Creativity: What do SME's need to know?

IN CRE MENTA

Innovation and creativity mentality
advancement in SMEs

Erasmus+

Table of Contents

Table of Figures

1   Introduction

Today you probably measure your organisations success by annual profits, level of sales and/or how you compare to your competitors. You already know that without a compelling product or service to market, your organisation will go nowhere. You also realise that in today's marketplace, companies' emphasis is changing from visible assets (like equipment or technology) to invisible assets (like creativity and capability). The owners of companies like yours are recognising that ideas are their most precious commodity and employees who produce them are in demand. Your competitive advantage depends on your ability to help everyone in your business be creative and to get the most out of the ideas produced by you and your employees. Opportunities for creativity also often increases employees satisfaction and helps to increase your social responsibility (for example introducing eco-friendly products/ processes) and be more socially accountable.

> *Creativity and innovation can help you to develop more successful products and services, reduce waste, decrease cost, shorten cycle times, develop new processes or improve the existing ones.*

1.1   What is this guidebook about?

The purpose of this guidebook is to help you to understand creativity as it relates to you and your business and to provide practical strategies for supporting the creative process of you (and your staff if you have any). This will help you to create more opportunities to innovate and be commercially successful. It is based on the European Standard Innovation Management - Part 6: Managing Creativity (CEN/TS 16555-6 Standard).

This guidebook will help you to generate new ideas and analyse them in a structured way to see which of these new ideas will lead to successful innovation in your organisation.

It will do this by covering:

- The links between creativity and innovation
- How you can create a plan to increase organisational creativity and measure its success
- How self-reflections on your attitude towards creativity and how you experience it at work can help you encourage it in others
- Tips for how to choose the right problem to solve
- Techniques and tools to use to draw out creativity in yourself and your staff
- How factors like motivation, experience and organisational culture can impact creativity.

This guidebook is structured in 5 parts, following the process of managing creativity (as outlined later). You can read the whole book or dip in and out to select the information most useful to you.

Every so often in the document you will see this symbol. Please take a moment to complete the exercises as this will help you to apply the advice.

This guidebook includes tools which will be indicated by this symbol. Many are not unique to managing creativity and you might already be aware of them.

Now that you are familiar with the guidebook let's start by looking at the 5 stages of managing creativity and an overview of what they mean.

1.2   What is the process of Managing Creativity?

You can think of managing creativity as having roughly 5 steps, though of course there is some overlap and some steps do not need to be re-visited.
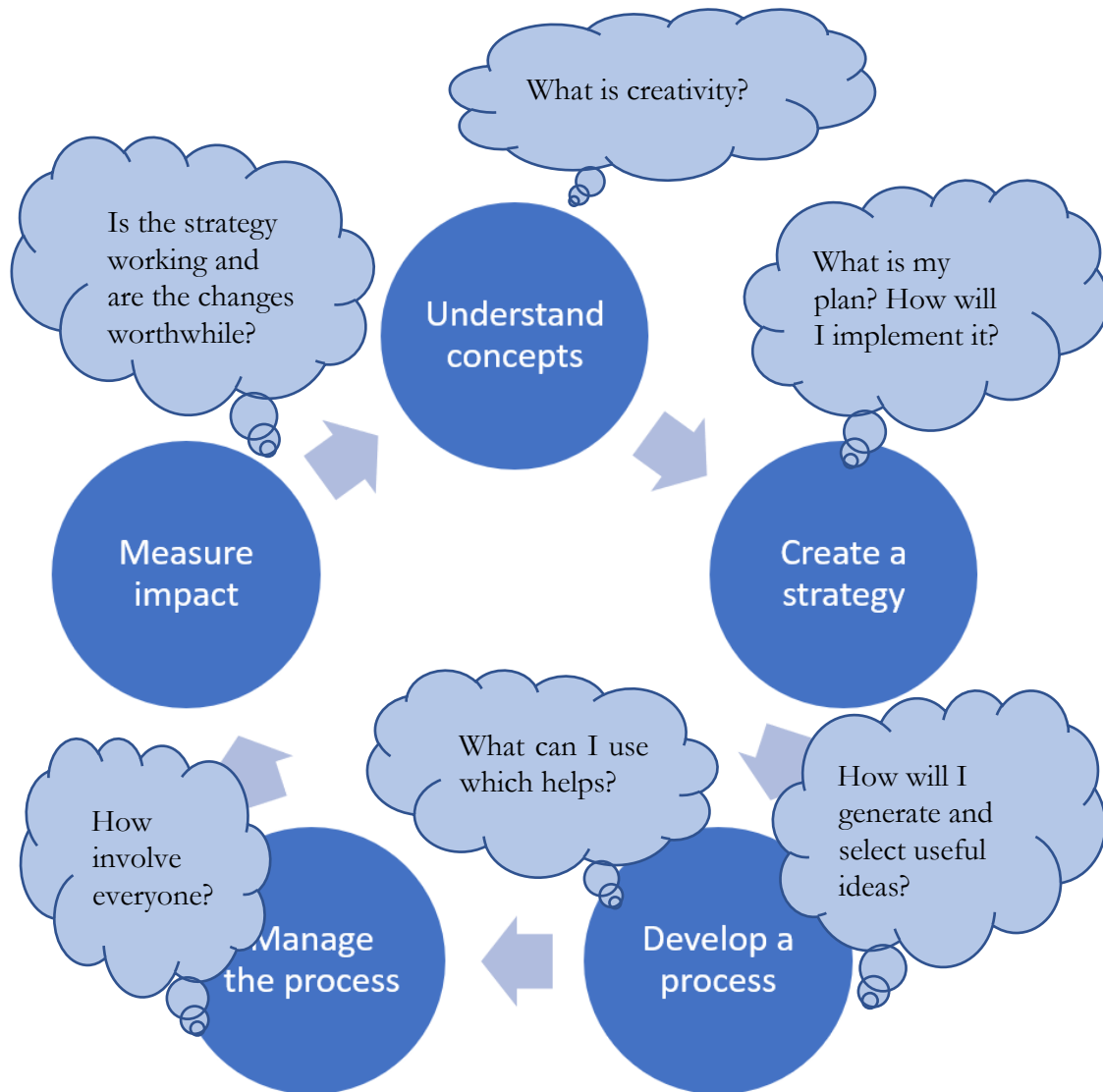
Figure 1: The 5 stages of managing creativity

Each stage corresponds to a section in this guidebook. Ready to learn more? Then read on!

