State the current situation
- Have a clear aim
- Use the resources available
- Detail the tasks to be carried out, whose responsibility they are, and their priorities and deadlines.
- Detail control mechanisms that will alert you to difficulties in achieving the plan.
- Identify risks, and plan for contingencies. This allows you to make a rapid and effective response to crises, perhaps at a time when you are at low ebb or are confused following a setback.
- Consider transitional arrangements – how will you keep things going while you implement the plan?

6. Evaluation of the Plan and its Impact
Once you have worked out the details of your plan, the next stage is to review it to decide whether it is worth implementing. Here you must be objective – however much work you have carried out to reach this stage, the plan may still not be worth implementing.

This is frustrating after the hard work of detailed planning. It is, however, much better to find this out now than when you have invested time, resources and personal standing in the success of the plan. Evaluating the plan now gives you the opportunity to either investigate other options that might be more successful, or to accept that no plan is needed or should be carried out.

Depending on the circumstances, the following techniques can be helpful in evaluating a plan:

- **PMI (Plus/Minus/Interesting)**
  This is a good, simple technique for 'weighing the pros and cons' of a decision. It involves listing the plus points in the plan in one column, the minus points in a second column, and the implications and points of uncertainty of the plan in a third column. Each point can be allocated a positive or negative score.

- **Cost/Benefit Analysis**
  This is useful for confirming that the plan makes financial sense. This involves adding up all the costs involved with the plan, and comparing them with the expected benefits.

- **Force Field Analysis**
  Similar to PMI, Force Field Analysis helps you to get a good overall view of all the forces for and against your plan. This allows you to see where you can make adjustments that will make the plan more likely to succeed.

- **Cash Flow Forecasts**
  Where a decision has mainly financial implications, such as in business and marketing planning, preparation of a Cash Flow Forecast can be extremely useful. It allows you to assess the effect of time on costs and revenue. It also helps in assessing the size of the greatest negative and positive cash flows associated with a plan. When it is set up on a spreadsheet package, a good Cash Flow Forecast also functions as an extremely effective model of the plan. It gives you an easy basis for investigating the effect of varying your assumptions.

- **6 Thinking Hats**
  6 Thinking Hats is a very good technique to use to get a rounded view of your plan and its implications. It provides a context within which you can examine a plan rationally, emotionally, optimistically, pessimistically and creatively.

Any analysis of your plan must be tempered by common sense.

If your analysis shows that the plan either will not give sufficient benefit, then either return to an earlier stage in the planning cycle or abandon the process altogether.

7. Implementing Change
Once you have completed your plan and decided that it will work satisfactorily, it is time to implement it. Your plan will explain how! It should also detail the controls that you will use to monitor the execution of the plan.

8. Closing the Plan
Once you have achieved a plan, you can close the project. At this point is often worth carrying out an evaluation of the project to see whether there are any lessons that you can learn. This should include an evaluation of your project planning to see if this could be improved.

If you are going to be carrying out many similar projects, it may be worth developing and improving an Aide Memoire. This is a list of headings and points to consider during planning. Using it helps you to ensure that you do not forget lessons learned in the past.

Key Points

The Planning Cycle is a process that helps you to make good, well-considered, robust plans.

The first step, the analysis of opportunities, helps you to base the plan firmly in reality. The second, definition of the aim, gives your plan focus.

The third stage is to generate as many different ways for achieving this aim as possible. By spending time looking for these you may find a better solution than the obvious one, or may be able to improve the obvious solution with parts of other ones.

Next select the best approach, and make a detailed plan showing how to implement it. Evaluate this plan to make sure that it will be worth implementing. If it is not, return to an earlier stage and either improve the plan or make a different one. If no plan looks like producing enough benefit to justify the cost, make no changes at all.

Once you have selected a course of action, and have proved that it is viable, carry it out. Once it is finished, examine it and draw whatever lessons you can from it. Feed this back into future planning.

9.6 Planning Large Projects and Programs

The techniques explained so far in this section on Mind Tools support a pragmatic, commonsense approach to planning and managing small and medium-sized projects.

A warning: this approach will only scale up to a certain extent – larger projects will reach a complexity where pragmatic management generates a level of inefficiency and waste which can start to threaten the project.

For larger projects, Project Management becomes a technical discipline in its own right. To run projects as efficiently as possible, Project Managers need to be trained in methodologies such as

PRINCE2 (an increasingly widespread UK government standard which stands for "PRojects IN Controlled Environments") or an equivalent, and need to apply an appropriate subset of these methodologies.

PRINCE2 is powerful is that it completely clarifies people's roles in projects, ensures that lines of communication are clear, makes sure that project risk is actively managed, sets up appropriate controls, establishes baseline costs, schedule and scope, etc. In this, it embodies and codifies much of project management best practice.

This link takes you to the formal, authoritative, but very dry PRINCE 2 Manual (only available from Amazon.co.uk). PRINCE 2: A Practical Handbook is probably an easier way to understand the standard, and is available from Amazon.com.

Similarly, a range of different software tools can be applied. More advanced project management methodologies and supporting software tools are beyond the scope of Mind Tools – this is where sites like ITToolkit.com take over.

9.7 Stakeholder Analysis
Winning support for your projects

"Stakeholder management is critical to the success of every project in every organization I have ever worked with. By engaging the right people in the right way in your project, you can make a big difference to its success... and to your career."

- Rachel Thompson, Experienced Project Manager

As you become more successful in your career, the actions you take and the projects you run will affect more and more people. The more people you affect, the more likely it is that your actions will impact people who have power and influence over your projects. These people could be strong supporters of your work – or they could block it.

Stakeholder Management is an important discipline that successful people use to win support from others. It helps them ensure that their projects succeed where others fail.

Stakeholder Analysis is the technique used to identify the key people who have to be won over. You then use Stakeholder Planning to build the support that helps you succeed.

The benefits of using a stakeholder-based approach are that:

- You can use the opinions of the most powerful stakeholders to shape your projects at an early stage. Not only does this make it more likely that they will support you, their input can also improve the quality of your project
- Gaining support from powerful stakeholders can help you to win more resources – this makes it more likely that your projects will be successful
- By communicating with stakeholders early and frequently, you can ensure that they fully understand what you are doing and understand the benefits of your project – this means they can support you actively when necessary
- You can anticipate what people's reaction to your project may be, and build into your plan the actions that will win people's support.

How to Use the Tool

The first step in Stakeholder Analysis is to identify who your stakeholders are. The next step is to work out their power, influence and interest, so you know who you should focus on. The final step is to develop a good understanding of the most important stakeholders so that you know how they are likely to respond, and so that you can work out how to win their support – you can record this analysis on a stakeholder map.

After you have used this tool and created a stakeholder map, you can use the stakeholder planning tool to plan how you will communicate with each stakeholder.

The steps of Stakeholder Analysis are explained below:

1. Identifying Your Stakeholders:
The first step in your stakeholder analysis is to brainstorm who your stakeholders are. As part of this, think of all the people who are affected by your work, who have influence or power over it, or have an interest in its successful or unsuccessful conclusion.

