New ideas are essential for industry, they are the lifeblood of successful organisations. Creative and innovative thinking, the means by which ideas are born and nurtured, are not products of clearly defined steps, they can be encouraged in various ways.

We all have new ideas but really good, creative new ideas vary in quality and frequency. A good idea can be classed as one that a critical mass of people consider to be both useful and original. Those people who have a high rate of excellent ideas are the true creative thinkers. Most creative thinkers can be placed on a scale relative to their quality and quantity of ideas.

<table>
<thead>
<tr>
<th>High</th>
<th>A</th>
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<tr>
<td></td>
<td>High productivity and few quality ideas</td>
<td>Many quality ideas in high quality</td>
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<tr>
<td>Low</td>
<td>B</td>
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<tr>
<td></td>
<td>Not very productive and not producing many ‘pearls’</td>
<td>Many quality ideas with low productivity</td>
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QUALITY OF IDEAS

High
Really good managers (and all successful businesses have them) are capable of having, or recognising, good ideas and using them to make things happen in a new way: of translating ideas into useful, practicable and commercial products, services or systems.

Innovation (to bring in or introduce something new – a new idea, method or device) draws together new ideas and their implementation, whereas creativity is the having of new ideas which, in an organisation, are generated or spotted by individuals or teams.

It is important for all managers and leaders to:
• understand creativity and the creative processes
• eliminate impediments to creativity and creative thinking
• widen their field of view as well as that of their staff
• build on ideas and not merely criticise them
• tolerate doubts and uncertainties
• adopt a creative attitude in listening, observing and reading
• be confident in your own creative skills
• make time to think
• participate creatively as a leader, manager or member of a team
• use teams to innovate effectively
• manage innovation in your business.

How far you develop your and your teams’ creative abilities is largely up to you. Your motivation to succeed will dictate how far you exert yourself to learn all you can about the art of being creative and innovative. Personal experi-
ence is a great way to learn once you understand the basic principles and thought processes.

Use the principles set out in this book to build your mind and encourage the right mind set to become more creative and innovative. The benefits this book can bring to you include:

- Developing your understanding of the creative process
- Overcoming the barriers to having new ideas and creative thoughts
- Enlarging your parameters of vision and information
- Building on your ideas as well as criticising them when relevant
- Increasing your tolerance for uncertainty and doubt
- Reading, listening and absorbing information around you with a creative mind
- Making you aware of having time to think
- Giving you confidence in yourself to be creative
- Encouraging you to be a more effective manager or leader to build creative teams
- Managing innovation within your organisation for the most successful outcomes.

Remember, the future of our civilisation depends on the creative flair and innovative genius of people like you.

This book is divided into two parts: **Part one: creative thinking** looks at obstacles to creativity and ways to improve it personally and organisationally; and **Part two: innovation** details how best to manage creativity and encourage innovation successfully in business.
Creative thinking

The creative process
Obstacles which inhibit creativity
Developing creativity
Decision-making and the creative thinker
Key elements of creative thinking and decision-making
Other useful approaches to creative thinking and decision-making
Using creative thinking to evaluate the options
Part one: Creative thinking

The creative process

Creativity can be improved by remembering that the creative process has four main stages and each needs to be properly ‘worked’:

1. **Preparation**: information gathering, analysis and solution exploration.
2. **Incubation**: letting the mind work to continue the process sub-consciously.
3. **Illumination**: inspiration – which can come when the individual is not necessarily thinking about the problem but is in a relaxed frame of mind.
4. **Verification**: testing ideas, solution, hunches, insights for applicability.

Obstacles which inhibit creativity

1. **Negativity in individuals and in teams**: focusing on the negative aspects of a problem as opposed to using your energy to seek opportunities for a solution.
2. **Fear of failure**: a fear of appearing foolish in front of colleagues.
3. **Lack of quality thinking time and experiences to draw from**: being over-stressed can make it difficult to think objectively and inhibits the natural thinking process.
4 Over-conformance with rules and regulations, a lack of freedom to develop: too many rules can encourage mental laziness.

5 Making assumptions that are not necessarily true: failing to identify the assumptions you are making will inhibit the process of developing new ideas.

