CIME Creativity & Innovation Toolkit

Package 2: Utilising Creative and Alternative Techniques

Harness the power of creativity and alternative thinking to solve problems, generate ideas, and make sound decisions for your business!





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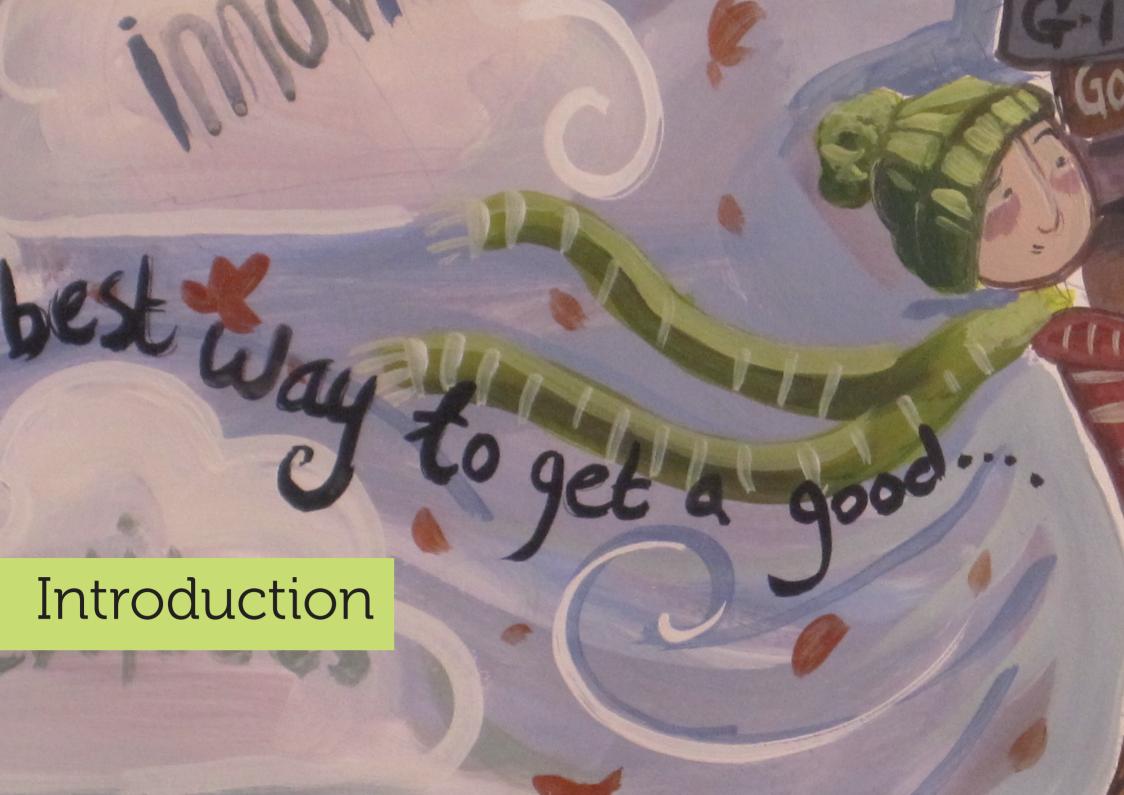


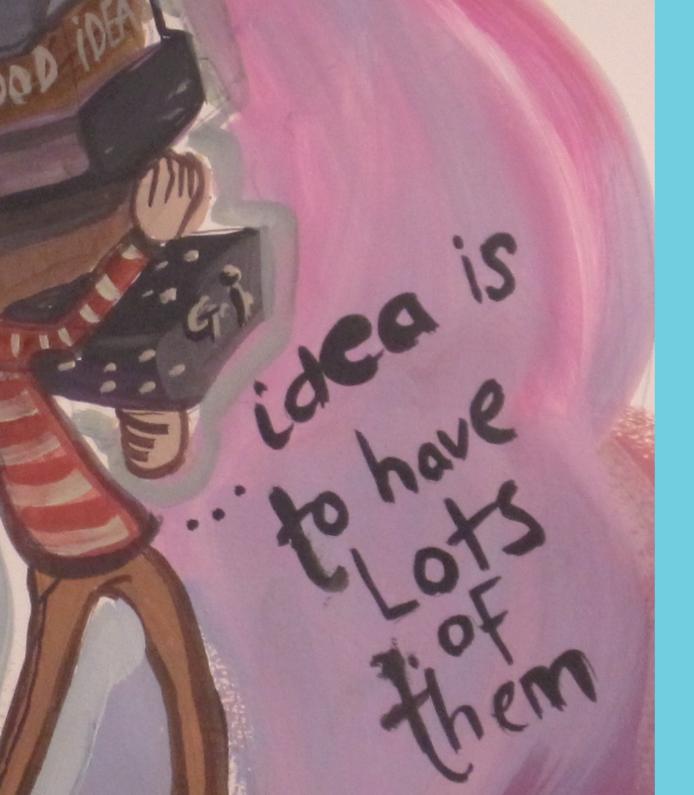


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This the second of a set of integrated modules that are targeted at assisting Small and Micro-Enterprises by harnessing the power of Creativity and Alternative Thinking. Readers will be introduced to a number of Creative and alternative techniques that can be used in all areas of business, not just generating ideas.

We will be showing you how to get to grips with Creative Techniques, how to select appropriate techniques to ensure success and encouraging you to create your own. Whether you wish to explore a business issue, generate ideas, adopt a different perspective, make better decisions or create a business plan we have something for you in our library of 24 techniques.

Using Creativity On Your Business Issues

Once again we should reiterate that the term 'Creative Problem Solving' does not necessarily imply that you have a business problem. It can be used where you may have a problem, but can also describe when you may have a baffling situation to explore, a tough decision to make or you may simply be looking for new opportunities. Shortly you will see why all of these things can be achieved using creative or alternative techniques.

2.1 The Creative Problem Solving Process

Many experts talk in terms of three main stages: an initial exploratory phase where one identifies the problem to work on and considers it from different angles; a second phase where one considers alternative ways of dealing with the problem; and a third phase where one works out the detailed implementation of a chosen way forward. Within each of these three phases you may find it helpful to encourage an imaginative phase where you consider different acts and possibilities, followed by an evaluative phase where these possibilities are

considered and a way forward is chosen. You can think of the problem-solving process as follows:

Stage 1: Explore problem

Open up (diverge): Explore different angles Close down (converge): Select key problem

Stage 2: Generate ideas

Open up (diverge): Consider alternatives Close down (converge): Select preferred option

Stage 3: Implement plan

Open up (diverge): Plan supporting action Close down (converge): Undertake action Since the whole process is itself an expansive opening out of new actions, it needs its own overall evaluation phase as well – in effect a fourth stage:

Stage 4: Evaluate

Open up (diverge): Monitor progress Close down (converge): Adapt action





How much time you spend on each phase depends on the nature of the problem; a problem you were unclear about probably warrants more time in the exploration stage, whereas something more straightforward may merit more time in the idea generation stage. If the issue is likely to generate conflict then the implementation stage is likely to be worth considerable attention.

The example given is very simple but it should be apparent to readers that an initial business issue as stated might not be the one that needs 'fixing'. For instance, a classic response to declining sales is to employ more sales people or sack the existing sales force, not actually find out why sales were declining in the first place.

Set out this way the procedure seems very rigid; in practice it is much more relaxed and iterative. If, for example, during the idea generation stage you suddenly realise that really some other problem is the one you should be addressing, go back to square one for another round of clarifying and exploring the nature of this problem; then return to generate and consider possible courses of action for this reformulated problem. Problem solving should be very practical and end up with a plan that feels

Example:

To explain the above process properly, let us consider a simple example. Mr Jones and his son run a family butchers shop in a medium sized town and trade is dropping off slowly but surely. What does Mr Jones do?