---

2 Understand Concepts or what is creativity?
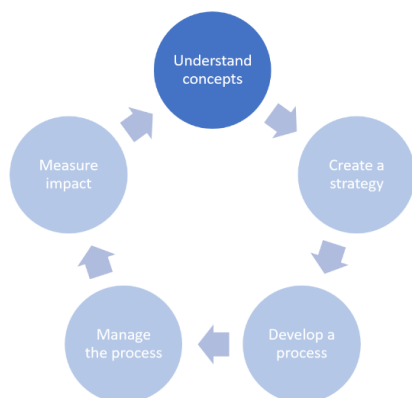
Creativity is the process of generating new ideas from original thinking. These ideas are the inspiration which, with some effort, can lead to innovation.

Creativity is the process of generating new ideas from original thinking

The two concepts are different but linked. You might like to think of creativity as being the first step, where you identify problems and generate ideas to solve them whereas innovation is the second step.

Innovation is the implementation of a new or significantly improved product, service, process or working practice. It involves selecting, developing and successfully implementing creative ideas. In other words, it is the practical application of a creative idea.

Innovation is the practical implementation of a creative idea

Creativity and innovation address ways of doing things better and differently. There are different theories around creativity. Understanding these theories will help you to decide how to harness it in your business. It will also help you realise that you can create conditions in your business which will help you (and your employees if you have any) to be more creative and policies to help you capture and develop creative ideas.

- In 200 employees, there are 10 natural innovators and 1 **really great** innovator. 55% can learn to be better innovators.
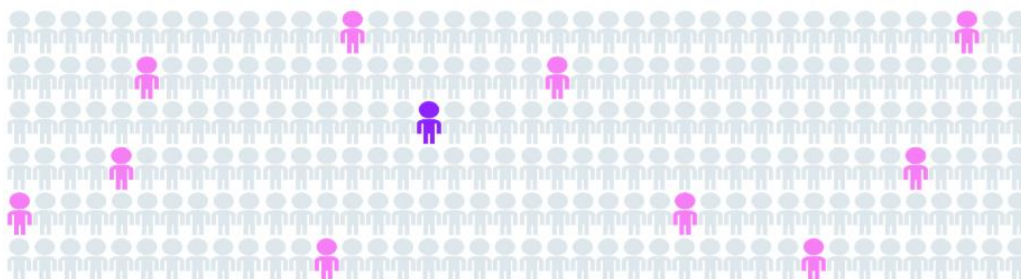
Figure 2: Innovators DNA

> *You can manage the support process and mechanisms around creativity but not the creative process itself.*

2.1   But I'm not creative!

Many people think of creativity as being a mysterious and powerful process owned by a select and fortunate few. They think you either have it or you do not. In many parts of the world creativity is still associated with divine inspiration. Others think creativity results from good fortune; a case of being in the right place at the right time. What do you think about creativity? Are you creative? Why don't you try some of these puzzles to get your creative juices flowing and test yourself!

2.1.1   Creativity puzzles

What colour are the hats?

Evil warlock doesn't like people, so he chooses four of them and buries them into the ground so that only their heads are above surface. The people can't move at all and they can look only forward.

They're buried in a line and one of them is separated by a wall. They are all facing the same direction: first person sees two heads and a wall. Second sees only one head and a wall. Second last person sees only the wall and last is looking to the distance where there is nothing interesting to be seen.

Warlock explains the situation and says that he has placed hats on their heads - two green hats and two red ones. One of the people is supposed to say what colour is the hat he/she is wearing. If he/she says the right colour warlock will dig them out immediately. If he says something else all of them will stay there till the end...

How will the people solve this problem? Take a minute to work this out.

If you are stuck, here's a hint. You probably figured that if the middle two people are wearing same hats the last one will know the answer.

If this is not the case another person has to work it out. If you think that none of the remaining people can find out the correct answer, try to think creatively and imagine what each of the people is experiencing.

For example, it probably looks something like this.

2 Green

2 Red
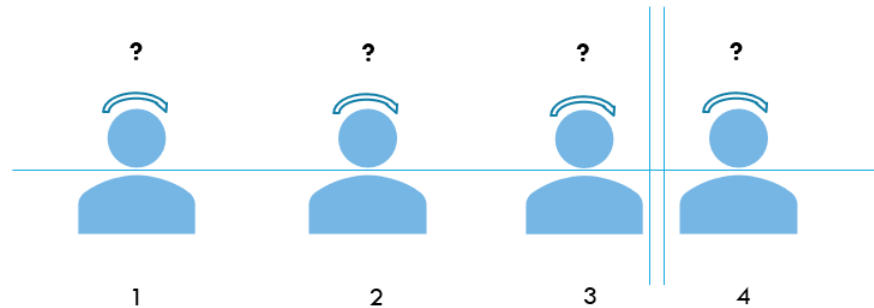
If person no. 1 doesn't come up with the answer soon it means that persons no. 2 and 3 have different hats. Person no. 2 will simply say the different colour to the hat in front. Of course, he/she must give enough time to the first person to talk.

Which switch belongs to each bulb?

You are standing next to three switches. You know these switches belong to three bulbs in a room behind a closed door – the door is tight closed, and heavy which means that it's impossible to see if any bulb is on or not. All three switches are now in position off.

You can do whatever you want with the switches and when you are finished you open the door and go into the room. While in there you must identify which switch belongs to which bulb.

How will you do that?

Take a minute to work this out. If you are stuck, here's a hint. The bulb doesn't only shine or not-shine.

Turn on the first switch and wait for a while. Turn off the first one and turn on the second. Go into the room. One bulb is shining, the second bulb is hot and the third one nothing…

Can you divide a cake in 8 pieces with three cuts?

This is a short question. Can you divide a cake into 8 pieces with just 3 cuts?

How will you do that?

Take a minute to work this out. If you are stuck, here's a hint. Not recommended if you have several impatient children waiting and watching as the slices may not be even…

First cut the cake in half and then quarters. That makes four parts in two cuts. Now just cut the cake horizontally (split the bottom and top part). Done!

2.1.2 What does creativity mean to you?

If you tried the puzzles (and maybe even got one or two correct) you will hopefully have realised that the answers are clear once you open your mind to think in unconventional ways. You had all of the information you needed to answer each one but sometimes we get so used to thinking about common items in a set way, we need to start questioning our assumptions and remind ourselves that our brains are amazingly creative! Take a minute to think about how you felt doing the exercises and what types of characteristics can help you to be creative.