6 Applying too much logic and not listening to the depth mind: too much logic excludes imagination, intuition and synthesis from your thought process.

7 Thinking you are not creative: the biggest barrier of all!

The non-creative person

These obstacles can be seen in the profile of the non-creative person; someone who is:

- not able to think positively about problems (and does not see them as opportunities)
- too busy or stressed to think objectively or at all
- very self-critical
- timid in putting forward a new idea (fearing ridicule)
- viewed as a conformist by friends/colleagues
- prone to apply logic as a first and last resort
- sceptical that many people are capable of being creative
- unable to think laterally
- uninspired even when confronted with a new idea.
On the other hand, creativity can be encouraged in people (including oneself) by exploring some of the qualities and characteristics of creative thinkers and the activities and steps that can be undertaken to improve the processes involved.

**Developing creativity**

To be creative an individual should:

1. **Think beyond the invisible frameworks that surround problems and situations.**
   Think ‘outside of the box’. Be open to new observations and thoughts, however ridiculous they may seem at first. We tend to see what we expect to be there but if we opened our minds beyond the ‘normal’ we would be more observant, objective and creative in our thoughts. Considering a new starting point and perspective when looking for a solution can be very inspiring. Approaching the problem from a different angle can encourage new ideas. Creative thinking should be an adventure into the unknown.

2. **Recognise when assumptions are being made and challenge them.**
   Never assume anything as you are making the supposition that it is correct or true. Preconceptions are the ideas you have before you gain actual knowledge. Assumptions and preconceptions are often unwarranted and misleading, and are great blockers to creative thinking. Challenging assumptions can open up a whole new creative process.
3 Spot blinkered thinking and widen the field of vision (to draw on the experiences of other individuals and businesses).

It is very easy to only ‘think within the box’ when you are faced with a problem but if you widen your parameters the answers may be closer than you think. Technologies and practices in industries other than your own may spark an idea, leading to a solution. Travel can widen your horizons and your span of relevance and open up all sorts of new avenues for thought.

4 Develop and adapt ideas from more than one source.

As humans we cannot make something out of nothing, our minds need something to work on, so we combine ideas and elements which are already in existence, to create new ideas and products. The creative mind can see possibilities, bonds and connections between various elements which others cannot see.

5 Practice serendipity (finding valuable and agreeable things when not particularly seeking them) – having a wide attention span and range of interests is important.

When we’re involved in trying to solve a problem we tend to have a narrow focus but we should always be open and aware of the unexpected. What may seem irrelevant at first could later become significant in creative thinking. It may take a while, perhaps weeks, months or even years, which is why the creative thinker should retain as much information and as many experiences as possible.
It’s these experiences that may be the trigger to a creative thought which might just solve a difficult problem.

6 ‘Transfer technology’ from one field to another. 
Keep an open mind when faced with a problem and look outside of your own situation. Often other departments, organisations and industries can give you the inspiration to develop ideas to solve your challenges. The most successful creative thinkers have knowledge about more than one field and often make their names appear in quite a different sphere than they are normally associated with.

7 Be open and prepared to use chance or unpredictable things and events to your advantage.
Have a wide focus of attention and develop your powers of observation to make use of the chance happenings you come across in your life. Use your experience to interpret these things as something useful without having preconceptions. You may have to invest a lot of time exposing yourself to chance experiences but they will give you a good reference base for future creativity.

8 Explore thought processes and the key elements of the mind at work in analysing, valuing and synthesising.
Creative thinking cannot really be broken down into a specific process or system. The very nature of creativity can mean it is a disorderly process. However, we usually begin by analysing the problem in hand and then playing around with restructuring it (synthesising). Next we set about using our imaginations and valuing the thoughts
we have in relation to a possible solution. We should be aware of these thought processes and use them to our advantage, not let them get in the way of being creative.

9 Use his/her ‘depth’ mind (the unconscious mind) for example by sleeping on a problem to generate creative solutions and ideas.

The value of ‘sleeping on a problem’ has been long known. Apart from actually dreaming of a solution, the time in bed before you sleep is very relaxing and allows ideas to be generated. Dreams allow you mind a total freedom to make connections you would not normally consider. Although this may not give you the exact answer it could be enough to direct your waking thoughts in the right direction. You should note down your dream thoughts as soon as you wake so they are not lost.