A business adviser may give Mr Jones a long list of things to do, one or two of which might affect the fortunes of his business but this is a little 'hit and miss' and it will cost him money in the short term. Mr Jones' son is a clever chap and gets his father to sit down and think of all the things that he needs to do to his shop such as give it a coat of paint, fix the display cabinets etc.

Once again this is less than satisfactory, and Mr Jones and his son have potentially wasted time generating ideas that may or may not work and will be less focused than those of the business adviser. Why is this? Nobody has actually identified why sales have been dropping off! So using our outline:

Stage 1: Explore problem of declining sales

Explore different angles – possibilities might include competition from supermarkets, town centre developments, local economic issues (unemployment), customer service, product range, shop location

Select key problem – which of the possibilities identified are the real causes? Which is the most important to work on right now? Let us pretend that competition from supermarkets is the biggest headache for Mr Jones.





Stage 2: Generate ideas to compete with supermarkets

Consider alternatives – provide a wider range, provide recipes, provide all of the ingredients for a meat-based dish, provide nutritional and dietary information, free local delivery, customer-friendly environment.

Select preferred option – Mr Jones is keen and thinks a better range of meat with recipe and nutritional information provided by Mrs Jones will be a hit

Stage 3: Expand product range

Plan supporting action – Jones Junior will spy on local supermarkets and report back. Mr Jones will change his offerings and Mrs Jones will provide new product information.

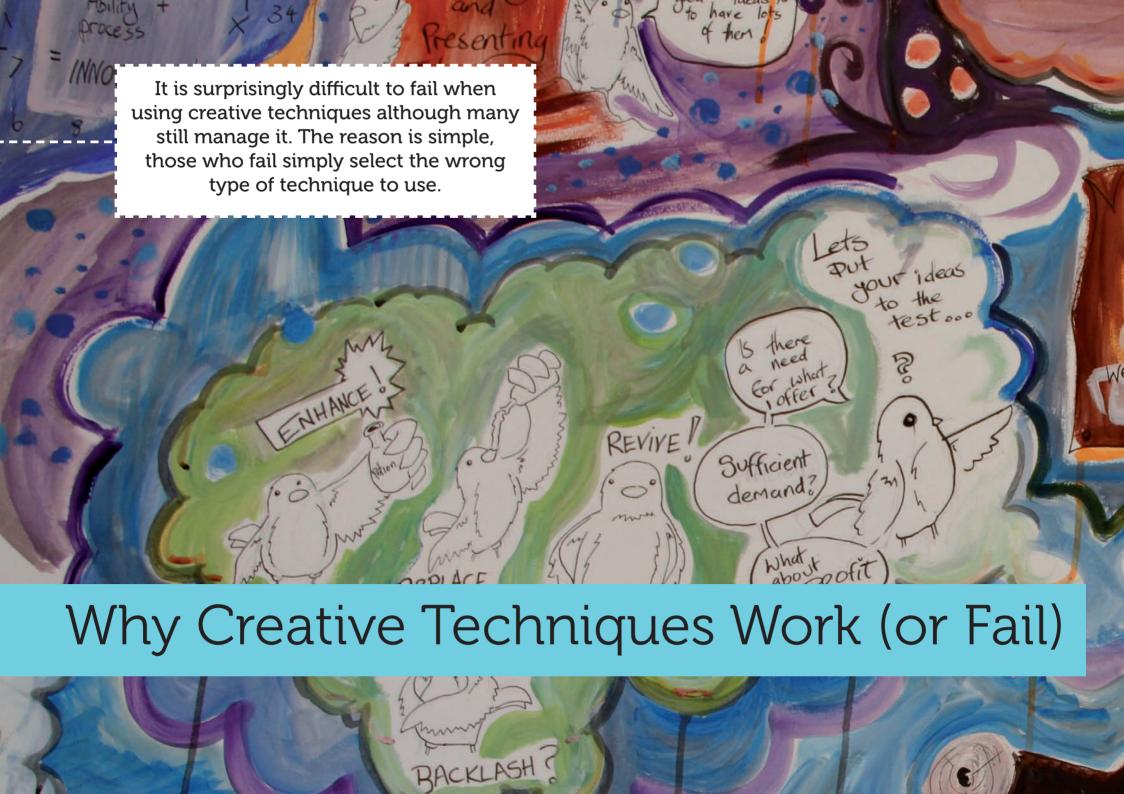
Undertake action – do the above, and monitor what actually happens. If there are any changes to make then change and monitor. If this works then pick something else for Stage 1 to work on.



appropriate and that the problem owner is willing to implement. If, after selecting a plan of action, you realise that you are not prepared to implement it, then treat that as a useful insight and go back and consider others until you find the one that you are most willing to implement.

One reason for problems is that people often think too narrowly; mental tramlines born of habits worn into the brain's patterns of thought over time. If you precede a closing down phase by an attempt to consider the problem, solution or plan of action from various perspectives you force the mind to go beyond its usual assumptions. From these different vantage points it may jump to a more appropriate response to the problem. The opening up phase in each stage may help people who are particularly prone to hasty evaluation of possibilities.

People prone to the opposite tendency of 'castles in the air' thinking may benefit from the discipline of the closing down phases. The action-planning phase often helps the vague-minded to commit themselves to a concrete action. As you get more practised you will speed up and become better able to judge which techniques to use when and the different stages and phases may become collapsed together. The procedure may eventually be replaced by a mental framework that serves the same purpose.







By and large, creative techniques work because our brains are incredibly good at making connections between seemingly unrelated items and because they never forget anything that we have seen or experienced (although they may have trouble with recall as we get older). We can also play some simple tricks on our minds to help them overcome some of the blockages that we put in the way.

A good example of this is the model of Left vs. Right Brain Thinking. It is not physiologically correct but it is still very useful. We think of the left side of our brain as being very logical and filtering ideas and the right side as being creative with no filtering mechanisms present. How is this useful, you may ask? Have you ever worked all day on a problem with no success, jumped in your car and driven home only to have the answer to your problem leap out at you whilst at a set or traffic lights? What has happened, according to our model, is that whilst at work you have introduced your logical left brain to the problem and then passed it to your creative right brain to work on because you needed your logical left brain to drive home. Because your right brain has no filters it has explored many more possible solutions for you!

You can also deliberately make use of this phenomenon. If you have something large and complicated to figure out, try to think about it first thing in the morning and then occupy yourself with something else for a while. You will be surprised (and amazed): Not only can your brain do this without you consciously thinking about it, it can playfully combine ideas and build on them once you have given it permission.

It is surprisingly difficult to fail when using creative techniques although many still manage it. The reason is simple, those who fail simply select the wrong type of technique to use. Previously we described the Creative Problem Solving process as a series of activities that alternate between being divergent (i.e. generating ideas) and convergent (i.e. selecting or focusing on a single idea). For each type of activity, we must select an appropriate technique.





Many readers will have experienced brainstorming executed incorrectly. It is common for a group of people to be summoned to a meeting room and for attendees to be asking to come up with ideas.

Brainstorming is a divergent technique and the first thing that we need to do in this instance is work out what the problem is, not create a long list of potential problems! In short, if you wish to diverge, pick a divergent technique and if you wish to converge, pick a convergent technique.

If you heed the above advice then you are sure to succeed, although when you are starting out some techniques may provide better results than others. After a while you will learn which work best for you and your business.

Selecting the Best Technique To Use

4.1 Classification of Techniques

As mentioned previously, techniques are usually classified according to the type of thinking that is required (divergent or convergent) as well as whether they are for solo or group use, planning or prioritising, reframing, or changing perspective and idea generation. In this guide we have tried to make choosing the right technique as simple as possible.

There are 24 techniques, which have been subdivided into four groups of six. Each group of six is intended for use in a particular type of situation, e.g. generating ideas. For each technique there is also a list of keywords that will help you further such as solo, exploring, reality check, planning.