> **Openness to experience** | Observance | Seeing things differently | Curiosity and persistence | Autonomy and self-reliance | Not subject to group standards | Willingness to accept risks | Ability to think outside of the box | Good at finding problems worth solving | Flexibility and originality | Not afraid of failure | Don't settle on a solution too soon (when there might be more useful ways forward)

Although we often talk about creative people, there is no standard way to measure what ideas are creative and which people are creative. Most people are good at developing existing ideas but not so successful at generating new and original ones. There are some suggested ways of considering creativity as follows:

P ersonality

   rocess

   roduct

We can think of creativity as being a personality trait on a scale between innovators and adapters . Innovators are those who do things better and adapters are those who think differently. This difference however refers to the type of creativity a person possesses and at best, can only show which people are most likely to produce creative ideas. Which doesn't help in our search for the perfect creative employee!

We can also think of creativity according to the process of thinking which is associated with "imagination, insight, invention, ingenuity, intuition, inspiration and illumination".

Other people define creativity by its output. Some researchers would say that in business having an original idea is not enough. "To be creative, an idea must also be appropriate, useful and actionable".

This is a useful viewpoint because research also shows us that creative product is the result of the ordinary thought processes of ordinary individuals. This means like any skill it can be learned, practiced and improved.

Creative product .....can be learned.

None of that would be possible without the brain. The brain has been described as one of the most complex things we have yet discovered in our universe. Studies on patients with brain damage have allowed scientists to uncover how each side of the brain controls different functions. The left hemisphere, for example, specializes in language skills and logic. The right hemisphere allows us to recognize shapes and faces and express and read. Most people are not likely to be strictly left-brain or right-brained - we use each side of our brain depending on the task we're dealing with. However, some theorists and researchers believe that there may be one side of the brain that we draw on more, which can in turn make the personality traits of that side of the brain more dominant than others. And we often also make assumptions about ourselves, deciding at a young age that we are not creative and so we favour a more logical approach to solving problems. But like anything if we don't use the power of our right brain, it may not work so well.

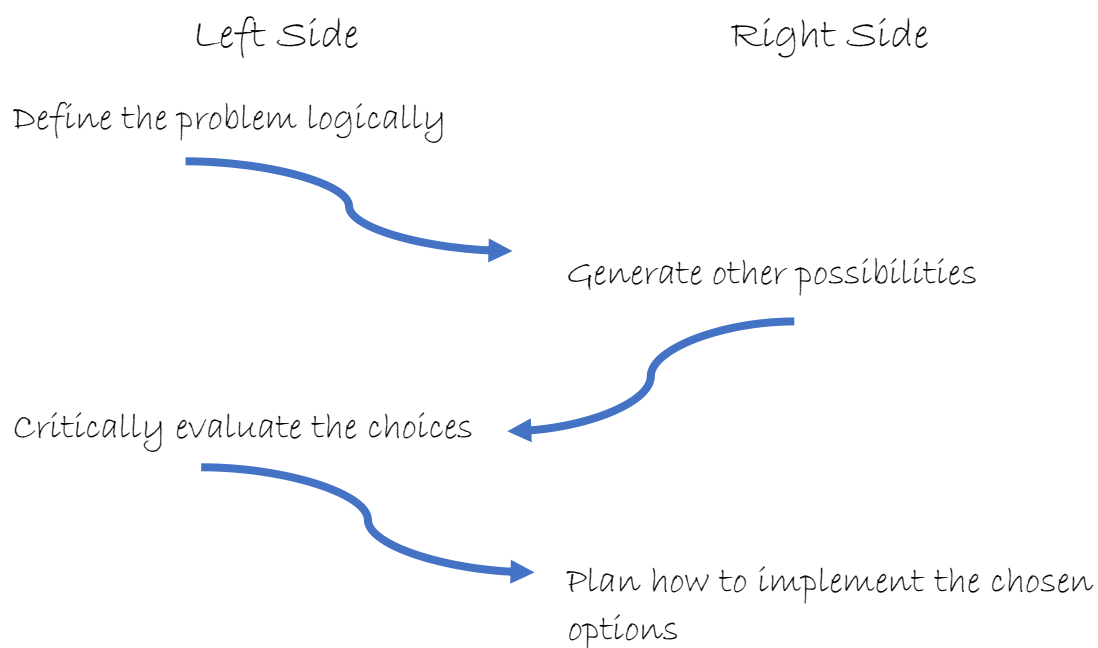Both sides of the brain are used in creative problem solving:

Left Side   Right Side

Define the problem logically

Generate other possibilities

Critically evaluate the choices

Plan how to implement the chosen options

Figure 3: How your brain solves problems

It's important to fine tune your left brain, but don't overlook the opportunities to let your right brain make its mark. Tom Kelley, General Manager of IDEO (check him out on YouTube), also discusses the use of the "hare" brain, meaning the aspects of thinking that we can control, and the "tortoise" brain, meaning giving though processes time to sit, ruminate, and percolate to slowly process creative solutions. Kelley claims this slower level of background thinking is even smarter than our cognitive problem-solving, and that it can be used to address dilemmas directly. He suggests that creative thinkers should schedule some time for daydreaming to give these slower mental processes a chance to be effective.

Creative thinking takes time and cannot always be accelerated. We all need time and space to day dream.

Creative thinking takes time and cannot always be accelerated.
We all need time and space to day dream.

And it's not all about the individual. The environment in which people live and work also affects their creativity. Since the 1990s, organisations have started to pay more attention to the effect that work culture and environment have on how creative people are in organisations. More recently the focus has shifted towards understanding creativity as a phenomenon that builds on what has gone before and arises from ongoing interactions.

Creativity …. builds on what has gone before and arises from
ongoing interactions

There are also signs that in several fields, working in an area for many years can help to produce exceptional creative achievement. Many business people who have successfully turned around organisations did so after working in their industry for many years e.g. Jan Carlzon, who rejuvenated Scandinavian Airlines, was years in the travel industry.

In this view, creativity comes from having enough expertise to recognise problems and solutions. This supports having a varied range of staff as more experienced staff might be more creative in the workplace than new-hires because of their years of know-how.

Of course, it's not just your staff who are creative as your expertise also helps you to see your industry in a creative way. Can you think of times in which this was true?

Think of times you were creative. What do you think helped you to be creative?

Maybe it was the way ideas were handled, the people involved and your dealings with them. Was it the working relationships? What was the atmosphere in the group? How did you set about solving the problem?

2.2 Oh, we are all creative. What next?

To return to our questions from earlier, you can call the recruitment search off as you have already hired creative people. But you can learn to capitalise on their creative thinking…..along with your own.