The table below shows some of the people who might be stakeholders in your job or in your projects:

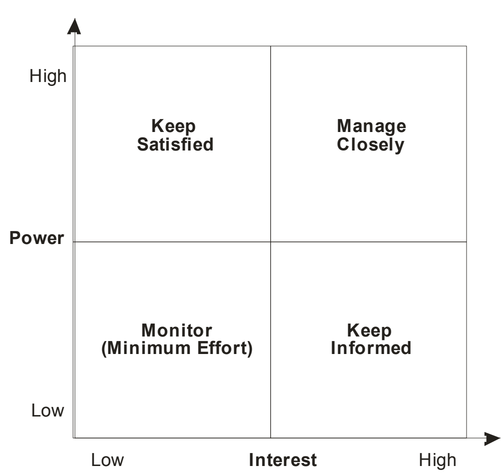
Your boss	Shareholders	Government
Senior executives	Alliance partners	Trades associations
Your coworkers	Suppliers	The press
Your team	Lenders	Interest groups
Customers	Analysts	The public
Prospective customers	Future recruits	The community
Your family		

Remember that although stakeholders may be both organizations and people, ultimately you must communicate with people. Make sure that you identify the correct individual stakeholders within a stakeholder organization.

2. Prioritize Your Stakeholders:
You may now have a long list of people and organizations that are affected by your work. Some of these may have the power either to block or advance. Some may be interested in what you are doing, others may not care.

Map out your stakeholders on the Power/Interest Grid template from your *Worksheets and Templates Supplement* as shown in Figure 1, and classify them by their power over your work and by their interest in your work.

Figure 1: Power/Interest Grid for Stakeholder Prioritization



For example, your boss is likely to have high power and influence over your projects and high interest. Your family may have high interest, but are unlikely to have power over it.

Someone's position on the grid shows you the actions you have to take with them:

- **High power, interested people:** these are the people you must fully engage and make the greatest efforts to satisfy.
- **High power, less interested people:** put enough work in with these people to keep them satisfied, but not so much that they become bored with your message.
- **Low power, interested people:** keep these people adequately informed, and talk to them to ensure that no major issues are arising. These people can often be very helpful with the detail of your project.
- **Low power, less interested people:** again, monitor these people, but do not bore them with excessive communication.

3. Understanding your key stakeholders:
You now need to know more about your key stakeholders. You need to know how they are likely to feel about and react to your project. You also need to know how best to engage them in your project and how best to communicate with them.

Key questions that can help you understand your stakeholders are:

- What financial or emotional interest do they have in the outcome of your work? Is it positive or negative?
- What motivates them most of all?
- What information do they want from you?
- How do they want to receive information from you? What is the best way of communicating your message to them?
- What is their current opinion of your work? Is it based on good information?
- Who influences their opinions generally, and who influences their opinion of you? Do some of these influencers therefore become important stakeholders in their own right?
- If they are not likely to be positive, what will win them around to support your project?
- If you don't think you will be able to win them around, how will you manage their opposition?
- Who else might be influenced by their opinions? Do these people become stakeholders in their own right?

A very good way of answering these questions is to talk to your stakeholders directly – people are often quite open about their views, and asking people's opinions is often the first step in building a successful relationship with them.

You can summarize the understanding you have gained on the stakeholder map, so that you can easily see which stakeholders are expected to be blockers or critics, and which stakeholders are likely to be advocates and supporters or your project. A good way of doing this is by color coding: showing advocates and supporters in green, blockers and critics in red, and others who are neutral in orange.

Figure 2: Example Power/Interest Grid with Stakeholders Marked

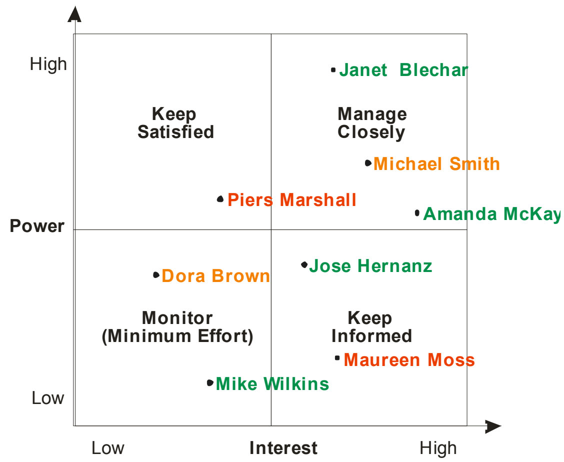


Figure 2 shows an example of this – in this example, you can see that a lot of effort needs to be put into persuading Piers and Michael of the benefits of the project – Janet and Amanda also need to managed well as powerful supporters.

Example

You can create your own example of stakeholder analysis at work – whether for your current role, a job you want to do or a new project.

Conduct a full stakeholder analysis. Ask yourself whether you are communicating as effectively as you should be with your stakeholders. What actions can you take to get more from your supporters or win over your critics?

Key Points

As the work you do and the projects you run become more important, you will affect more and more people. Some of these people have the power to undermine your projects and your position. Others may be strong supporters of your work.

Stakeholder Management is the process by which you identify your key stakeholders and win their support. Stakeholder Analysis is the first stage of this, where you identify and start to understand your most important stakeholders.

The first stage of this is brainstorm who your stakeholders are. The next step is to prioritize them by power and interest, and to plot this on a Power/Interest grid. The final stage is to get an understanding of what motivates your stakeholders and how you need to win them around.

9.8 Stakeholder Management and Planning

Planning stakeholder communication

Worksheet

"Stakeholder management is critical to the success of every project in every organization I have ever worked with. By engaging the right people in the right way in your project, you can make a big difference to its success... and to your career."

This article follows on from the previous article on Stakeholder Analysis.

Having conducted a Stakeholder Analysis exercise, you will have most of the information you need to plan how to manage communication with your stakeholders.

You will have identified the stakeholders in your job and in your projects, and will have marked out their positions on a stakeholder map.

The next stage is to plan your communication so that you can win them around to support your projects. Stakeholder Planning is the process by which you do this.

How to Use the Tool

To carry out a Stakeholder Planning exercise, take a copy of the Stakeholder Communications worksheet from your *Worksheets and Templates Supplement*. This is a table with the following column headings:

- Stakeholder Name
- Communications Approach
- Key Interests and Issues
- Current Status – Advocate, supporter, neutral, critic, blocker
- Desired Support – High, medium or low
- Desired Project Role (if any)
- Actions Desired (if any)
- Messages Needed
- Actions and Communications

Using this table, work through the planning exercise using the steps below:

1. Update the Worksheet with Power/Interest Grid Information:
Based on the Power/Interest Grid you created in your stakeholder analysis, enter the stakeholders' names, their influence and interest in your job or project, and your current assessment of where they stand with respect to it.

2. Plan Your Approach to Stakeholder Management:
The amount of time you should allocate to Stakeholder Management depends on the size and difficulty of your projects and goals, the time you have available for communication, and the amount of help you need to achieve the results you want.

Think through the help you need, the amount of time that will be taken to manage this and the time you will need for communication. Help with the project could include sponsorship of the project, advice and expert input, reviews of material to increase quality, etc.

3. Think Through What You Want From Each Stakeholder:
Next, work through your list of stakeholders thinking through the levels of support you want from them and the roles you would like them to play (if any). Think through the actions you would like them to perform. Write this information down in the 'Desired Support', 'Desired Project Role' and 'Actions Desired' columns.

4. Identify the Messages You Need to Convey:
Next, identify the messages that you need to convey to your stakeholders to persuade them to support you and engage with your projects or goals. Typical messages will show the benefits to the person or organization of what you are doing, and will focus on key performance drivers like increasing profitability or delivering real improvements.