4.2 Technique Selection

To select the most appropriate techniques we need to bear in mind the overall description of the Creative Problem Solving process and the type of activity that we wish to carry out (e.g. creating a plan) before referring to the techniques listed below. This is best illustrated once again using the example of Mr Jones and his butchers shop with declining sales.

Example:

As described above, Mr Jones and his son run a family butchers shop in a medium sized town and trade is dropping off slowly but surely. What does Mr Jones do? He has decided against taking the advice of a business adviser on the grounds that he did not really understand his business. Mr Jones and his son have just been introduced to Business Creativity and decide to give it a try. So how do they get on?

Stage 1: Explore the problem of declining sales

Explore different angles – they decide to generate a number of reasons why sales might have declined using Reverse Brainstorming, an easy option as they really are trying to work out why sales could drop to nothing. Whilst having a tea break they came up with around 30 issues that could be causing sales to decline.

Select key problem – Mr Jones did not want to try to fix 30 things at once but his son reminded him that these were only potential issues, so they should figure out if a) they were real and b) serious. They decided to use Bullet Proofing and categorise the potential issues in terms of serious/not serious (if it occurred) and the probability of the issue arising. They further streamlined their thinking to equate seriousness to financial cost and probability to frequency of occurrence. This led the Jones duo to create a small group of serious problems and led them to conclude that the major (but not the only) reason for their declining sales was the newly opened local supermarket.

Stage 2: Generate ideas to compete with supermarkets

Consider alternatives – it is here that Mr Jones and his son had their eureka moment. They decided to use the Morphological Matrix as an idea-generating technique. To do this they decided to categorise some new offerings in terms of meat, price, target purchaser and 'extras'. For each of these categories they listed 10 ideas – meat (pork, beef, lamb, chicken, ostrich, venison ...), price (very cheap, cheap, moderate, luxury ...), target purchaser (student, family, pensioner, restaurant ...), extras (wine, recipes, gravy, vegetables ...). As you will see later from the description of the Morphological Matrix, this has the possibility of generating 10,000 somewhat crazy ideas. This is exactly what they did using Mr Jones' son's computer.

Select preferred option – Mr Jones once again decides to use Bullet Proofing and chooses his two criteria as 'hard for a supermarket to imitate' and 'positive impact on sales'. This gives him a number of things that the local supermarket will find hard to copy and which will be profitable. Included in his list are a 'meal in a box' for young couples to include meat, vegetables, herbs and spices and a bottle of wine as well as cooking instructions and low fat products for the figure conscious. He is also going to trial 'meat on wheels' his new delivery system.

Stage 3: Expand product range

Plan supporting action – they create an outline plan using a storyboard to include the monitoring of a) the local supermarket's response, b) effect on their trade, c) comments from customers

Undertake action – do the above, and amend the storyboard plan as necessary. Also plan to try more from the results of the Morphological Matrix to confuse the supermarket.

Retrospectively, this seems obvious, but what would you have done with just traditional thinking at your fingertips? It would be so easy to try a number of (obvious) things with no logical reasoning and it would have been impossible to generate a large number of ideas with just two people!

4.3 Creating Your Own Techniques

As we mentioned previously, when you become experienced at using these techniques you will find your favourites and then start to change them slightly, effectively creating your own.

There are a number of techniques known as 'whole process' techniques, which we have not included here but which you will discover by accident. Mr Jones and his son found that the Morphological Matrix followed by Bullet Proofing worked really well, effectively sticking two techniques together since the output of one stage of the process was fed straight into the next. If you take this a stage further and stick lots of techniques together then you have a 'whole process' of your own.

The one thing to remember is always to use the most appropriate technique for what you are trying to achieve.



Creative Techniques for Use In Your Business



The following techniques can all be used in a business context, in particular they can all be used to great effect within small or micro enterprises.

5.1 Exploring/Defining Techniques5.1.1 Why?

Keywords: Solo, Group, Exploring, Defining, Convergent

One way of probing into a problem area is simply to ask repeatedly: 'Why does X happen, and why do the things that cause X happen themselves?' Or you can look at consequences rather than causes by asking: 'Why is this a problem for you?' or simply: 'So what?' Repeated use of such questions usually produces deeper thought about a topic, pushing the boundaries wider and/or into areas of personal values and ethics.

There are two important variants for either cause or consequence questions:

'And why else does X happen (why else is it a problem)?' This tries to extend the range of immediate causes or consequences.

'And why does X1 happen (why is X1 a problem for you)?' where X1 is whatever was the cause of X. This probes for causes or consequences at one remove.

You can repeat these two types of questions for any of the causes, the causes of causes, etc. However, five or ten questions are often sufficient to get some feel for the network of causes or consequences involved, and to gently push the problem owner into considering assumptions and connections that would not have been examined otherwise.

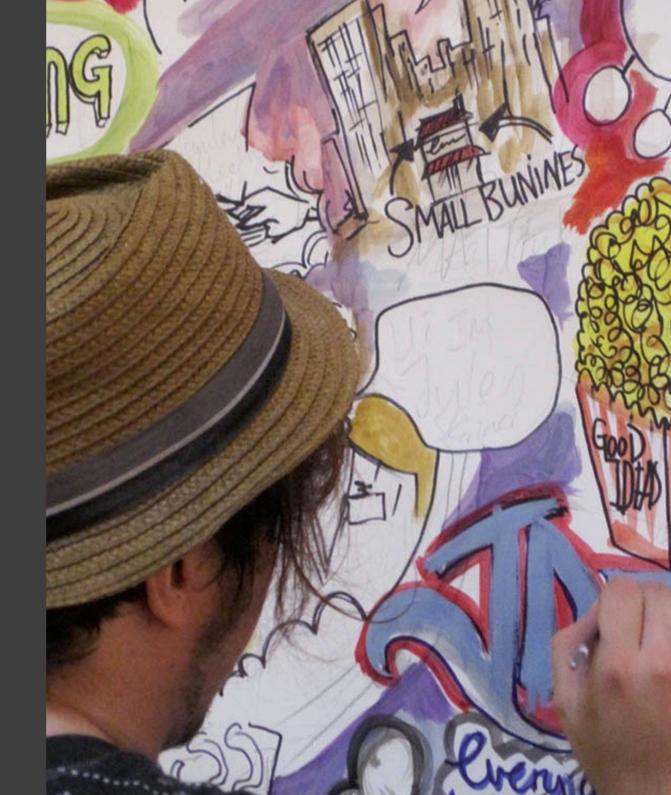
5.1.2 Working With Aliens

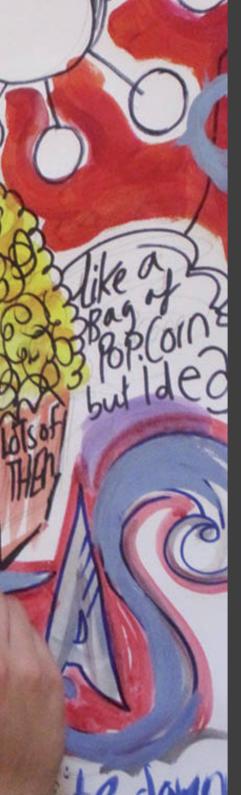
Keywords: Solo, Group, Exploring, Divergent
This technique is one of a series in which
random stimuli are used and alternative
viewpoints are adopted. It works best with welldefined problems or where new products or
services are being considered.

To start, define the problem or situation as best you can and brief those who are taking part. A group of half a dozen or so is ideal.

Imagine that an alien spaceship has landed on earth and the aliens are looking at your problem or the object that you have described. Next, try to imagine what sort of questions the aliens would be asking, what would they be curious about? Many of the checklist techniques can provide some guidance here. A possible list could be:

- What is the purpose of this?
- How does it work?
- Why does it have to be this way?
- Why do these earthlings use these materials?
- Is it useful to me?
- Why does this matter, and to whom?
- Is it worth any money?
- Is there any other value?
- Could it be used for...?