We have just learned that having the skills to think imaginatively and the experience to identify problems and solutions are vital to successful creativity. But we also require a third ingredient, motivation. In other words, your staff will do a far better job if they are inspired by the interest, enjoyment, satisfaction and challenge of the work itself rather than because you ask them to do something or because it's part of their job.
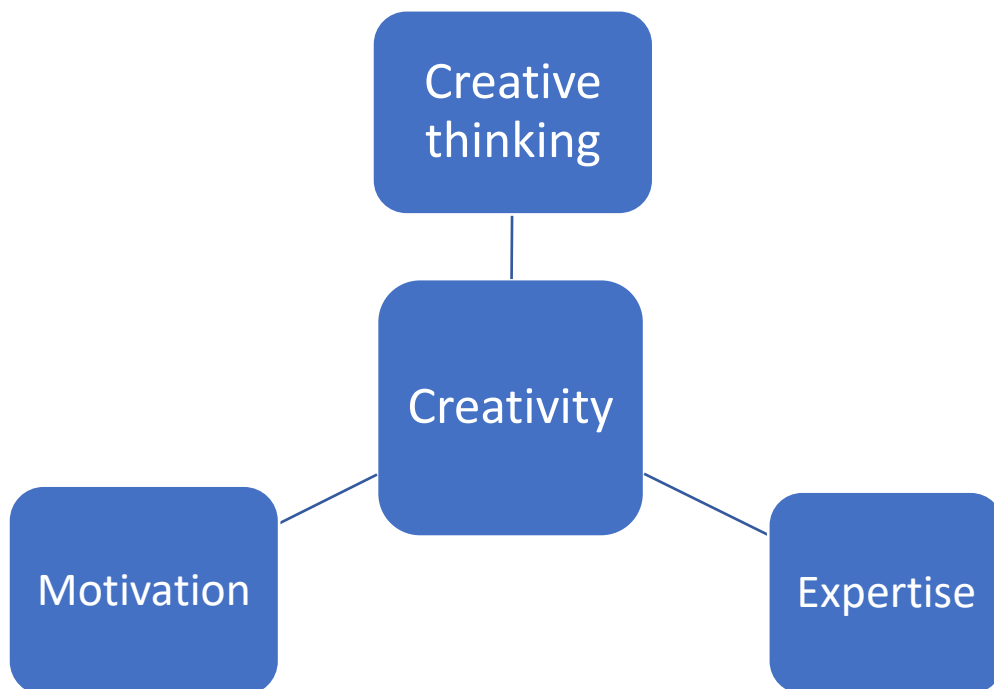
Figure 4: Components of creativity-creative thinking skills, expertise & motivation

If a person really cares about something, they are more willing to take risks to achieve it and both determination and risk-taking seem to be necessary for creativity. In other words, people are more likely to be creative in areas they are most interested in. This means you should allow your employees some freedom to work on the projects they are most attracted to and to determine how they do their work.

2.2.1 Innovation Types and Levels

Research into motivation suggests that people respond well when their achievement and performance is acknowledged and rewarded. Many innovative companies have implemented policies that allow staff to follow their own motivation to some degree. Once a month, LinkedIn holds an InDay, which is when employees set aside regular work to explore new ideas. SAS is noted for offering a high-trust environment and exhibiting a low turnover rate. Mentorships and open-door communication policies with leadership at BCG allows for creative freedom and the confidence to share ideas. At Marks & Spencer there is no such thing as too much communication.

3M Corporation excels in how it treats promising employees: give them opportunities, support them, and watch them learn and thrive. These policies have led to some very successful products for those organisations.

Now that you know how to encourage creative thinking, you should be able to increase the number of creative ideas produced by your staff. But as a business owner/manager you want more than ideas. Earlier in this guidebook we discussed that innovation is the implementation of a new or significantly improved product, service, process or working practice. So, while creativity is a vital starting point, innovation is the hard work that follows!

There are 4 different types of innovation:

1. Product innovation - the creation of new or significantly improved goods, or services e.g. the MP3 player, or the GPS.
2. Process innovation - the development of a new/significantly improved production, or supply process, e.g. inserting a new automatic device in a production line.
3. Marketing innovation – the implementation of new marketing methods that bring significant changes in the design, packaging, positioning, advertising of a product, or in the pricing. Examples include using new mediums.
4. Organisational innovation means the implementation of new methods in the daily business practices, in work organisation, or in external connections, e.g. introducing a new training system.
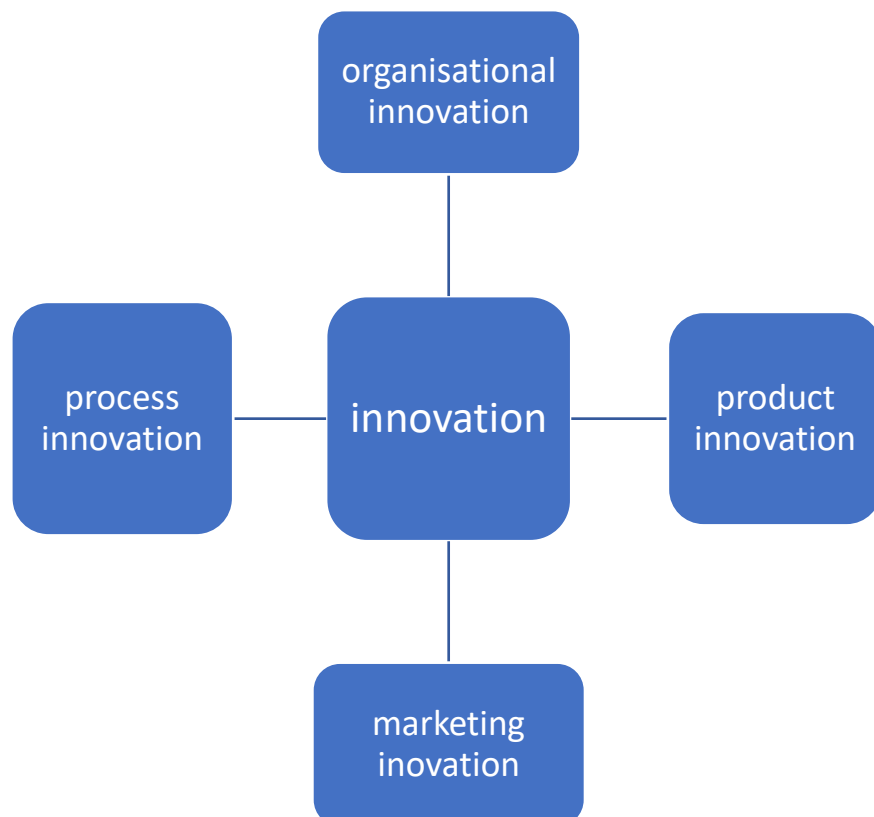
Figure 5:The 4 types of innovation

What type of innovation comes first to your mind?

Businesses often focus on product innovation as this gives the biggest opportunity to get advantage over competitors. But now you can see that innovation can be found in not only the products, processes, methods developed by a company but also those taken from other companies, organisations or research institutions etc., and applied in the company.