5. Identify Actions and Communications:
Finally, work out what you need to do to win and manage the support of these stakeholders. With the time and resource you have available, identify how you will manage the communication to and the input from your stakeholders.

Focusing on the high-power/high-interest stakeholders first and the low-interest/low-power stakeholders last, devise a practical plan that communicates with people as effectively as possible and that communicates the right amount of information in a way that neither under nor over-communicates.

Think through what you need to do to keep your best supporters engaged and on-board. Work out how to win over or neutralize the opposition of skeptics. Where you need the active support of people who are not currently interested in what you are doing, think about how you can engage them and raise their level of interest.

Also, consider how what you are doing will affect your stakeholders. Where appropriate, let people know as early as possible of any difficult issues that may arise, and discuss with them how you can minimize or manage any impact.

Tip:
It is usually a good idea to manage people's expectations about likely problems as early as possible. This gives them time to think through how to manage issues, and preserves your reputation for reliability.

Once you have prepared your Stakeholder Plan, all you need to do is to implement it. As with all plans, it will be easier to implement if you break it down into a series of small, achievable steps and action these one-by-one.

Key Points

As the work you do and the projects you run become more important, you will affect more and more people. Some of these people have the power to undermine your projects and your position. Others may be strong supporters of your work.
Stakeholder Management is the process by which you identify your key stakeholders and win their support.

Stakeholder Analysis is the first stage of this, where you identify and start to understand your most important stakeholders. The first step in this is brainstorm who your stakeholders are. The next is to prioritize them by power and interest, and to plot this on a Power/Interest Grid. The final step is to get an understanding of what motivates your stakeholders and how you need to win them around.

Once you have completed your Stakeholder Analysis, the next stage is Stakeholder Planning. This is the process you use to plan how to manage your stakeholders and gain their support for your projects.

Stakeholder Planning can usefully be conducted using a planning sheet like the one described. To prepare your plan, go through the following steps:

1. Update the planning sheet with information from the power/interest grid
2. Think through your approach to stakeholder management
3. Work out what you want from each stakeholder
4. Identify the messages you need to convey
5. Identify actions and communications

Good Stakeholder Management helps you to manage the politics that can often come with major projects. It helps you win support for your projects and eliminates a major source of project and work stress.

Section 10: Practical Creativity

- Reversal – Improving Products and Services
- SCAMPER – Generating new products and services
- Attribute Listing, Morphological and Matrix Analysis – Creating new products, services and strategies
- Brainstorming – Generating many radical ideas
- Reframing Matrix – Looking with different perspectives
- Concept Fan – Widening the search for solutions
- Random Input – Making creative leaps
- Provocation – Carrying out thought experiments
- DO IT – A simple process for creativity
- Simplex – A powerful problem-solving process

10. Introduction to Practical Creativity

The tools in this section can help you to become more creative. They are designed to help you devise creative and imaginative solutions to problems, and help you to spot opportunities that you might otherwise miss.

The section describes the following techniques:

- Reversal – Improving Products and Services
- SCAMPER – Generating new products and services
- Attribute Listing, Morphological Analysis and Matrix Analysis – Creating new products, services and strategies
- Brainstorming – Generating many radical ideas
- Reframing Matrix – Looking with different perspectives
- Concept Fan – Widening the search for solutions
- Random Input – Making creative leaps
- Provocation – Carrying out thought experiments
- DO IT – A simple process for creativity
- Simplex – A powerful problem-solving process

Before you continue, it is important to understand what we mean by creativity, as there are two completely different types. The first is technical creativity, where people create new theories, technologies or ideas. This is the type of creativity we discuss here. The second is artistic creativity, which is more born of skill, technique and self-expression. Artistic creativity is beyond the scope of these articles.

Many of the techniques in this chapter have been used by great thinkers to drive their creativity. Albert Einstein, for example, used his own informal variant of Provocation to trigger ideas that lead to the Theory of Relativity.

Approaches to Creativity

There are two main strands to technical creativity: programmed thinking and lateral thinking. Programmed thinking relies on logical or structured ways of creating a new product or service. Examples of this approach are Morphological Analysis and the Reframing Matrix.

The other main strand uses 'Lateral Thinking'. Examples of this are Brainstorming, Random Input and Provocation. Lateral Thinking has been developed and popularized by Edward de Bono, whose books you can find in the appropriate articles.

Programmed Thinking and Lateral Thinking

Lateral thinking recognizes that our brains are pattern recognition systems, and that they do not function like computers. It takes years of training before we learn to do simple arithmetic – something that computers do very easily. On the other hand, we can instantly recognize patterns such as faces, language, and handwriting. The only computers that begin to be able to do these things do it by modeling the way that human brain cells work. Even then, computers will need to become more powerful before they approach our ability to handle patterns.

The benefit of good pattern recognition is that we can recognize objects and situations very quickly. Imagine how much time would be wasted if you had to do a full analysis every time you came across a cylindrical canister of effervescent fluid. Most people would just open their can of fizzy drink. Without pattern recognition we would starve or be eaten. We could not cross the road safely.

Unfortunately, we get stuck in our patterns. We tend to think within them. Solutions we develop are based on previous solutions to similar problems. Normally it does not occur to us to use solutions belonging to other patterns.

We use lateral thinking techniques to break out of this patterned way of thinking. Lateral thinking techniques help us to come up with startling, brilliant and original solutions to problems and opportunities.

It is important to point out that each type of approach has its strength. Logical, disciplined thinking is enormously effective in making products and services better. It can, however, only go so far before all practical improvements have been carried out. Lateral thinking can generate completely new concepts and ideas, and brilliant improvements to existing systems. In the wrong place, however, it can be sterile or unnecessarily disruptive.

Taking the best of each...

A number of techniques fuse the strengths of the two different strands of creativity. Techniques such as the Concept Fan use a combination of programmed and lateral thinking. DO IT and Min Basadur's Simplex embed the two approaches within problem solving processes. While these may be considered 'overkill' when dealing with minor problems, they provide excellent frameworks for solving difficult and serious ones.

The Creative Frame of Mind

Often the only difference between creative and uncreative people is self-perception. Creative people see themselves as creative and give themselves the freedom to create. Uncreative people do not think about creativity and do not give themselves the opportunity to create anything new.

Being creative may just be a matter of setting aside the time needed to take a step back and allow yourself to ask yourself if there is a better way of doing something. Edward de Bono calls this a 'Creative Pause'. He suggests that this should be a short break of maybe only 30 seconds, but that this should be a habitual part of thinking. This needs self-discipline, as it is easy to forget.

Another important attitude shift is to view problems as opportunities for improvement. While this is something of a cliché, it is true. Whenever you solve a problem, you have a better product or service to offer afterwards.

Using Creativity

Creativity is sterile if action does not follow from it. Ideas must be evaluated, improved, polished and marketed before they have any value. Other sections of Mind Tools lay out the evaluation, analysis and planning tools needed to do this. They also explain the time and stress management techniques you will need when your creative ideas take off.

Have fun creating!

10.1 Reversal

Improving Products and Services

Reversal is a good tool for improving a product or a service. To use it, ask the opposite of the question you want to ask, and apply the results.