These (and other questions) should be asked with childlike innocence, i.e. assume no familiarity with earthly concepts. The questions may throw up some ideas which indicate that the original starting point was flawed.

If this is the case then revisit the problem definition stage of the Creative Problem Solving process. If some common themes emerge then record these and use them as random stimuli for further excursions, or use a form of association to group some of themes to see if they suggest further options, choices or ideas.

5.1.3 Boundary Relaxation

Keywords: Solo, Group, Exploring, Defining, Divergent A problem boundary is the imaginary line between what a problem is, must be, should be, or could be, and what it isn't, mustn't be, shouldn't be, or couldn't be.

This approach works by creating awareness of the different components of the boundary and then seeing how far they can be loosened. Here are some ways of making a boundary more visible.

NOT-ing the problem statement. Take each significant term in a problem statement and define it more clearly by saying what it is not, for example: How to develop (not replace, alter, reduce...)

the motorway (not other roads, airlines, ships...)
network (not piecemeal)
to allow for (not compel)
the gradual (neither imperceptible nor rapid)
replacement (not augmentation)
of rail (not air, ships...)
transport (not pleasure use, prestige use)

Boundary conditions not mentioned in the problem statement may often be found by looking elsewhere, e.g. budgets, policy statements, market analyses, and by asking around. Sometimes you may need to read between the lines

Once a boundary feature has been identified clearly, then it is usually relatively simple to ask yourself and/or others involved:

- Would it make the problem any easier to solve if this part of the boundary could be altered in some way?
- If so, under what circumstances could it be altered or ignored?

It may be easier to get temporary leeway around a boundary by discreetly 'bending' it and making sure nothing goes wrong, than by trying to get formal permission to alter it. Many are familiar with the saying, 'Remember it is easier to ask for forgiveness than for permission.'

5.1.4 Speed Storywriting

Keywords: Group, Exploring, Generating, Divergent
This is a little like the well-known game of
'consequences'. Participants should be divided into
groups of not less than five and for ease of
facilitation should be arranged into something that
approximates to a circle.

Prior to the exercise the facilitator must prepare a sheet for each participant that contains five blank sections (of approximately 10-12 lines) with the following headings:

- Describe the situation
- What happened?
- What is the immediate result and impact?
- What is the wider outcome?
- What is the learning/moral of this story?

If you wish to explore a particular situation then you can start by putting a sentence or two in the first section so that everyone starts with the same 'story'. Examples of possible situations are:

- You are about to leave work to go home and your least favourite person approaches you and begins to talk to you and...
- You suspect that your partner has been having an affair. You enter an expensive restaurant and

see your partner there with a business associate of the opposite sex. You...

Every person starts by completing section 1 and then after 2 or 3 minutes passes their sheet to the person on their left so that the sheets pass anti-clockwise around the group. Each person then completes section 2 and so on. In this way each person starts one story and then writes one fifth of someone else's.

As the exercise progresses, the time to complete each section will increase as participants have to read more before they can continue the story. When all five sections are complete, the stories should be returned to the people who started them. This exercise will always produce some humorous stories and provide some valuable insights into the chosen situation used to start the process. It is also a good demonstration of leading people away from their own mind-set and of using building techniques where everyone can contribute.

5.1.5 Movie Screen

Keywords: Solo, Group, Exploring, Defining, Convergent The basic idea here is to imagine a screen in front of you with your problem, rather like a film, showing on it. You can think of the screen as being 5 to 10 metres (15 to 30 feet) in front of you. First imagine





your situation, particular problem or issue as it is now, on the screen in front of you. Notice all the people and places involved, see how you behave and react, and notice your feelings and the attitudes of those around you. Then imagine that screen being pushed to one side and in its place a picture of the solution to your problem.

Try to keep the solution within the bounds of reality. Once again, notice all the people there, how are they behaving, notice how you are, what you are doing and how you are feeling.

Mentally get up out of your seat and walk forward into the screen, into your screen self, and really feel what it will be like in the future, when this matter is cleared up. Enjoy the feeling, notice what it is like and take in all that is happening in as much detail as you can. For this to work you need to identify with your screen self as fully as possible.

Then when you have done this for a while and really know what it will be like, mentally leave the screen and back away towards your seat and sit down. As you do, get the film on your screen to start to wind backwards showing you how you got from your position now to the position in the future that you have been enjoying. How you did this often comes as a surprise. Attend

hard as the film unwinds before you and what has to be done becomes clear. Once it is back at the beginning commit your intention to take this path. This commitment is as important as the rest.

5.1.6 Add-Subtract-Change

Keywords: Solo, Group, Exploring, Generating, Divergent

A clue to this lies in the title. If you have a problem, situation, product or challenge then simply ask the following questions:

- What could we add that would make a difference to us/other stakeholders?
- What could we subtract or take away that would make a difference?
- What could we change that would have a significant impact?

This is a little like the 'list & twist' exercise described later in this module but it addresses some fundamental questions about whether we have captured the essence of the situation, which factors are important and which are irrelevant. It is also likely to stimulate a dialogue about why certain factors have been included/excluded and also the values of stakeholder groups. This technique is not as simple as it first appears.

5.2 Generating Ideas

5.2.1 Reverse Brainstorming

Keywords: Solo, Group, Exploring, Generating, Divergent

Reverse (or negative) brainstorming is an ideal technique for people in businesses of all sizes, either on their own or with colleagues. It can also be slotted into short periods of time such as coffee breaks, bus or train journeys or while waiting for someone. And if your board meeting drags on you can always let your mind wander a little!

To start with, select an issue or topic about which you need to generate ideas. The fact that some of you will be more familiar with the topic than others in a group situation doesn't matter for this exercise. Everybody will get benefit from trying out the technique and swapping notes afterwards.

The topic should have a positive and possibility-focused phrasing, such as 'How can we gain/improve/create/diversify/build...' Make sure that everyone in the group understands the question or statement.

If you're in a group, nominate someone to record ideas on a flip-chart. If you are on your own then make sure you have a note pad handy.

Then (and only then) take the topic and reverse it.

For example, if your topic is 'How to improve sales in the company?', reverse it to 'How could we drive down sales as low as they could possibly go?'

Write down this reverse statement. Brainstorm for as many ideas as you can (about the reverse statement, forget the original topic for now) and record them. This is where human nature takes over; we are more likely to record negative ideas than positive ones.

Note your ideas verbatim. Don't judge or filter ideas during idea generation. Keep it quick and always include the unlikely, the weird and the apparently impossible.

Next, take those ideas and reverse them again. This can be done:

- Directly, so if one had been, say 'everybody stopped talking', the reverse might be 'everybody talks much more' which might lead to ideas about chat rooms, coffee knowledge sharing hours or skill sharing sessions.
- By extracting a principle or meaning. So 'everybody stopped talking' – interpreted as a restriction of rights – when reversed could mean ensuring that there is a policy for appropriate communication with ethnic groups within the company.

Topics that you might like to investigate are:

- How can I drive down sales?
- How can I make my production line less efficient?
- How can I waste as much time as possible during the day?





Even newcomers to this type of thinking should be able to generate 10 to 20 good ideas in around 20 minutes.

5.2.2 List & Twist

Keywords: Solo, Group, Exploring, Generating, Divergent

If you are trying to generate ideas for a new product or service that might be based (loosely) on an existing idea then why not try this technique. Simply take the existing idea and apply some or all of the following to it and see what happens. Then perhaps use another technique to refine or test out the idea.

For instance, if you already have a book the idea of adding a smell might lead to a 'scratch and sniff' book. Try them and see.