The brain is capable of analysing information that you may not even realise you have absorbed. By switching off your conscious thinking you allow your depth mind to begin analysing, valuing and synthesising your inner most knowledge. You cannot control this type of inspiration but you should stay alert and expectant, so you are aware when it shows itself.

10 Note down thoughts/ideas that apparently drop into the mind unsolicited so that they are not forgotten.

Keeping a notebook is a good way of recording materials for your future use. Make notes of conversations (real or from TV or radio), quotations from articles or books and observations and thoughts. Your instinct will tell you what
may be relevant to future problem solving and creative thinking. There is no need to be too systematic as when you look back through your notes you will make connections between points which you didn’t initially see.

11 Use analogy (to improve imaginative thinking) to find ‘models’ or solutions in ‘nature’, in existing products, services and/or in other organisations – not always reinventing the wheel.

Nature holds many answers to our problems. We have the challenge of realising them and applying what we discover to our individual situation. Other models can be found in existing products and organisations but we must be aware not to copy them directly as this could lead to more problems. We should keep an open mind and be very observant when looking at our surroundings and use what we see to our advantage.

12 Try to sometimes make the strange familiar and the familiar strange to spark new ideas.

Creative thinking is the search for something new. Sometimes that something new can be found within the familiar. By making the familiar strange you begin to look at it differently and this can lead to many creative thoughts. The reverse is also true. By becoming more familiar with the strange you open your mind to exploring new avenues you may not have realised existed. Both these processes can lead the creative thinker to new ideas.
13 Make connections with points that are apparently irrelevant, disguised/buried or not easily accessible, outside your own sphere of expertise and lacking authority. Look beyond the ‘normal’ for your inspiration. Learn to think freely about a situation or problem and don’t be too hasty about defining a problem and boxing it into a category. Look outside of your knowledge sphere for the answers.

14 Suspend judgement to encourage the creative process and avoid premature criticism – analysis and criticism repress creativity. Criticism has its place but shouldn’t be embarked upon too early in the creative process as it can have a negative effect. When exploring and experimenting with new ideas, too much negativity can cut short the creative flow. Constructive criticism should be invited when you reach the evaluating and testing stage.

15 Know when to leave a problem (remaining aware but detached) for solutions to emerge – patience is important here as is the suspension of judgement. Sometimes you can be too involved with a problem and you need to take a step back to be able to make progress. By switching off your attention you allow your depth mind to become more active. You need to have the confidence that your unconscious mind will take over. Ideas often appear when you are involved in another activity, such as driving, sitting on a train or walking. Try to resist the temptation to start thinking consciously about the ideas.
that come to you in this way, and instead allow them to develop in their own time.

16 **Tolerate ambiguity and occasionally live with doubt and uncertainty.**
Successful creative thinkers are able to tolerate ambiguity, uncertainty, complexity and apparent disorder in their quest for a solution. It can be difficult to resist coming to a premature conclusion or solution. The challenge is to hold many ideas in your mind at once and to work with them to a satisfactory conclusion.

17 **Stimulate your own curiosity (in everything including travel) and the skills of observation, listening, reading and recording.**
Curiosity is the appetite of the intellect. Creative thinkers are naturally curious because they have a desire to learn, know and develop new ideas. Curiosity in creative thinking is a great motivator; it’s the thought of ‘I wonder what will happen next?’ That is the link between thinking and learning.

Travel can be a great mental stimulant, arousing a curiosity and interest in the world and other cultures. Experiencing other cultures can make you ‘wake up’ to the one you normally live in and put a different perspective on it.

Reading requires your mind to be imaginative and creative. Always stay alert when reading as books, newspapers and other matter are all sources of ideas, thoughts, facts and opinions, which, taken out of context may be relevant to your present or future thinking.
Good listening skills rely on a certain amount of humility – the understanding that we don’t know everything. Having an open mind and being curious when you are listening, allows you to really absorb what you are hearing without being critical and analytical. Make sure you fully understand what you are hearing before you analyse and evaluate. Don’t easily dismiss what may seem like useless information but be curious enough to see if you can develop it into something more.