Example

Imagine that you want to improve the response of a service center. Using Reversal you would ask 'How would I reduce customer satisfaction?'. After considering this question you might give the following answers:

- Not answering the phone when customers call
- Not returning phone calls
- Have people with no product knowledge answering the phone
- Use rude staff
- Give the wrong advice

After using Reversal, you would ensure that appropriate staff members were handling incoming phone calls efficiently and pleasantly. You would set up training programs to ensure that they were giving accurate and effective advice.

Key Points

Reversal is a good, easy process for improving products and services. You use it by asking the exact opposite of the question you want answered, and then apply the results appropriately.

10.2 SCAMPER

Generating new products and services

SCAMPER is a checklist that helps you to think of changes you can make to an existing product to create a new one. You can use these changes either as direct suggestions or as starting points for lateral thinking.

Developed by Bob Eberle, the changes SCAMPER stands for are:

S – **Substitute** – components, materials, people
C – **Combine** – mix, combine with other assemblies or services, integrate
A – **Adapt** – alter, change function, use part of another element
M – **Modify** – increase or reduce in scale, change shape, modify attributes (e.g. color)
P – **Put to another use**
E – **Eliminate** – remove elements, simplify, reduce to core functionality
R – **Reverse** – turn inside out or upside down.

Example

As an example, imagine that you are a manufacturer of nuts and bolts, and you were looking for new products. SCAMPER would give you:

- **Substitute** – use of high tech materials for niche markets, such as high speed steel? Carbon fiber? Plastics? Glass? Non-reactive material?
- **Combine** – integrate nut and bolt? Bolt and washer? Bolt and spanner?
- **Adapt** – put Allen key or Star head on bolt? Countersink head?
- **Modify** – produce bolts for watches or bridges? Produce different shaped bolts (e.g. screw in plugs)? Pre-painted green bolts?
- **Put to another use** – bolts as hinge pins? As axles?
- **Eliminate** – Eliminate nuts, washers, heads, thread, etc.
- **Reverse** – make dies as well as bolts, make bolts that cut threads for themselves in material, etc.

Using SCAMPER here has helped you define possible new products. Many of the ideas may be impractical or may not suit the equipment used by the manufacturer. However some of these ideas could be good starting points for new products.

Key Points

SCAMPER is an acronym for Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, Reverse. This is a list of changes that you could make to existing products and services to open up new opportunities.

10.3 Attribute Listing, Morphological Analysis and Matrix Analysis
Tools for creating new products and services

Attribute Listing, Morphological Analysis and Matrix Analysis are good techniques for finding new combinations of products or services. They are sufficiently similar to be discussed together. We use Attribute Listing and Morphological Analysis to generate new products and services.

How to Use the Tools

To use the techniques, firstly list the attributes of the product, service or strategy you are examining. Attributes are parts, properties, qualities or design elements of the thing being looked at. For example, attributes of a pencil would be shaft material, lead material, hardness of lead, width of lead, quality, color, weight, price, etc. A television plot would have attributes of characters, actions, locations, weather, etc. For a marketing strategy you might use attributes of markets open to you, uses of the product, skills you have available, etc.

Draw up a table using these attributes as column headings. Write down as many variations of the attribute as possible within these columns. This might be an exercise that benefits from Brainstorming. The table should now show all possible variations of each attribute.

Now select one entry from each column. Either do this randomly or select interesting combinations. By mixing one item from each column, you will create a new mixture of components. This is a new product, service or strategy.

Finally, evaluate and improve that mixture to see if you can imagine a profitable market for it.

Example

Imagine that you want to create a new lamp. The starting point for this might be to carry out a morphological analysis. Properties of a lamp might be power supply, bulb type, light intensity, size, style, finish, material, shade, etc.

You can set these out as column headings on a table, and then brainstorm variations:

Power Supply	Bulb Type	Light Intensity	Size	Style	Finish	Material
Battery	Halogen	Low	Very Large	Modern	Black	Metal
Mains	Bulb	Medium	Large	Antique	White	Ceramic
Solar	Daylight	High	Medium	Roman	Metallic	Concrete
Generator	Colored	Variable	Small	Art Nouveau	Terracotta	Bone
Crank			Hand held	Industrial	Enamel	Glass
Gas				Ethnic	Natural	Wood
Oil/Petrol					Fabric	Stone
Flame						Plastic

Interesting combinations might be:

- Solar powered/battery, medium intensity, daylight bulb – possibly used in clothes shops to allow customers to see the true color of clothes.
- Large hand cranked arc lights – used in developing countries, or far from a mains power supply
- A ceramic oil lamp in Roman style – used in themed restaurants, resurrecting the olive oil lamps of 2000 years ago

- A normal table lamp designed to be painted, wallpapered or covered in fabric so that it matches the style of a room perfectly

Some of these might be practical, novel ideas for the lighting manufacturer. Some might not. This is where the manufacturer's experience and market knowledge are important.

Key Points

Morphological Analysis, Matrix Analysis and Attribute Listing are useful techniques for making new combinations of products, services and strategies.

You use the tools by identifying the attributes of the product, service or strategy you are examining. Attributes might be components, assemblies, dimensions, color, weight, style, speed of service, skills available, etc.

Use these attributes as column headings. Underneath the column headings list as many variations of that attribute as you can.

You can now use the table by randomly selecting one item from each column, or by selecting interesting combinations of items. This will give you ideas that you can examine for practicality.

Notes

- Attribute Listing focuses on the attributes of an object, seeing how each attribute could be improved.
- Morphological Analysis uses the same basic technique, but is used to create a new product by mixing components in a new way.
- Matrix Analysis focuses on businesses. It is used to generate new approaches, using attributes such as market sectors, customer needs, products, promotional methods, etc.

10.4 Brainstorming

Generating many radical and useful ideas

Brainstorming is a useful and popular tool that you can use to develop highly creative solutions to a problem.

It is particularly helpful when you need to break out of stale, established patterns of thinking, so that you can develop new ways of looking at things. This can be when you need to develop new opportunities, where you want to improve the service that you offer, or when existing approaches just aren't giving you the results you want.

Used with your team, it helps you bring the experience of all team members into play during problem solving.

This increases the richness of solutions explored (meaning that you can find better solutions to the problems you face, and make better decisions.) It can also help you get buy in from team members for the solution chosen – after all, they have helped create that solution.

Brainstorming and Lateral Thinking

Brainstorming is a lateral thinking process. It asks that people come up with ideas and thoughts that seem at first to be a bit shocking or crazy. You can then change and improve them into ideas that are useful, and often stunningly original.

During brainstorming sessions there should therefore be no criticism of ideas: You are trying to open up possibilities and break down wrong assumptions about the limits of the problem. Judgments and analysis at this stage will stunt idea generation.

Ideas should only be evaluated at the end of the brainstorming session – you can then explore solutions further using conventional approaches.

If your ideas begin to dry up, you can 'seed' the session with, for example, a random word (see Random Input).

Individual Brainstorming

When you brainstorm on your own you will tend to produce a wider range of ideas than with group brainstorming – you do not have to worry about other people's egos or opinions, and can therefore be more freely creative. You may not, however, develop ideas as effectively as you do not have the experience of a group to help you.

When Brainstorming on your own, it can be helpful to use Mind Maps to arrange and develop ideas.

Group Brainstorming

Group brainstorming can be very effective as it uses the experience and creativity of all members of the group. When individual members reach their limit on an idea, another member's creativity and experience can take the idea to the next stage. Therefore, group brainstorming tends to develop ideas in more depth than individual brainstorming.