Add a step
Eliminate a step
Rearrange the steps
Outsource a step
Add an ingredient
Complicate it
Combine ingredients
Make it bigger
Make it smaller
Make it more extreme
Substitute materials
Make it less extreme
Make it self-service
Make it more reliable

Find other uses
Find other customers
Improve the quality
Decrease the quality
Make it easier
Eliminate something
Align with other product
Align with other service
Licence
Make it more expensive
Find new distribution
Make it less expensive
Combine other processes
Make it educational

Slow down
Add sound
Add motion
Add texture
Change packaging
Automate parts
De-automate parts
Standardise
Speed it up
Put some fun in it
Change the state
Divide it
Change the shape
Bundle it

You can probably think of even more qualities to use in your twisting process:

Make it friendly
Make it an experience
Make it biodegradable
Add more service
Make it look old
Celebrity connection
Flatten it
Purify it

Add beauty
Make it exclusive
Make it interactive
Make it a game
Make it look new
Reverse the concept
Make it wearable
Add nostalgia

Add information
Add or change colour
Let customer finish
Put a story with it
Make it edible
Turn it upside down
Make it sticky
Add smell







5.2.3 Morphological Matrix

Keywords: Solo, Group, Generating, Divergent
This is a form of random stimulation that can be used solo or in groups. It is ideal for generating ideas when you have an idea about WHAT you wish to do but not HOW you might go about doing it. This is best explained by example rather than trying to describe the technique in detail.

If you were a TV producer you might ask the question, 'How might we go about creating a new soap opera?' To use this technique in such a case, first create a table with ten rows labelled 0-9 and four columns initially numbered 1-4.

Next perform the following steps:

- Label each column with a different parameter or characteristic of the problem or task, e.g. for our example column 1 could be target audience, column 2 - setting, column 3 theme, column 4 - suggested title.
- For column 1 generate varied and/or unusual ideas and fill the column (you now have ten wacky suggestions for target audience).
- Repeat for column 2, column 3 and column 4.
 Try not to refer to adjacent columns when filling a column.

- Randomly select four numbers in the range
 0 9. To do this you could:
 - Turn over 2 dominoes, 2 numbers on each end gives four numbers
 - Use the last four digits of your telephone number
 - Use the last four digits of your National Insurance number
 - Use the day and month of your birthday
- Use the four numbers to generate combinations by using each number in turn as an index into one of the columns. Each set of four random numbers thus selects a target audience, setting, theme and title. Record your combination.
- Repeat the previous step as many times as you wish (and keep recording the results). Note that this simple table can create 10,000 different combinations!
- When you have sufficient combinations, choose one (or more if you have time) to examine in greater detail. You might use them as generated or they might suggest something else to you.

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Keywords: Solo, Group, Generating, Divergent
This is an idea-generation tool that can be used either solo or in groups. It is best used for generating ideas about something that you wish to modify in some way such as upgrade or enhance a current product or service. You need to create a problem statement, e.g. How might we make our car go faster?

SCAMPER is an acronym as defined below. Select a letter from the list and read its trigger word and associated questions. Ask yourself what new ideas do this word and questions suggest or try to associate the question and trigger word with your original statement. Record your ideas and then repeat this as many times as you want, each time picking a new letter from the SCAMPER list. Note you do not have to use the letters in sequence.

Substitute: what might you take away and put back in its place? What might you substitute, replace, exchange. Think of who else, what else, other ingredients, other material, different approach?

Combine: what two or more things might you put together? What could you combine this with, what sort of blend or alloy, assortment or ensemble?

Adapt: how might you change something to solve the problem? What could you do differently, what else is similar, have we done this before, what can I copy?

Modify, magnify, minify: what can be made bigger or smaller? How would things change if the object were made bigger or smaller? What could be increased or reduced in size or which attributes could be enhanced or diminished?

Put to other uses: what might be used in a different way? Can this be used for different purposes, do its properties suggest other uses, do its properties such as size or weight suggest other uses, and can it be used in another context?

Eliminate: what might you get rid of? Can you leave something out, condense or concentrate, remove parts, make lighter?

Rearrange or reverse: what might you mix up or move around? Can you reverse roles, turn upside down (backwards or inside out), change perspective, alter timing, and change objectives?

Your recorded ideas may themselves be combined or investigated further if necessary. Note these may not be sensible ideas (although they could be) and may just suggest ways forward for you or your business.





5.2.5 Drawing

Keywords: Solo, Group, Generating, Reframing, Exploring, Divergent

Freehand expressive drawing often helps to capture intuitive reactions that can't yet be put into words, and may often contain meanings that were not consciously realised when it was drawn, except that it 'felt right'. Drawing can be more acceptable than imagery work, and is usually felt to be 'safer'. If you have been working with imagery, drawing can help to capture it.

Drawing to evoke personal insights

Setting the frame. After deep relaxation or contemplation when your intuitive self has been working on a problem, ask it for symbols, scenes or images representing your situation. Ask: What is the current state?, knowing you don't need a definitive answer immediately.

Expressing the image. Draw on a large piece of paper, using many colours. Suspend judgement. Let images flow without conscious direction, as if the items on paper were telling you how they wanted to be. It may help to use your 'opposite' hand.

Associating with words. Fill in the first word that comes to mind for each of the symbols in your

drawing. Write a paragraph combining all the words, and expand this in a free flow of thoughts and feelings. Use the results as glimpses of your subconscious impressions that you can always modify if you want.

Drawing to establish an evocative theme for a meeting

Someone creates a thematic image some days before the meeting.

At the meeting, the image is displayed beside the agenda, prompting comments about the meeting's purpose.

This usually elicits energising feelings about principles and values.

Recording ideas on 'rich pictures'

Instead of capturing ideas as a written list, try capturing them pictorially, on a large wall chart or 'rich picture'. For many of us, sketching ideas is closer to how our thoughts grow naturally. Later, if necessary (e.g. to produce a written report), this pictorial outline can be translated into the traditional linear list.

5.2.6 Super Heroes

Keywords: Solo, Group, Exploring, Divergent
This technique is a fantasy-based version of
Rolestorming. Participants pretend to be a fictional (or
real) super hero (Superman, the Incredible Hulk,
James Bond, Wonder Woman, Sherlock Holmes, the
Witch of the North, the Mask, etc.) and use their 'super'
characteristics to trigger ideas. It works like this:

1. In advance:

- Prepare a pack of descriptions of super hero characters. Each description gives their name, a picture, a list of their powers and weaknesses, background on how they got their powers, etc.
- If possible, collect a few costume props for each super hero, or at least a suitable sign or badge labelled with the super hero's name.
- 2. The problem is displayed and discussed to ensure that everyone understands it. If you wish, you could use brainstorming or brainwriting to 'purge' the easily accessible ideas.
- **3.** Each group member then selects a super hero (either from the prepared set, or one of their own choice), makes sure that they know this hero's characteristics, and if possible chooses appropriate costume, props, badge, etc.





4. The characters are then used as the basis of an Excursion. Participants can either get into role ('I am Superman; I will fly to your rescue, and am freezing the opposition by blowing my super-cold breath on them').

Or a less extrovert group might prefer a more descriptive approach, e.g. one member describes their character's special powers, abilities, vulnerabilities, habits, etc. in as much detail as they can, and all group members generate ideas by linking this description back to the problem, either by asking, for instance, 'How would Sherlock Holmes solve this problem?'. Either way, the super hero solutions are adapted to be suitable for ordinary mortals, or force-fitted back to the problem: 'Sherlock Holmes played the violin and took opiates; what solutions to our problem does that suggest?'

Because of the importance of lively, highenergy interaction, it may be best for ideas to be contributed orally rather than in written form, though this will introduce some group pressures. **5.** Repeat Step 4 for all members. When you have sufficient ideas, evaluate them as usual.