There are also different levels of innovation:

Radical: New technology which can potentially make current practice obsolete or introduce a new one eg the bagless vacuum cleaner. May take some time to be adopted by the market

Incremental: Repeated small improvements to a process, product or service over time to improve revenue, efficiency or working practices

Disruptive: Step change to current process introducing something new to the world, maybe replacing current methods or technology eg. the internet

Innovation

Figure 6: Incremental, radical and disruptive innovation

Of course, you can't just say, "Be creative," and expect yourself or your staff to magically produce innovative ideas. A creativity-driven work environment must be carefully cultivated and encouraged, and it starts with you and your plan.

3 Create a Strategy or how do I manage creativity in the workplace?
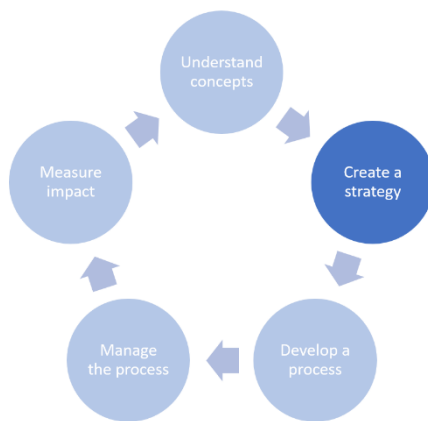
Just as there is no one way to consider creativity there is also no standard technique for introducing creativity into an organisation but there are lots of ways to try, some of which might be useful to you. This section includes some suggestions on how you can encourage and help your staff to be creative starting with identifying your weak areas and making formal plans to address them.

What helps creativity in organisations? Think of an organisation known to you that you believe to be creative. What strikes you as interesting about the way it works?

Creative organisations often share certain characteristics including an open culture, empowered staff, flexible structure, integrated procedures, idea development systems and good external partnerships.

In the previous section we considered individual creativity, in other words, activities undertaken by individual employees within an organisation. In this section we will think about organisational innovation and how you can influence these components through workplace practices and conditions. As with any major change in practice it's a good idea to create a plan or strategy to guide you with clear steps for implementation.

A strategy is a way of describing how you are going to get things done

Your Creative Management Strategy will broadly answer the question of how you are going to get from where you are to where you want to be in terms of managing the various aspects of creativity in your company.

3.1 How do I do it?

Your Managing Creativity Strategy can take the same format as any other type of strategy you currently use. The plan should be practical and actionable, so you are clear on what steps you need to take to implement it. This section covers some examples of tools you can use to consider the environment in which your organisation operates and to identify threats and weaknesses you are vulnerable to as well as strengths and opportunities you can make use of. This knowledge helps you to then determine a high-level plan to minimise the negatives and maximise the positives.

3.1.1 Analysis tools

There are various general analysis tools you can use like SWOT Analysis, Porter's 5 Forces, PESTEL, Porter's Value Chain, Pareto Analysis etc. As they are not unique to creativity we will just give a brief overview here, but you can find lots more information freely available, including other strategic analysis tools not included here.

Creativity Scorecard

SWOT Analysis   Pareto's Analysis   Porter's Value Chain

Create a strategy

Affinity Diagram   Porter's 5 Forces

PESTLE

Table 1: Common Strategy Level Analysis Techniques

SWOT Analysis

The most basic form of analysis, you just think of your company's **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats.

Porter's 5 Forces

A framework for identifying threats and opportunities around you. It includes the competitive rivalry, bargaining power of suppliers and customers and threat of new entrants and substitutes".

PESTLE

Another framework to ensure you consider a broad range of possibly sources of opportunities and threats. It prompts you to think about the **P**olitical, **E**conomic, **S**ocial, **T**echnological, **E**nvironmental and **L**egal opportunities or threats to your business

Porter's Value Chain

A simple and graphical way for identifying and describing your companies' main functions and understanding how they help you to create value.

Pareto Analysis

Have you heard that 20% of your products, services, customers and distribution deliver about 80% of your products? This is a visual way of looking at that idea.

Creativity Scorecard

As well as the more general strategy analysis tools available, we would also like to suggest using the following scorecard, specifically developed to help you manage creativity by helping you to capture:

- your staff's attitude to and perception of creativity in your organisation
- the current level of creative initiatives in the organisation
- the barriers experienced by your staff when trying to be creative
- the health of the current structures, systems and culture in place to assist effective creativity management.

You can complete the scorecard yourself and ask your staff to complete it. You can also use the questions as a guide for structured interviews if you prefer to gather information through talking to your staff.

You can use this scorecard both when planning your strategy, when managing creativity and to assess your progress.

The scorecard is divided into a number of factors that can help to embed or work against creativity management within organisations. Once you have completed the questions, you will have an idea of which section you need to focus on.

You can come back and use this scorecard again and again as you work through your process of introducing and managing creativity in your business.

Creativity Scorecard

Table 2: Creativity Scorecard

Please circle the extent to which you agree or disagree with these statements where 1 represents strongly agree and 5 represents strongly disagree					
Leadership (relates to you and any other management)					
1. You have defined clear strategies (or action plans)	1	2	3	4	5
2. You have communicated the strategies to all employees	1	2	3	4	5
3. You have created a vision and set clear objectives	1	2	3	4	5
4. You and other management actively promote creativity & innovation	1	2	3	4	5
5. You accept non-conformity	1	2	3	4	5
6. You encourage champions	1	2	3	4	5
7. You visibly drive innovation	1	2	3	4	5
8. You adopt a consensus and shared approach to decision making	1	2	3	4	5
9. You adopt a participative decision-making style	1	2	3	4	5
10. You actively encourage your people to offer new product ideas	1	2	3	4	5
Culture					
1. Your organisation's culture promotes the generation of ideas	1	2	3	4	5
2. You have a formal idea generation process is place	1	2	3	4	5
3. Your employees have a diverse range of interests	1	2	3	4	5
4. You actively encourage risk taking	1	2	3	4	5
5. There is a high level of trust in the organisation	1	2	3	4	5