**Remember**

Managers should remember that creativity should challenge the status quo to test continuously for improvements, because:

- a thing is not right because we do it
- a method is not good because we use it
- equipment is not the best because we own it.

**Decision-making and the creative thinker**

Decision-making is an attribute which is mastered by all successful creative thinkers. Many effective decisions have to be made throughout the creative process.

The effective thinker and decision maker is skilled in analysing, synthesising and valuing. He knows when and how to use his depth mind and he’s tuned in to his intuitive mind. His imagination can help to find new ways of approaching situations and problems. He is always open to new ideas, even if they come via unlikely analogies as his
span of relevance is wide. He has enough self awareness to know that others may have a greater specialised knowledge than he, and he is able to consult with them in the search for solutions and the truth.

To make an effective decision these six processes should be followed:
1. Define the objective
2. Gather sufficient information
3. Identify the options
4. Evaluate those options
5. Make the decision, choose the option to follow
6. Test its implementation.

The three essential skills of an effective decision-maker and creative thinker are:
1. analysing
2. synthesising
3. valuing.

Effective decisions result from thinking things through using the crucial elements of:
- establishing the facts
- considering all the options
- deciding on the course of action.

The truly effective creative thinker:
- has skills of analysis, synthesis and valuing
- is open to intuition
- has imagination
- is open to new ideas
• has a sense of humility – recognising that others may have better powers or knowledge and combining these with their own ideas.

Never make false assumptions or jump to conclusions. Don’t be prone to faulty reasoning or to not listening to others. Always operate in the context of facing reality and of seeking and speaking the truth.

The logical or rational creative thinker will follow this decision-making model:
Decision makers don’t always choose the optimum solution as they are affected by emotion, power, politics, the influences of other people and by their own values. Often a decision is a compromise between different courses of action, being one that:

- agrees to some extent with one’s own personal interests, needs or values
- meets the value standards of superiors
- is acceptable to those affected (by the decision and for carrying it out)
- looks reasonable
- has an escape element of self-justification if it all goes wrong.

*Clearly such approaches to decision-making must be removed from your approach!*  

Managers need to be prepared to make time to think creatively about decisions – to devote quality time to this crucial area of activity, because the *thought behind the solution is as important as the action itself.*
Key elements of creative thinking and decision-making

Analysis
The ability to break up the whole into more manageable parts, dissecting complex matters into simple elements.

An analytical mind can:
• establish the relationship between the parts and the whole
• find the root cause(s) of the problem
• identify the issue(s) at stake.

Analytical, logical thinking is the ability of being able to draw proper conclusions from the information available.

Analytical ability together with the knowledge of how to develop and use analytical techniques is not enough for real achievement as a creative thinker. You also need flair, perseverance and self-motivation to be really successful. Analysis plays an important role in problem solving. It helps to sift through facts and opinions, dissecting the problem into parts and moving you towards a solution to the problem. The hallmarks of an analytical mind are:
• simplicity,
• originality; and
• clarity.

Analytical ability can be improved by:
• working from first principles
• establishing the facts and separating them from opinions, assumptions or suppositions
• asking questions such as ‘When did the problem first arise?’ and considering Who, What, When, Why, Where and How
• constantly checking the logical steps which can undermine good reasoning
• thinking backwards from the desired outcome
• organising the facts
• seeing the problem as a solution in disguise.

Two other terms with regard to logical thinking are ‘inductive’ and ‘deductive’. These are both ways of inferring things: deduction is a means of drawing a particular inference from a general proposition, while induction is the forming of a generalisation from a number of particular instances.

To test your logical thinking ability, consider the following two scenarios:

1 A businessman on the way to a meeting has some time to kill. He is in a small town and decides to have his hair cut. The town has only two barbers, each with his own shop. The businessman looked through the window of one shop and saw that it was extremely untidy. The barber needed a shave, his clothes were unkempt and his hair was badly cut. The other shop was extremely tidy. The barber was freshly shaved, impeccably dressed and his hair was neatly trimmed. The businessman returned to the first shop for his haircut. Why?