This approach has several advantages:

- It is good for warming-up a group, and creating an atmosphere of light-hearted fun in which energy is high and fantasy and metaphor are acceptable. Being in role gives permission to do things you might normally feel uncomfortable about.
- Implicit in all super heroes are skills and capacities that break the bounds of normal behaviour and hence go beyond the underlying norms and assumptions that we normally live within. It is therefore similar to other boundary-stretching techniques such as Exaggeration or Reversals.

Super hero stories have strong elements of wishfulfilment, and can therefore help to surface wishes that we normally do not articulate.

• It is a form of idea-generating Excursion.

Obviously, it is not suitable for very serious or introverted groups, or low trust conditions.

5.3 Changing Perspective / Reframing / Clarification

5.3.1 Exaggeration

Keywords: Solo, Group, Exploring, Reframing, Generating, Divergent

Magnify (or stretch) and minify (or compress) are two idea-generating transformations which are both forms of exaggeration.

Here are some forms of exaggeration illustrated for an example problem:

I need a lot of capacity in my Reprographic Department to cope with a few key peak loads, but this means that for much of the time much of it is idle:

Forms of exaggeration	Examp
Exaggerate upwards	I have a
(magnify)	photoc
Exaggerate downwards	My pho
(minify)	barely ι
Exaggerate scope	The wh
(invade context)	under-ı
Exaggerate significance	Our ove
(aggrandise)	nationa
Exaggerate selectively	Reprog
(caricature)	Home!

Examples

I have a million
photocopiers standing idle
My photocopiers are
barely used at all
The whole organisation is
under-used
Our over-capacity is a
national scandal
Reprographics Rest

Exaggeration works because we often have mindsets related to the scale of a problem. So there may be types of action that are acceptable in a crisis but not in a lesser problem, or ways of living with trivial problems that you don't consider when faced with a more serious problem that 'obviously' needs a 'real' solution. It is therefore worth testing your unspoken assumptions about the scale of the problem by thinking about what would be appropriate if the problem were of a different order of magnitude.

Sometimes these exaggerated solutions can in fact be applied directly. More often, they are indeed inappropriate as they stand, but may suggest other ideas that would be acceptable. The same principle can also be applied to building on ideas for solutions. Suppose you are looking for ways of preventing vandalism by young teenagers, and someone suggests: 'Keep them in after school.'

You could try building on this idea by exaggerating it in various ways. For example, magnifying it to 'Keep them in permanently' might suggest giving them a permanent role (e.g. school monitor) that would make vandalism more difficult. Minimising it to 'Gentle restraint after school' might lead to ideas such as devising an after-school club that the teenagers would really enjoy.





5.3.2 Metaphor

Keywords: Solo, Group, Exploring, Reframing, Divergent

Metaphor can be used in a number of different ways.

If you are examining a problem and are stuck on how to tackle it then try to create a metaphor. We often use the phrase that something is like 'wading through treacle'. Think of something a bit more specific than this – your problems with work colleagues may conjure up an image of a wrestling match!

Next examine your metaphor, a piece at a time, and see if selecting and changing any aspect of it gives you ideas that can be transferred across to your problem. The wrestling metaphor may result in the idea of a break between rounds – perhaps a reference to negotiation or arbitration in real life.

When selecting metaphors, there are two main types. Using an inanimate object without any action or movement can be useful when tackling deep-seated problems as it is less likely to result in going off at a tangent in a group situation. A metaphor involving movement and action can be used to create ideas and is very similar to random stimulation in this respect. If, for instance, your metaphor is a fairground then exploring the myriad of activities that could occur should give you some brilliant ideas and situations to explore.

5.3.3 Multiple Redefinition

Keywords: Solo, Group, Exploring, Reframing, Divergent

In open-ended problems the solver is most unlikely to hit on a satisfactory description at the outset. By definition, the boundaries are fuzzy and different stakeholders may have different boundary perceptions. It is therefore very common to find yourself redefining the problem after starting work on it.

Many redefinition techniques are available but this is designed to help users develop imaginative redefinitions via a set of questions that take you systematically through several different mental modes: empathic, analytical, motivational, magical, metaphorical and off-beat.

- 1. Write down on a piece of paper an open-ended problem that is important to you and for which you would like some answers that could lead to action. Take as long or as short a time as you like to do this.
- 2. Again, taking your own time, complete the following statements with reference to your chosen problem. If you cannot think of anything to write for a particular statement

- move on to the next statement.
- There is usually more than one way of looking at problems. You could also define this one as...
- ...but the main point of the problem is...
- What I would really like to do is...
- If I could break all laws of reality (physical, Social, etc.) I would try to solve it by...
- The problem put in another way could be likened to...
- Another, even stranger, way of looking at it might be...
- **3.** Now return to your original definition in Step 1. Write down whether any of the redefinitions have helped you see the problem in a different way.

It is sometimes helpful to take a break between Steps 2 and 3 to allow time for incubation.





5.3.4 Walking With Moccasins

Keywords: Group, Exploring, Reframing Literally, what it is like to 'Walk in someone's footsteps'?

Experience part of an Amerindian route to becoming a brave and understand how someone else sees, hears and feels the world. Become more aware of how you see, hear, feel.

This works in groups of three. Use it to provide some stimulation to a stale situation or to help people within a group to gain insight into other people's perspectives.

One member takes the role of the experienced brave and goes out for a walk for about 15 to 20 minutes. Whilst walking, s/he must describe what s/he sees, hears and feels. The experience of having to do this brings what your conscious mind normally ignores into the forefront of your mind. It can tell you much about what you are like, and how you relate to the world you live in.

The second member – the trainee – follows in the footsteps (walks in the moccasins) of the one in front. The task is twofold. (a) Pay attention to what is said, and see/hear/feel as your leader does, (b) Attempt to adopt a similar posture, facial

expression etc. to the person you are following. Throughout, keep silent.

The third member acts as the timekeeper and as the observer. In observer role, watch the other two participants and tell the follower anything they can do to match the leader more closely – stance, gait, body language, facial expression, etc. You are also responsible for safety (e.g. the leader may be able to cross a road safely, but can the follower?)

In the Amerindian context, the brave may be followed for a complete lunar cycle (28 days) with the trainee ending up feeling and thinking like a brave.

In this context, debrief, with each of you in turn describing the experience, how it was for you, and what you have learnt from it about yourself and either of the other two participants.

You might notice things like whether someone notices more the big picture or the small detail, the type of sounds they hear, their attitude of mind, and the sort of things they think to themselves. Sometimes this can be quite a surprise, and it certainly helps to understand how we differ from each other.

5.3.5 Changing Attributes

Keywords: Solo, Group, Exploring, Reframing, Generating, Divergent

This is a very early creativity technique that takes an existing product or system, breaks it into parts, identifies various ways of achieving each part, and then recombines these to identify new forms of the product or system; similar to the classic children's game called 'Heads, bodies and legs'.

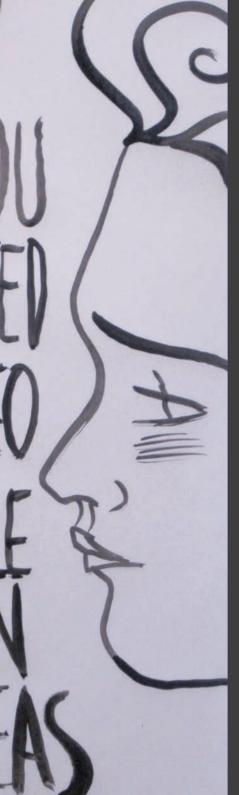
A new kind of toothbrush or project management method probably has much the same major functional elements as any other kind of toothbrush or project management method, but with some important differences in the way the elements are achieved or put together.

So to generate a new way of doing something, you could list all the key attributes of current approaches, and try to improve on some of them.