6. You have dedicated the right resources to achieving creativity goals	1	2	3	4	5
7. All employees participate in generating ideas	1	2	3	4	5
8. Information and knowledge are shared throughout the company	1	2	3	4	5
9. All operations are driven by customer needs	1	2	3	4	5
10. You have an effective mentoring system	1	2	3	4	5
Structure	1	2	3	4	5
1. Structure is flexible and organic	1	2	3	4	5
2. Your structure allows you to capture the voice of the customer	1	2	3	4	5
3. Your organisational structure promotes idea generation & learning	1	2	3	4	5
4. You implement projects using autonomous cross-functional teams	1	2	3	4	5
5. Project teams are organic, flexible and agile	1	2	3	4	5
6. All team operations are driven by customer needs	1	2	3	4	5
7. Team members are mutually accountable	1	2	3	4	5
8. Team members are empowered to make decisions	1	2	3	4	5
9. You use communities of practice to optimise core competencies	1	2	3	4	5
10. There is a high level of co-operation across the organisation	1	2	3	4	5
Motivation					
1. You use effective performance indicators to measure progress	1	2	3	4	5
2. You use performance indicators to encourage desired behaviour	1	2	3	4	5
3. You reward knowledge sharing, and reuse	1	2	3	4	5

	1	2	3	4	5
4. You recognise success in your company	1	2	3	4	5
5. Your team members are all mutually accountable	1	2	3	4	5
6. You provide adequate and effective training to all employees	1	2	3	4	5
7. You give your staff some freedom to pursue their own ideas	1	2	3	4	5
8. Failures and mistakes are tolerated and not punished	1	2	3	4	5
9. You give your staff lots of autonomy to make decisions	1	2	3	4	5
10. Money is made available for internal projects	1	2	3	4	5
Communication					
1. Virtual team members have effective IT tools to communicate	1	2	3	4	5
2. The right information is available at the right time and structure	1	2	3	4	5
3. People collaborate to facilitate the cross fertilisation of ideas	1	2	3	4	5
4. Alliances are formed with other organisations for mutual benefit	1	2	3	4	5
5. Communication among team members is efficient and effective	1	2	3	4	5
6. Communication between project teams is efficient and effective	1	2	3	4	5
7. All staff can access Information on ideas generated and problems raised	1	2	3	4	5
8. Individuals collaborate to solve problems	1	2	3	4	5
9. Individual skills are effectively leveraged within & between project teams	1	2	3	4	5
10. Virtual team members can seamlessly communicate with each other	1	2	3	4	5

3.1.2 Leadership and Policy

The process of generating ideas which we will look at in the next section, is vital to your whole innovation management process and therefore should be:

- Included in your policy
- Supported by you and any other leaders
- Accepted by staff and any other stakeholders.

You should be clear on why you are generating creative ideas and what you intend to do with them. As part of setting your policy you should consider:

- Choosing the best person to manage the process
- Defining the level of innovation you are aiming for
- Deciding if you will come up with the ideas internally or seek external help. .

3.1.3 Documentation and Intellectual Property

When developing a Managing Creativity Strategy, it's a good idea to also develop a clear policy around documentation, intellectual property and employee contracts. For example, you could consider adding a contract clause such as "all ideas originated by company employees, inside or outside working hours are the property of the company". Also consider a clause for subcontractor or freelancer contracts and whether you need to use Non-Disclosure Agreements (NDAs).

All records, meeting minutes, names of those involved and notes generated from an idea's inception should be kept. Determine if you need to name the idea originator on patent applications. This documentation will provide a possible resource for other new ideas and can also be useful if you then need to prove the originality of the idea at any point.

4 Develop a process – or how do I generate, evaluate and select ideas?
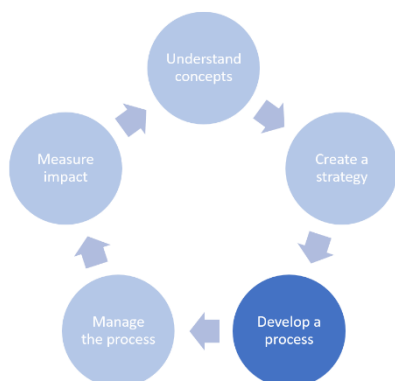
4.1 Process of Individual Creativity

We have already learnt that creative output is the result of the natural thought processes of ordinary individuals. Creativity only becomes extraordinary based on what the individual produces.

Some think that creative responses are the result of;

1. A new situation which reminds people of a previous situation, so they respond in the same way.
2. A totally new situation they never experienced before, so they respond in a random way.

Once you understand this idea, you will also realise that you can control the response. Structure is not the enemy of creativity. Following a structured thought process can help you (and your staff if you have any).

4.1.1 What is it?

There are 6 phases to our creative process as individuals.
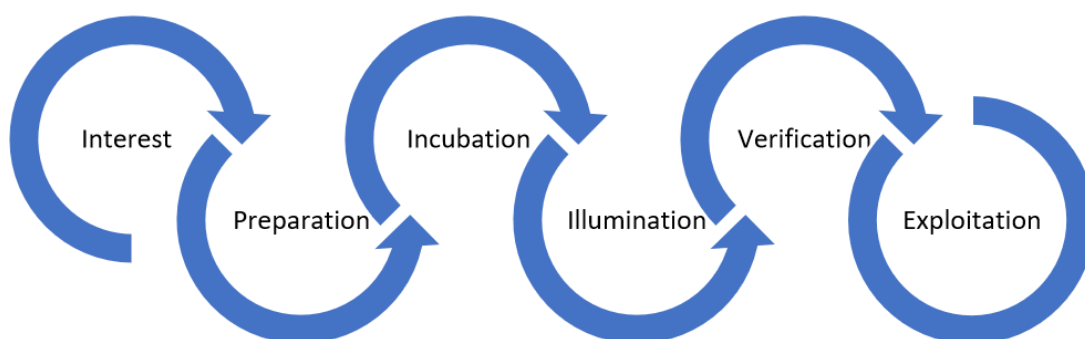
Figure 7: The 6 phases of the creative process of individuals

You possibly use this process already but informally and without really thinking about it. What causes you to use your creativity every day?

As a business person, you encounter problems every day. Whether it's an unexpected request from a customer, dealing with a glitch in your supply chain or helping staff with an issue, you already spend a lot of time solving problems and are probably very skilled at it.

4.1.2 How do I do it?

If you understand the process by which individuals solve problems and generate other ideas, you can learn to control it.