Brainstorming in a group can be risky for individuals. Valuable but strange suggestions may appear stupid at first sight. Because of such, you need to chair sessions tightly so that uncreative people do not crush these ideas and leave group members feeling humiliated.

How to Use the Tool

To run a group brainstorming session effectively, do the following:

- Define the problem you want solved clearly, and lay out any criteria to be met;
- Keep the session focused on the problem;
- Ensure that no one criticizes or evaluates ideas during the session. Criticism introduces an element of risk for group members when putting forward an idea. This stifles creativity and cripples the free running nature of a good brainstorming session;
- Encourage an enthusiastic, uncritical attitude among members of the group. Try to get everyone to contribute and develop ideas, including the quietest members of the group;
- Let people have fun brainstorming. Encourage them to come up with as many ideas as possible, from solidly practical ones to wildly impractical ones. Welcome creativity;
- Ensure that no train of thought is followed for too long;
- Encourage people to develop other people's ideas, or to use other ideas to create new ones ; and
- Appoint one person to note down ideas that come out of the session. A good way of doing this is to use a flip chart. This should be studied and evaluated after the session.

Where possible, participants in the brainstorming process should come from as wide a range of disciplines as possible. This brings a broad range of experience to the session and helps to make it more creative.
And again, it's worth exploring the use of computer-based tools for group brainstorming. As long as you're reasonably quick with keyboard and mouse, these significantly improve the quality and effectiveness of a brainstorming session.

Key Points

Brainstorming is a great way of generating radical ideas. During the brainstorming process there is no criticism of ideas, as free rein is given to people's creativity (criticism and judgment cramp creativity.)

This often makes group brainstorming sessions enjoyable experiences, which are great for bringing team members together.

Individual brainstorming is best for generating many ideas, but tends to be less effective at developing them. Group brainstorming tends to develop fewer ideas, but takes each idea further. Group brainstorming needs formal rules for it to work smoothly.

10.5 The Reframing Matrix

Looking at problems with a different perspective

A Reframing Matrix is a simple technique that helps you to look at business problems from a number of different viewpoints. It expands the range of creative solutions that you can generate.

The approach relies on the fact that different people with different experience approach problems in different ways. What this technique helps you to do is to put yourself into the minds of different people and imagine the solutions they would come up with.

How to Use the Tool

Put the question to be asked in the middle of a grid. We use boxes around the grid for the different perspectives. This is just an easy way of laying the problem out, so if it does not suit you, change it.

We will look at two different approaches to the reframing matrix – you could, however, use this approach in many different ways.

The 4 Ps Approach

This relies on looking at a problem from different perspectives within a business. The 4 Ps approach looks at problems from the following viewpoints:

- **Product perspective:** Is there something wrong with the product?
- **Planning perspective:** Are our business plans or marketing plans at fault?
- **Potential perspective:** If we were to seriously increase our targets, how would we achieve these increases?
- **People perspective:** Why do people choose one product over another?

An example of this approach is shown below:

Figure 1. Reframing matrix example - New product not selling well

Product Perspective: Untried product Is it technically correct? Is it attractive? Is it well priced?	**Planning Perspective:** Are we approaching the right markets? Are we using the right sales strategy?
Potential Perspective: How would we raise sales?	**People Perspective:** How do customers see the product? Are they convinced that it is reliable? Why are they choosing other products?

Problem:
New product not selling well

The 'Professions Approach'

Another approach to using a reframing matrix is to look at the problem from the viewpoints of different specialists. The way, for example, that a doctor looks at a problem would be different from the approach a civil engineer would use. This would be different from a sales manager's perspective.

The idea of the Reframing Matrix was devised by Michael Morgan in his book Creating Workforce Innovation.

Key Points

The Reframing Matrix is a formal technique used to look at problems from different perspectives. It helps to expand the number of options open to you for solving a problem.

You draw up a reframing matrix by posing a question in a box in the middle of a piece of paper. You then draw a grid around it. Each cell will contain approaches to the problem, seen from one perspective.

One way of using the technique is the '4 Ps' approach. This looks at the problem from the following viewpoints: Product, Planning, Potential and People. Another set of perspectives is to ask your self how different professionals would approach the problem. Useful professions to consider would be medical doctors, engineers, systems analysts, sales managers, etc.

10.6 Concept Fan

Widening the Search for Solutions

The Concept Fan is a way of finding different approaches to a problem when you have rejected all obvious solutions. It develops the principle of 'taking one step back' to get a broader perspective.

How to Use the Tool

To start a Concept Fan, draw a circle in the middle of a large piece of paper. Write the problem you are trying to solve into it. To the right of it radiate lines representing possible solutions to the problem. This is shown in Figure 1:

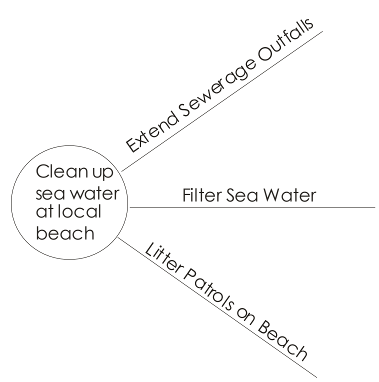


Figure 1: First Stage of a Concept Fan

It may be that the ideas you have are impractical or do not really solve the problem. If this is the case, take a 'step back' for a broader view of the problem.

Do this by drawing a circle to the left of the first circle, and write the broader definition into this new circle. Link it with an arrow to show that it comes from the first circle:

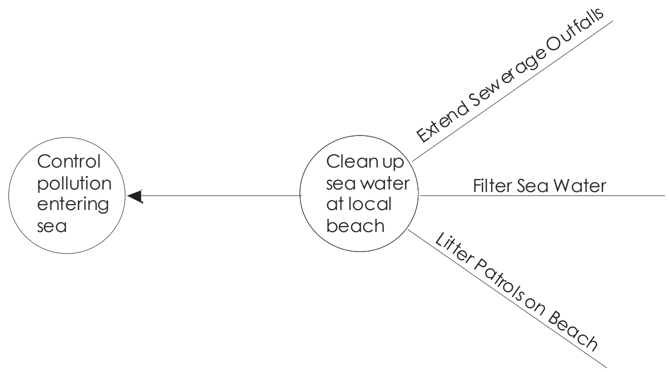


Figure 2: Broadening the Problem Definition on a Concept Fan

Use this as a starting point to radiate out other ideas (see Figure 3).

If this does not give you enough new ideas, you can take yet another step back (and another, and another… See Figure 4).

The idea of the Concept Fan was devised by Edward de Bono in his book Serious Creativity which shows how to use many similar tools.

Key Points

The Concept Fan is a useful technique for widening the search for solutions when you have rejected all obvious approaches. It gives you a clear framework within which you can take 'one step back' to get a broader view of a problem.

To start a concept fan, write the problem in the middle of a piece of paper. Write possible solutions to this problem on lines radiating from this circle.

If no idea is good enough, redefine the problem more broadly. Write this broader definition in a circle to the left of the first one. Draw an arrow from the initial problem definition to the new one to show the linkage between the problems. Then radiate possible solutions from this broader definition.

Keep on expanding and redefining the problem until you have a useful solution.