2 Two trains are 100 miles apart. They are moving towards each other, one at 40mph and the other at 60mph. A plane flying backwards and forwards
between the two trains is travelling at 80mph. How far does the plane fly before the trains meet?

Don’t spend more than 10 minutes on each scenario then turn to the Appendix on page 97 for the answers.

Often the end result is clear, the problem is how to get there. Using your imagination to visualise the end result, work backwards logically to find out the solution. Using this method try to solve the following problem.

3 Sandra has to get her two babies, Jennifer and Carl, as well as her cat, out to the car. Because Sandra has a broken arm she can only carry one baby or the cat at a time. Neither child can be left alone with the cat. How does she get all three of them to the car in as few trips as possible?

The solution to this problem is in the Appendix on page 97.

Part of the process of logical thinking is re-arranging the available information. A problem is often a jumble of information that needs to be:
• Separated into its component parts
• Re-arranged or restructured

A problem is often a solution in disguise. Try sorting out the available information in a systematic way. Sometimes using a pen and paper as a tool is a great strategy. Consider the following scenario:

4 Louise, Donna and Jane live next door to each other. Donna has the flat in the middle. They work as a teacher, a TV presenter and a nurse, but not necessarily in that order. The TV presenter walks Jane’s dog when Jane is working late. The teacher taps on Louise’s wall when Louise’s music is too loud. What career does each woman have?

The solution to this problem is in the Appendix on page 97.

Logical thinking is only a small part of effective creative thinking. It can be very useful but be conscious not to over-analyse as it can lead to inactivity or ‘paralysis by analysis’.

Synthesis

Synthesis is the opposite to analysis, it is the ability to combine parts or elements to form a whole. ‘Holistic’ is a useful word to explain this approach. ‘Wholes’ are produced by grouping units together where it is difficult to analyse them into their parts without losing the wholeness. When thinking creatively, there is a need to be able to see the wood for the trees (holism) rather than just the trees (analysis).

The ability to be able to think about organisations and teams, opportunities and problems as wholes is extremely impor-
tant. In business, the whole is greater than the sum of the parts. Creative thinkers in business need to see the whole view to be able to yield solutions. It is not productive to see things just as a marketing problem or a production problem, for example. By deliberately refraining from analytical thinking beyond a certain point, synthesis will take over and the whole will take shape.

The Gestalt school of psychology bases itself on the following principles:
• the overall significance of behaviour rather than a mechanistic explanation
• the relationship between events, rather than just the events themselves
• events don’t happen in isolation, but in a context which gives them significance.

Managers without holistic minds tend to take a narrow view of problems, seeing them related only to a single function, e.g. ‘This is a Marketing problem’.

When we synthesise we are putting elements together to make a compound. This is how ideas can begin as seeds and grow inside our minds.

The idea of ideas growing can bring a reluctance to analyse ideas too early, but rather to let them develop before submitting them for criticism from others. By becoming more aware of holistic thinking and it’s importance you will be able to deliberately refrain from analysis and develop the skills to allow the whole to take shape in your mind.
Valuing

Valuing is the third essential skill in effective thinking and decision-making. To make decisions you must be able:

- to establish the true facts; and
- to know what to do.

Time should be taken to discover the true facts as this will make knowing what to do easier. In the process of establishing the truth we use the skill of valuing alongside analysis, synthesis, depth mind and intuition.

Another form of valuing is knowing who to trust and when to trust to get the truth. This is where educated intuition comes in. Questioning is a valid method of establishing the credentials of the adviser and the credibility of the advice. Experience will help you to recognise the people who:

- tell you what they think you want to hear
- express a view thinking it will agree with your own
- are watching their backs
- try to hide things.

Be scrupulous in establishing the truth as bad advisers may give you interpretations of the situation which are from their objective. They may give you information to help you follow a particular course of action which they want you to follow. Beware of inaccurate figures, errors in facts and assumptions as they will divert you from the truth. You should try to surround yourself with advisers you can trust, who are in touch with the reality around them and who are loyal to their commitment to truth. By the same means, be willing to admit when you are wrong, you will be setting a good example.