Interest — When you scan your environment for opportunities or solutions

Preparation — When you identify a problem, collect information, plan

Incubation — When you use intuition to think about things, maybe for a long time

Illumination — When the idea or solution finally comes together in "the 'eureka' moment

Verification — When you revise and validate the idea and may go back through earlier stages

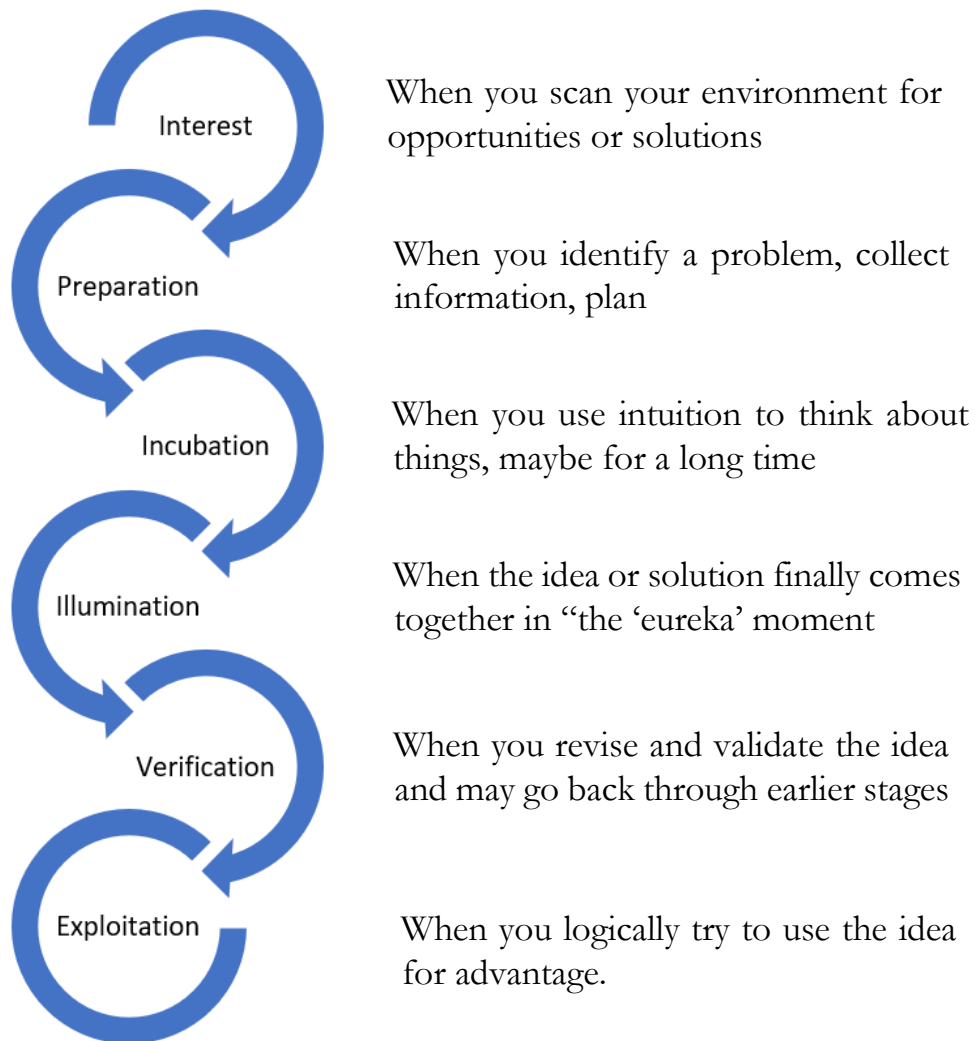**Exploitation** — When you logically try to use the idea for advantage.

Figure 8: Process for individual-level creativity

4.2 Process of Organisation Creativity

4.2.1 What is it?

Now that you understand the process by which individuals solve problems and generate other ideas, it is time to think about how to apply that to your business. Read on to learn about how you can facilitate the generation of ideas, their selection, improvement and application in your organisation.
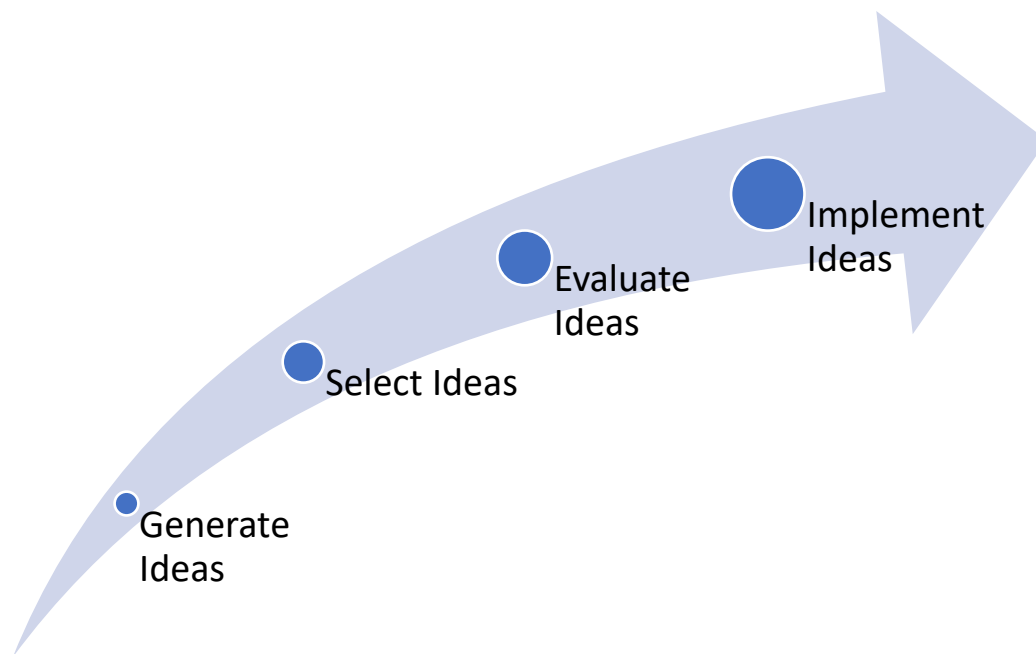

Figure 9: Managing organisational creativity

4.2.2 How do I do it?

Phases	Description	How you do it
Generate Ideas	When you deliberately try to create ideas, sometimes called ideation	Look at market research, feedback from customers, R&D, technological, economic and social trends, information captured during the sales process, feedback from business partners, and organisations who support innovation.
		Carry out brainstorming map possibilities, identify problems (more detail below).
		Document all ideas and keep revisiting as you may use some in the future.
		Ideas are fragile when in their early stages. Try creating a submission format to keep them from bias e.g. 2 A4 pages with words and graphics where the submitter explains the idea and its benefits to the organisation, with research or data if available.

Select Ideas	When you are trying to find a problem worth solving so you organise, filter and select all the ideas generated so you can focus on the best ones.	The most difficult stage, this step requires a very different mindset, so many people might think that this kind of work is not creative, but in fact, it is. If we want to successfully finish any innovation process, running only the ideation step is useless. Keep reading to discover some tools you can use for this stage.
Evaluate Ideas	When you develop a selection process by which you will judge and evaluate the ideas from the first two stages	Ask yourself questions like is there market need? Is the idea technically feasible and/or economically feasible to implement and market? Is the market ready? Is the idea competitive? What is the profit or value potential? You may not be able to answer all those questions without doing more development of the idea.
Implement Ideas	Put the idea into effect	Put someone in charge of implementing the idea; estimate the resources required (people, time, money, equipment); free up people to work on it; make sure staff know the idea is valued.