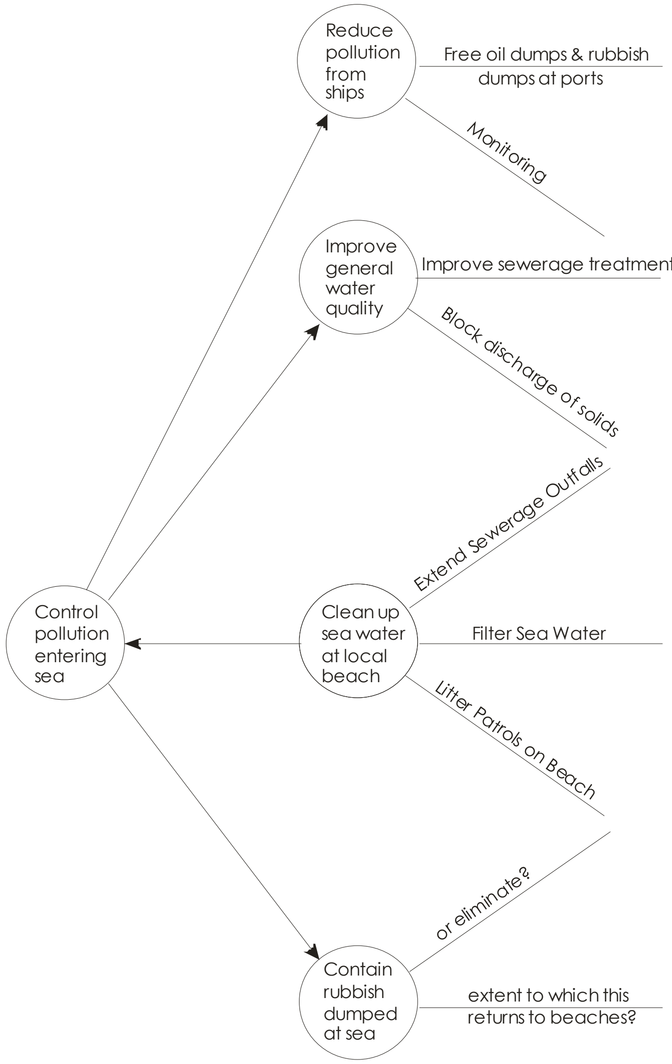


Figure 3: Radiating Ideas from the Broader Problem Definition

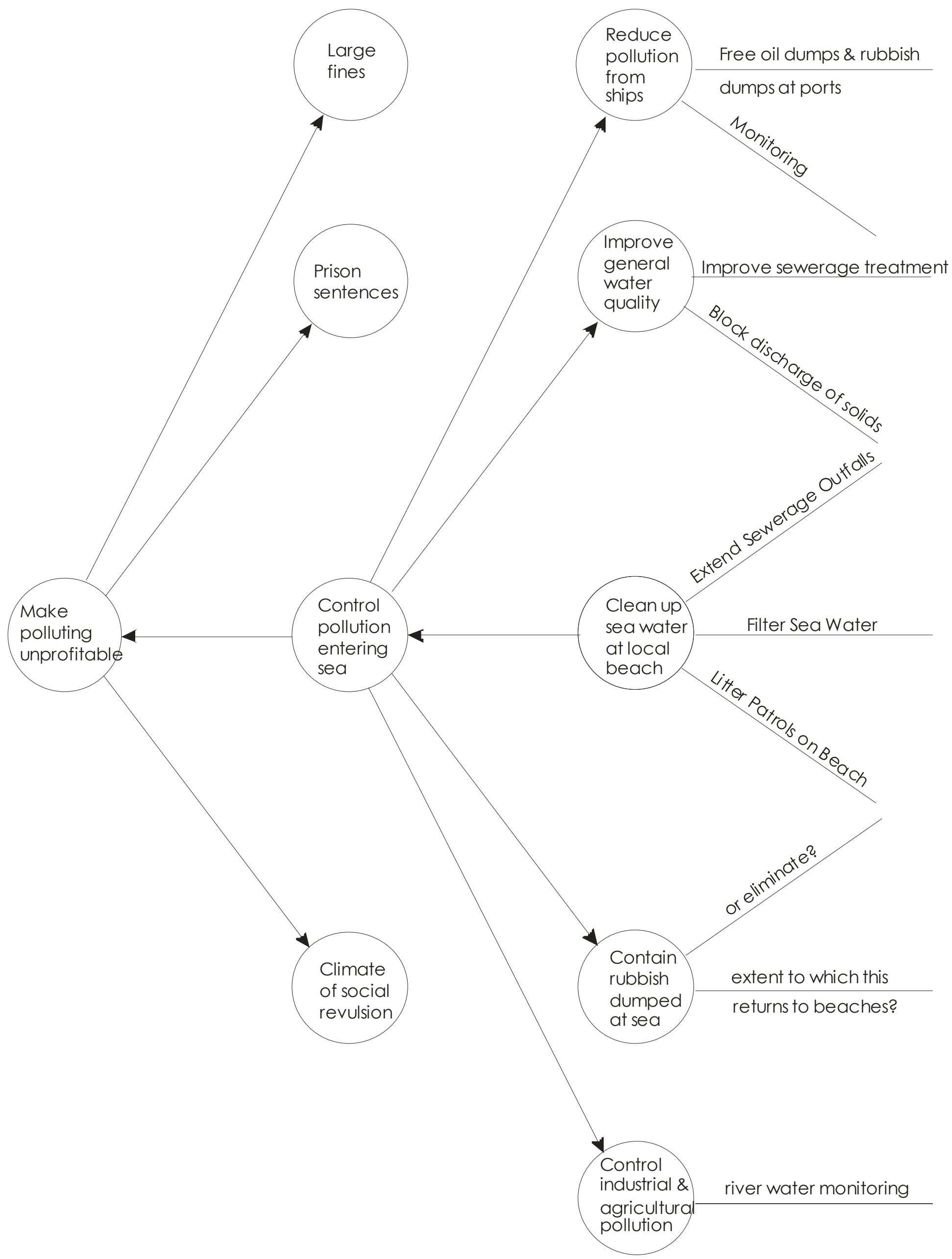


Figure 4: A Developed Concept Fan

10.7 Random Input

Making Creative Leaps

Random Input is a lateral thinking tool. It is very useful when you need fresh ideas or new perspectives during problem solving.

As explained in the introduction to this chapter, we tend to think by recognizing patterns. We react to these patterns based on past experience and extensions to that experience. Sometimes, though, we get stuck inside them. Within a particular pattern there may be no good solution to a particular sort of problem.

Random input is a technique for linking another thinking pattern into the one we are using. Along with this new pattern comes all the experience you have connected to it.

How to Use the Tool:

To use Random Input, select a random noun from either a dictionary or a pre-prepared word list. It often helps if the noun is something that can be seen or touched (e.g. 'helicopter', 'dog') rather than a concept (e.g. 'fairness'). Use this noun as the starting point for brainstorming your problem.

You may find that you get good insights if you select a word from a separate field in which you have some expertise.

If you choose a good word, you will add a range of new ideas and concepts to your brainstorming. While some will be useless, hopefully you will gain some good new insights into your problem. If you persist, then at least one of these is likely to be a startling creative leap.

Example

Imagine that you are thinking about the problem of reducing car pollution. So far in thinking through the problem you have considered all the conventional solutions of catalytic conversion and clean fuels.