So:

- **1.** Identify the product or process you are dissatisfied with or wish to improve.
- 2. List its attributes. For a simple physical object like a toothbrush, this might include name, parts, functions, methods of use, target market, materials, shape, colours, textures, etc. A toothbrush for small children might end up with a table like this:
 - Name: Toothbrush
 - Parts: Handle, neck, head, bristles, hole, cartoon character
 - Functions: Remove trapped food particles; polishing teeth; massaging gums; attracting small children to use it
 - And so on
- **3.** Choose, say, seven or eight of these attributes that seem particularly interesting or important.
- **4.** Identify alternative ways to achieve each attribute (e.g. different ways of making a handle, or different ways of appealing to small children), either by conventional enquiry, or via any idea-generating technique, including use of analogies, free association or any building technique.





5. Combine one or more of these alternative ways of achieving the required attributes and see if you can come up with a new approach to the product or process you were working on.

Using randomly chosen combinations to stimulate ideas. If you prefer a more mechanical and less intuitive way of using this array of alternatives, you could generate provocative combinations by working through each attribute in turn and picking one of the ways of achieving that attribute at random (e.g. with dice). For instance, this might give you a rather weird toothbrush with a wooden handle, designer logo, plastic neck, large head, metal bristles, etc.!

You can then use this chimera either as a random stimulus to trigger more ideas or you can attempt a form of constructive evaluation by identifying what would be good about it, and what problems it would create (e.g. benefits, potentials and concerns or receptivity to ideas). This process of generating random combinations and then using them to stimulate ideas can be repeated ad infinitum!

5.3.6 Homing In

Keywords: Group, Exploring, Reframing, Defining, Convergent

What people say often gives a very incomplete picture of what they mean – and conversely parts of their story may be missing without them realising it. Clarifying it and homing in on the real meaning will help communication to others, and will often unlock problems and help the problem owner as well

Some common forms of language fuzziness are listed below, together with some questions for clarifying them. The questions call for specific answers, not only clarifying the speaker's own thinking, but also preventing questioners imposing their own (possibly incorrect) interpretations on it.

Notice that these are powerful questions, and used insensitively they can feel like interrogation rather than help!

Deletion. Material has been completely left out of the sentence.

I'm inadequate. To do what?

My thinking is better. About what?

Better than what?

Referential index deletion. A person, place or thing is introduced into the sentence but not specified.

Things get me down. What things?

Something should be done. What should be done?

Unspecified verbs. The verb is introduced but is not clarified.

I can deal with it. How, specifically?
I'm stuck. How are you stuck?

Nominalisations. Abstract nouns like pride, respect, love, confidence, are introduced. Though apparently important to the speaker, they do not have fixed, clear meanings.

There is no respect here. Who is not respecting

whom?

Knowledge is most important. Who knowing what?

Modal operators. Use of limiting words like can't and must.

I can't do anything right. What prevents you?

You must go. What might happen if

I don't?

Lost performatives. A 'should' or 'must' statement that doesn't state where its authority comes from, e.g. 'People should know better.' (Who, exactly, says they should?)

Generalisations and universal quantifiers.

Associating a whole class of experience with the same meaning, e.g. Staplers never work!, I'll never accept another sales trip again!, Everyone hates me.

Presuppositions. Elements in the statement that must have some existence for the statement to be true or valid, e.g. 'The manager tried to lie to me again' presupposes a manager and past lying. (Exactly when and in what circumstances did the manager lie to you in the past?)

Causal modelling. Any cause–effect statement that will link two or more situations in a cause–effect fashion, e.g. 'The printer breakdown was the reason for me being late with the draft.' (Is this the only possible explanation?)

Mind reading. The speaker claims to be privy to the internal states of others, e.g. 'I know what you are thinking', 'I think he is doing that because he wants the contract.' (What is the person actually thinking or wanting?)





5.4 Focusing/Decision Making/Planning5.4.1 Bullet Proofing

Keywords: Solo, Group, Defining, Convergent
It can be important to identify the areas where your plan might be especially vulnerable. What might go wrong? What are some of the difficulties that might arise? What's the worst imaginable thing that could happen?

This approach is a simpler version of a technique often known as 'Potential Problem Analysis'. It also has some elements of negative brainstorming. 'What might happen if...?' is a useful question for exploring possible challenges.

Brainstorm around questions such as: 'What might happen if...?' to locate areas in your plan of action that might cause problems that have not yet been considered.

Place each area identified in a table such as the one below, showing how likely the event is to occur and if it did occur, how serious it would be for your plan. Your greatest concerns will probably be towards the top right of the table – major problems that are very likely to happen. If there are a significant number, you may first need to prioritise them so that you can focus your effort on the most important.

Use any suitable problem-solving method to work out ways of dealing with them.

Necessary though this kind of exercise is, looking on the black side can lower your spirits! If you feel in need of a bit of cheering up, try using the same technique in reverse: What could go well? What pleasant surprises might it deliver? What is the best thing that could happen? Try to make these reasonably plausible – a collection of good things that really might happen!

		How likely is it to occur?	
		Unlikely	Very Likely
If it did occur, would it be a:	Major Problem		Most Serious
	Minor Problem	Least Serious	







5.4.2 Storyboard

Keywords: Solo, Group, Defining, Convergent
This technique is a simple way to use drawings to clarify a goal and a route to achieve it, and to identify key blockages in attaining the goal.

While you can use an ordinary pen and sheet of A4 paper, a range of coloured felt-tipped pens and a large sheet of paper (e.g. A1 flip-chart) are better.

Preparation Place the paper in the landscape position. Draw six square boxes on it, and label them 1 to 6, leaving enough space under each to write a short sentence.

Where you are going Relax, and get an image in your mind of a goal you are trying to achieve. In your imagination, transport yourself forward in time to the point where you have achieved your goal successfully. What does it feel like? What is happening? How are you and others reacting to it? Draw in Box 6 a picture that conveys to you this situation. Don't label it yet. No art skills are needed – stick figures or coloured splodges are fine; don't 'try' to draw, just let your hand draw.

Where you are now Bring your imagination back to the present. Form an image of the major elements of the present situation, and draw that in Box 1, much as you did for Box 6. Don't label it yet.

Intermediate turning-points Do the same for Boxes 2-5, using them to depict a sequence of four key intermediate steps in successfully moving from the present situation to the desired situation: four key scenes in the drama. Don't label them yet.

Potential blocks When you have finished all six boxes, and are happy that they convey (to you) a successful progression from 'here' to 'there', spend some time contemplating your picture, and try to think of what must be overcome if you are to make this progression. Write a word or brief phrase under each picture to show what might block the progression at that point; these are your key challenges.

This is a plan your conscious and unconscious have cooperated in producing, so it is an expression of your current state of mind on this issue. You may find it helpful to discuss your picture with someone, or put it on your wall for a few days so that you can continue to let it work in your mind.

If after some thought you are not happy with it, use this representation to help you identify the problems for another round of problem solving.

5.4.3 Force Field Analysis

Keywords: Solo, Group, Defining, Convergent
Force field analysis represents the opposing forces in a situation. For example, it can help to map out the factors involved in a problematic situation at the problem exploration stage, or to understand factors likely to help or hinder at the action planning and implementation stages.

It originates in the Gestalt theories of the psychologist Kurt Lewin, who believed that situations are maintained by dynamically balanced patterns of forces, and that problem solving involved modifying this balance so that the situation changed itself in the desired direction.