Selecting a random noun from the titles of the books in a bookcase you might see the word 'Plants'. Brainstorming from this you could generate a number of new ideas:

- Plant trees on the side of roads to convert CO^2 back into oxygen
- Similarly, pass exhaust gases through a soup of algae to convert CO2 back into oxygen. Perhaps this is how an 'air scrubber' in a space craft works?
- Put sulfur-metabolizing bacteria into an exhaust gas processor to clean up exhaust gases. Would nitrogen compounds fertilize these bacteria?
- Another meaning of 'Plant' is factory. Perhaps exhaust gases could be collected in a container, and sent to a special plant to be cleaned? Perhaps you could offload these gases at the same time as you fill up with fuel?

These ideas are very raw. Some may be wrong or impractical. One of them might be original and the basis of some useful development.

Key Points

Random input is an excellent way of getting new perspectives on a problem. It often leads to startling creative leaps.

It provides an easy way of breaking out of restrictive thinking patterns. It helps you to link in whole ranges of new solutions that you would not otherwise associate with the problem.

The best words to use are concrete nouns, which may come from areas in which you have some expertise. Nouns should not, however, come from the same field as the problem you are considering, as the whole idea of Random Input is to link in new thinking patterns, not to stay inside old ones.

10.8 Provocation
Carrying Out Thought Experiments

Provocation is an important lateral thinking technique. Just like Random Input, it works by moving your thinking out of the established patterns that you use to solve problems.

As explained earlier, we think by recognizing patterns and reacting to them. These reactions come from our past experiences and logical extensions to those experiences. Often we do not think outside these patterns. While we may know the answer as part of a different type of problem, the structure of our brains makes it difficult for us to link this in.

Provocation is one of the tools we use to make links between these patterns.

How to Use the Tool

We begin by making deliberately stupid statements (Provocations), in which something we take for granted about the situation is not true. Statements need to be stupid to shock our minds out of existing ways of thinking. Once we have made a provocative statement, we then suspend judgment and use that statement to generate ideas. Provocations give us original starting points for creative thinking.

As an example, we could make a statement that 'Houses should not have roofs'. Normally this would not be a good idea! However this leads one to think of houses with opening roofs, or houses with glass roofs. These would allow you to lie in bed and look up at the stars.

Once you have made the Provocation, you can use it in a number of different ways, by examining:

- The consequences of the statement
- What the benefits would be
- What special circumstances would make it a sensible solution
- The principles needed to support it and make it work
- How it would work moment-to-moment
- What would happen if a sequence of events was changed
- Etc.

You can use this list as a checklist.

Edward de Bono has developed and popularize use of Provocation by using the word 'Po'. 'Po' stands for 'Provocative operation'. As well as laying out how to use Provocation effectively, he suggests that when we make a Provocative statement in public that we label it as such with 'Po' (e.g. 'Po: the earth is flat'). This does rely on all members of your audience knowing about Provocation!

Edward de Bono's books explore this sort of technique in detail, including *Serious Creativity*.

As with other lateral thinking techniques, Provocation does not always produce good or relevant ideas. Often, though, it does. Ideas generated using Provocation are likely to be fresh and original.

Example

The owner of a video-hire shop is looking at new ideas for business to compete with the Internet. She starts with the provocation 'Customers should not pay to borrow videos'.

She then examines the provocation:

- **Consequences:** The shop would get no rental revenue and therefore would need alternative sources of cash. It would be cheaper to borrow the video from the shop than to download the film or order it from a catalogue.
- **Benefits:** Many more people would come to borrow videos. More people would pass through the shop. The shop would spoil the market for other video shops in the area.

- **Circumstances:** The shop would need other revenue. Perhaps the owner could sell advertising in the shop, or sell popcorn, sweets, bottles of wine or pizzas to people borrowing films. This would make her shop a one-stop 'Night at home' shop. Perhaps it would only lend videos to people who had absorbed a 30-second commercial, or completed a market research questionnaire.

After using the Provocation, the owner of the video shop decides to run an experiment for several months. She will allow customers to borrow the top ten videos free (but naturally will fine them for late returns). She puts the videos at the back of the shop. In front of them she places displays of bottles of wine, soft drinks, popcorn and sweets so that customers have to walk past them to get to the videos. Next to the film return counter she sells merchandise from the top ten films being hired.

If the approach is a success she will open a pizza stand inside the shop.

Key Points

Provocation is an important lateral thinking technique that helps to generate original starting points for creative thinking.

To use provocation, make a deliberately stupid comment relating to the problem you are thinking about. Then suspend judgment, and use the statement as the starting point for generating ideas.

Often this approach will help you to generate completely new concepts.

10.9 DO IT – A Simple Process for Creativity

DO IT is a process for creativity.

Techniques outlined earlier in this chapter focus on specific aspects of creative thinking. DO IT bundles them together, and introduces formal methods of problem definition and evaluation. These help you to get the best out of the creativity techniques.

DO IT is an acronym that stands for:

D – Define problem
O – Open mind and apply creative techniques
I – Identify best solution
T – Transform

These stages are explained in more detail below:

How to Use the Tool

1. Define the Problem
This section concentrates on analyzing the problem to ensure that the correct question is being asked. The following steps will help you to do this:

- Check that you are tackling the problem, not the symptoms of the problem. To do this, ask yourself why the problem exists repeatedly until you get to the root of it.
- Lay out the bounds of the problem. Work out the objectives that you must achieve and the constraints that you are operating under.
- Where a problem appears to be very large, break it down into smaller parts. Keep on going until each part is achievable in its own right, or needs a precisely defined area of research to be carried out. See Drill-Down for a detailed description of this process.

- Summarize the problem in as concise a form as possible. Robert W. Olsen suggests that the best way to do this is to write down a number of 2 word problem statements and choose the best one.

2. Open Your Mind and Apply Creative Techniques
Once you know the problem that you want to solve, you are ready to start generating possible solutions. It is very tempting just to accept the first good idea that you come across. If you do this, you will miss many even better solutions.

At this stage of DO IT we are not interested in evaluating ideas. Instead, we are trying to generate as many different ideas as possible. Even bad ideas may be the seeds of good ones.

You can use the whole battery of creativity techniques covered earlier in this section to search for possible solutions. Each tool has its particular strengths and benefits, depending on the problems that you want to solve. While you are generating solutions, remember that other people will have different perspectives on the problem, and it will almost certainly be worth asking for the opinions of your colleagues as part of this process.

3. Identify the Best Solution
Only at this stage do you select the best of the ideas you have generated. It may be that the best idea is obvious. Alternatively, it may be worth examining and developing a number of ideas in detail before you select one.

The Decision Making Techniques section of Mind Tools explains a range of excellent decision making techniques. Decision Tree Analysis and Force Field Analysis are particularly useful. These will help you to choose between the solutions available to you.

When you are selecting a solution, keep in mind your own or your organization's goals. Often Decision Making becomes easy once you know these.

4. Transform
Having identified the problem and created a solution to it, the final stage is to implement this solution. This involves not only development of a reliable product from your idea, but all the marketing and business side as well. This may take a great deal of time and energy.

Many very creative people fail at this stage. They will have fun creating new products and services that may be years ahead of what is available on the market. They will then fail to develop them, and watch someone else make a fortune out of the idea several years later.

The first stage in transforming an idea is to develop an Action Plan for the transformation. This may lead to creation of a Business or Marketing Plan. Once you have done this, the work of implementation begins!