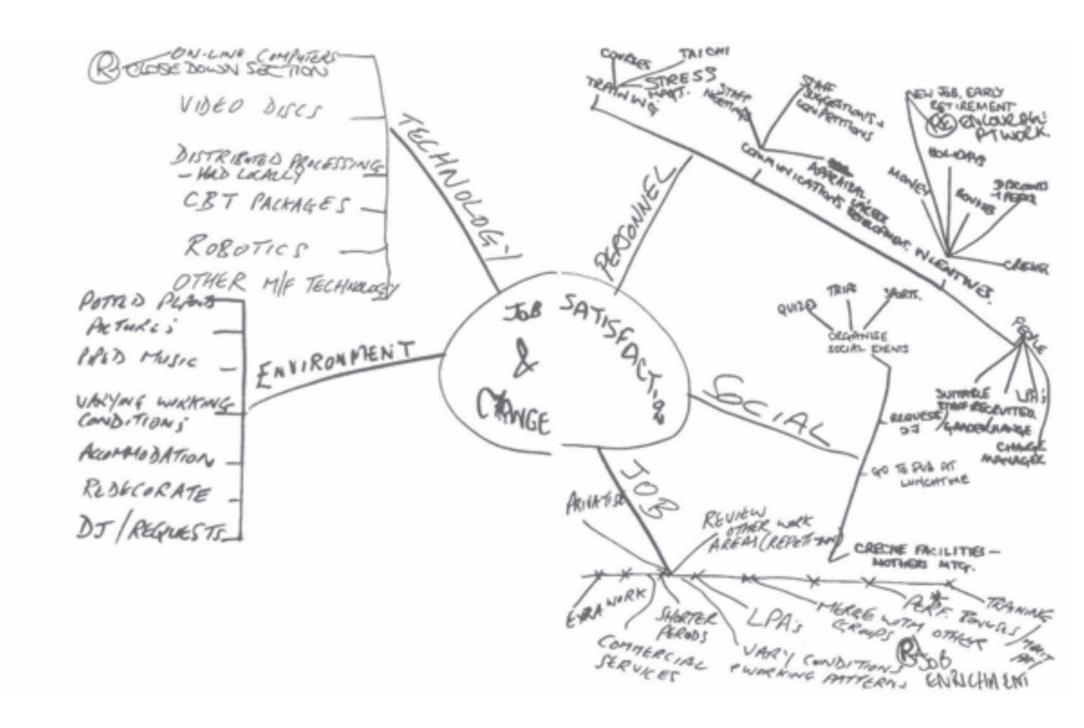
Force field analysis maps out the current balance between forces that could be helpful or supportive to your desired change (potential driving forces) and others that are likely to be unhelpful or constraining (restraining forces). Sometimes these will be dynamically paired, with two forces pulling in opposite directions, or pushing confrontationally against one another, so that they neutralise one another.

The procedure is as follows:

- 1. Group members identify and list the driving and restraining forces (perhaps using a convenient brainstorming or brainwriting technique) and discuss their perceptions of them
- 2. The group leader represents the current position as a horizontal line across the middle of the page, and draws all the driving forces as arrows that either pull or push the line upwards, and all the restraining forces as arrows that pull or push the line downwards. Where driving and restraining forces are paired (either pulling apart or confronting) they are positioned accordingly. You can use arrow thickness to indicate strength of impact of a force, and arrow length to indicate how difficult it would be to modify. It is usually best for the group to reach consensus on these details.
- **3.** Use the diagram to generate ideas around the possible ways to move the centre line in the desired direction by:
 - finding ways to strengthen or add positive forces.
 - finding ways to weaken or remove negative forces.
 - recognising the strength of the negative forces and abandoning the idea.







5.4.4 Mind Mapping

Keywords: Solo, Group, Exploring, Defining, Convergent

The term mind mapping was devised by Tony Buzan for the representation of ideas, notes, information, etc. in radial tree diagrams, sometimes also called spider diagrams. These are now very widely used, so try a Web search on 'Buzan', 'mind map' or 'concept map'.

See left for an example taken from a real problemsolving session.

To draw a mind map:

- **1.** Put your paper (ideally a large sheet) in landscape format and write a brief title for the overall topic in the middle of the page.
- **2.** For each major sub-topic or cluster of material, start a new major branch from the central topic, and label it.
- **3.** Each sub-sub-topic or sub-cluster forms a subsidiary branch to the appropriate main branch.
- **4.** Continue in this way for ever finer sub-branches.
- **5.** You may find that you want to put an item in more than one place. You could just copy it into each place. Alternatively, you could just draw in a cross-link.
- **6.** You may find that you want to show relationships between items on different branches. You can do this by coding them using colour, type of writing, etc.

7. You may find that it helps to bring the map to life if you identify particular branches, items, etc., with drawings, etc.

There are several mind-mapping software packages available. They make it much easier to edit and rearrange the map, and they can sometimes hold notes associated with labels (so that they can act as filing systems), and some can convert between map and text outliner formats.

However, computer-based maps have the disadvantages of the small screen and are less adaptable than hand-drawn versions (e.g. you can't usually make cross-links).

When used in their 'pure' forms, radial tree diagrams, hierarchical tree diagrams, clustering methods (cf. Snowball, KJ-method) and text outliner layouts all use the same hierarchical logic; even the n-dimensional matrix can be represented in hierarchical form. However they have different visual impacts and different abilities to represent secondary connections, such as overlapping and cross-linking.

5.4.5 Help or Hinder

Keywords: Solo, Group, Defining, Convergent
This is a very basic but useful procedure for the action planning stage.

Each group member identifies a few people and things that they feel might help and hinder the client implementing his plan and notes these on a large flip-chart. It is important not to neglect the hindrances.

The client can then underline what they see as the most critical of these factors, say two or three of the helps and two or three of the hindrances. Some items may occur on both sides; for instance a powerful senior manager would be an enormous help on your side, but could be a serious hindrance otherwise.

The group then addresses the problem of how the client can engage the support of the key helping people and things and, even more important, get round those that will hinder and are likely to prevent the scheme going through.

Bearing these in mind the group then develops a specific plan of action, which gives some indication of the dates and times allotted to each sequence in the plan.





Finally they check the developed plan with the client to see if it is acceptable and whether the client will commit to it. If not, they need to identify the factors they have missed, and will probably need to take the problem-solving process through another cycle.

The process is usefully captured in the simple matrix shown below.

	Helps	Hinders
Context Exploration Who? What?		
Action planning How? When? Where?		

A simple action planning matrix

5.4.6 Assumption Testing

Keywords: Solo, Group, Defining, Convergent
This technique is concerned with making
underlying assumptions more visible.
Identify a particular choice you have made, and ask
yourself what assumptions guide this choice – why
you feel it is the best choice.

List the assumptions, and beside each write a counter-assumption: not necessarily its negation, but the opposite pole of the construct it represents. Example: Suppose you choose to wear informal clothes to work. Why do you do this, and what assumptions are you making?

For instance:

Assumption 1. I assume that my colleagues don't mind how I dress (Opposite pole: Perhaps they actually find my clothes style offensive)

Assumption 2. I assume that informality conveys relaxed values (Opposite pole: Perhaps it conveys that I am scruffy and disorganised)

Work down the list and delete any assumption/counter-assumption pairs where it would make little difference to your choice whether the assumption or the counter-assumption were actually the case.

Assess each of the remaining assumptions in terms of

High vs. low potential impact – How critical is its truth to justifying your pattern of behaviour?

High vs. low plausibility – How confident are you that it is, in fact, true?

Plot the assumptions on a 2 x 2 matrix (high/low impact and high/low plausibility). For example, in my work setting, Assumption 1 above would be: high potential impact (if my dress style really did upset colleagues, I would do something about it), but low plausibility (I don't think it does upset them).

High impact/high plausibility assumptions are clearly the most crucial, but high impact/low plausibility assumptions need to be taken seriously in case they turn out to be true, so check them out if you can.

The assumptions in the high impact cells are those you see as largely justifying your actions. Are you over-estimating them? What could change these assumptions? What benefits would there be and for whom?

The assumptions in the low impact cells are seen as less critical, but it might be worth checking this out. Are they being under-estimated?





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