DO IT was devised by Robert W Olsen in his book 'The Art of Creative Thinking'.

Key Points

DO IT is a structured process for creativity. Using DO IT ensures that you carry out the essential groundwork that helps you to get the most out of creativity tools.

These steps are:

- Problem Definition: During this stage you apply a number of techniques to ensure that you are asking the right question.
- Open Mind: Here you apply creativity techniques to generate as many answers as possible to the question you are asking. At this stage you are not evaluating the answers.

- Identify the best solution: Only at this stage do you select the best solutions from the ones you came up with in step 2. Where you are having difficulty in selecting ideas, use formal techniques to help.
- Transform: The final stage is to make an Action Plan for the implementation of the solution, and to carry it out. Without implementation, your creativity is sterile.

10.10 Simplex
A Powerful Integrated Problem-Solving Process

Simplex is an industrial-strength creativity tool. It takes the approach of DO IT to the next level of sophistication.

Rather than seeing creativity as a single straight-line process, Simplex sees it as the continuous cycle it should be. Completion and implementation of one cycle of creativity leads straight into the next cycle of creative improvement.

How to Use the Tool
Simplex uses the following eight stages:

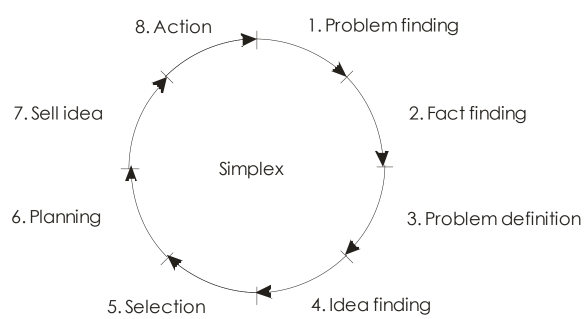


Figure 1: The Simplex Process

These are explained below:

1. Problem finding
Often finding the right problem to solve is the most difficult part of the creative process. When using Simplex, actively seek problems out. Wherever they exist you have opportunities for change and improvement.

Problems may be obvious, or can be flushed out using trigger questions like the ones below:

- What would your customers want you to improve?
- What could they be doing better if we could help them?
- Who else could we help using our core competences?
- What small problems do we have which could grow into bigger ones?
- What slows our work or makes it more difficult? What do we often fail to achieve?
- How can we improve quality?
- What are our competitors doing that we could do?
- What is frustrating and irritating?

These questions deal with problems that exist now. It is also useful to try to look into the future. Think about how you expect markets and customers to change over the next few years; the problems you may experience as your organization expands; and social, political and legal changes that may affect it.

At this stage you may not have enough information to formulate your problem precisely. Do not worry about this until step 3!

2. Fact Finding
The next stage is to find out as much information relating to the problem as possible.

This gives you the depth of knowledge you need to:

- Use the best ideas your competitors have had
- Understand customers' needs in more detail
- Know what has already been tried
- Fully understand any processes, components, services or technologies that you may need to use
- Ensure that the benefits of solving the problem will be worth the effort you will put into it.

This stage also involves assessing the quality of the information that you have. Here it is worth listing your assumptions and checking that they are correct.

3. Problem definition
By the time you reach this stage, you should know roughly what the problem is and should have a good understanding of the facts relating to it. From here the thing to do is to crystallize the exact problem or problems you want to solve.

It is important to solve a problem at the right level. If you ask questions that are too broad, then you will never have enough resources to answer them effectively. If you ask questions that are too narrow, you may end up fixing symptoms of a problem, rather than the problem itself.

Min Basadur (who created the Simplex Process) suggests using the question 'Why?' to broaden a question, and 'What's stopping you?' to narrow it.

For example, if your problem is one of trees dying, ask 'Why do I want to keep trees healthy?'. This might broaden the question to 'How can I maintain the quality of our environment?'.

A 'What's stopping you?' here could be 'I do not know how to control a disease killing the tree'.

Big problems are normally made up of many smaller ones. This is the stage at which you can use a technique like Drill-Down to break the problem down to its component parts.

4. Idea finding
The next stage is to generate as many ideas as possible. Ways of doing this range from asking other people for their opinions, through programmed creativity tools and lateral thinking techniques to brainstorming.

Do not evaluate ideas during this stage. Instead, concentrate on generating many ideas as possible. Bad ideas often trigger good ones.

5. Selection and Evaluation
Once you have a number of possible solutions to your problem, it is time to select the best one.

The best solution may be obvious. If it is not, then it is important to think through the criteria you will use to select the best idea. The Decision Making Techniques section of Mind Tools lays out a number of good methods for this. Particularly useful techniques may be Decision Trees, Paired Comparison Analysis and Grid Analysis.

Once you have selected an idea, develop it as far as possible. It is then essential to evaluate it to see if it is good enough to be considered worth using. It is important not to let your ego get in the way of your common sense. If your idea does not give big enough benefit, then either see if you can generate more ideas, or restart the whole process. You can waste years of your life developing creative ideas that no-one wants.

There are two excellent techniques for doing this. One is Edward de Bono's *6 Thinking Hats*, which is an excellent tool for qualitative analysis. The other is Cost/Benefit Analysis, which gives you a good basis for financially based decisions.

6. Planning
Once you have selected an idea, and are confident that your idea is worthwhile, then it is time to plan its implementation.

The best way of doing this is to set this out as an Action Plan, which lays out the who, what, when, where, why and how of making it work. For large projects it may be worth using more formal planning techniques.

7. Sell Idea
Up to this stage you may have done all this work on your own or with a small committee. Now you will have to sell the idea to the people who must support it. This might be your boss, a bank manager or other people involved with the project.

In selling the project you will have to address not only the practicality of the project, but also things such internal politics, hidden fear of change, etc.

8. Action
Finally, after all the creativity and preparation, comes action! This is where all the careful work and planning pays off.

Once the action is firmly under way, return to stage 1, Problem Finding, to continue improving your idea.

Min Basadur's book, *The Power of Innovation*, explores this process in much more detail.

Key Points

The Simplex Process is a powerful, sophisticated approach to innovation. It is suitable for projects and organizations of almost any scale.

The Process is an eight-stage cycle. Upon completion of the eight stages you start it again to find and solve another problem. This helps to ensure continuous improvement.

Stages in the process are:

- Problem finding
- Fact finding
- Problem Definition
- Idea Finding
- Selection and Evaluation
- Planning
- Selling of the Idea
- Action

By moving through these stages you ensure that you solve the most significant problems with the best solutions available to you. This process can help you to be intensely creative.

Moving On

We hope you've enjoyed the Mind Tools E-Book.

We have put a great deal of effort into developing this and our other material. If you have any suggestions on how we can improve it for the future, then please let us know at customer.helpdesk@mindtools.com or through the Mind Tools web site at www.mindtools.com. Alternatively, if you have enjoyed this guide and found it useful, please let us know!

The Mind Tools web site at www.mindtools.com offers articles on a wide range of important career development and personal effectiveness techniques, as well as a range of related products and services.

Members of the Mind Tools Career Excellence Club benefit even further, from additional resources including podcasts and forums where they can discuss career issues and get ideas from Mind Tools Team as well as from other Club members. Click here to find out more about how you can take charge of your career by joining the Mind Tools community.

Best wishes, and enjoy using Mind Tools!

James Manktelow
CEO
Mindtools.com

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Index