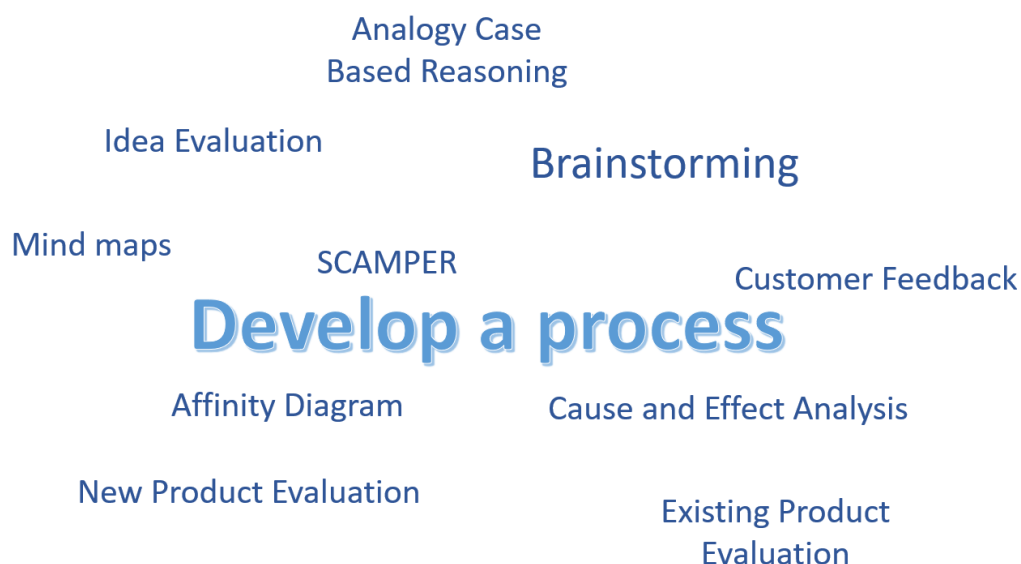## 4.3　Useful tools for developing the process

Figure 10: Tools to assist process development

We mentioned earlier that there are many techniques around ideas. It might be useful for you to consider these tools in two groups:

1.   Those that help you to generate ideas

2.   Those that help you to analyse the ideas and chose those worth pursuing

Some examples we will cover include brainstorming, mind maps, cause and effect diagrams and Affinity diagrams. You might use a version of these techniques already. You can find lots of information on the internet to help you introduce those techniques but here is a quick overview.

Let's use the example of an SME trying to increase opportunities for networking.

4.3.1   Generating ideas

When using creativity tools focused on generating ideas try to generate as many ideas as possible during a short time span, usually a few minutes during an ideation session. A good rule here is not to criticise or judge new ideas as they come, as this will stop your staff from fully participating. You want them to let their brains run free to generate as many possibilities as they can; filtering and merging will come later.

Brainstorming

Brainstorming is all about creating a free and open environment that encourages everyone to participate. It gets team members to share their knowledge and creativity without any fear of negative consequences. You can brainstorm in a group or by yourself. Both have benefits. Brainstorming by yourself can generate a lot of ideas which you might not feel comfortable to suggest in a group. Brainstorming in a group can benefit from the collective experience in the group. Not everyone feels comfortable speaking up in a group and so you should manage ideation according to the preferences of you and your staff.

What does it do?

Brainstorming encourages people to come up with thoughts and ideas that can, at first, seem a bit crazy. Some of these ideas can be worked on to develop original, creative solutions to a problem, while others can generate even more ideas. This helps to get people unstuck by getting the to move out of their normal ways of thinking.

Never criticise an idea generated during brainstorming

You're trying to open possibilities and break down incorrect assumptions about the problem's limits. Judgment and analysis at this stage stunt idea generation and limit creativity.

How do I do it?

1. Prepare the group – environment, resources, refreshments, a diverse group of participants
2. Present the problem and tell everyone you are all there to generate ideas
3. Guide the conversations and encourage everyone to participate
4. Capture the ideas
5. Sort through the ideas and identify themes
6. Evaluate ideas at the end of the session – this is the time to explore solutions further, using conventional approaches.
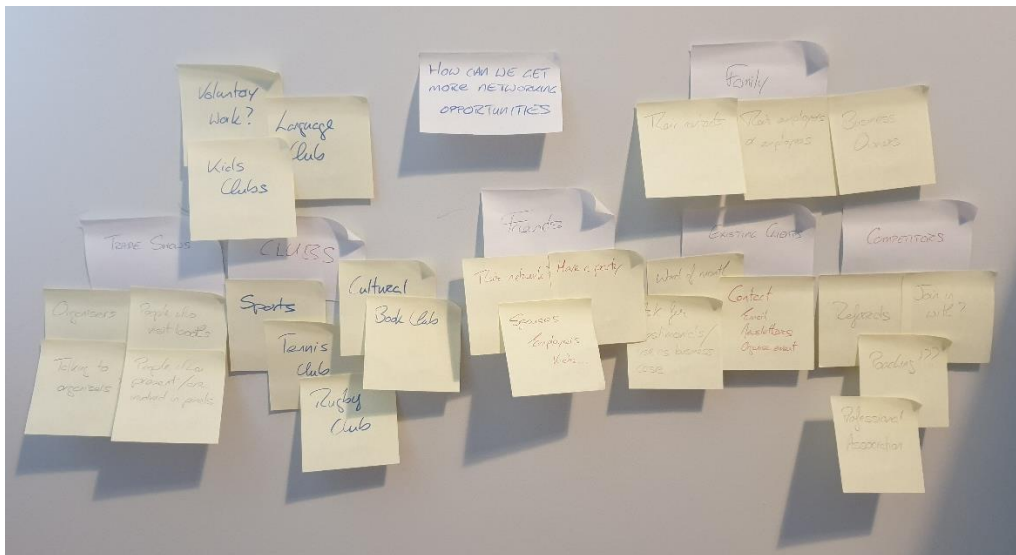
Figure 11: Brainstorming output example

Consider having the session facilitated by an external expert who may contribute new ideas or ways of thinking or examples from other companies.

Customer Feedback

Gather information from customer feedback, both positive and negative. You may learn more from complaints than complements. If you use any kind of customer satisfaction scoring system, gather all the data that relates to the lower scores.

SCAMPER

Use SCAMPER as a tool to find ways to improve an existing product or come up with ideas for a new one. It's based on the notion that everything new is a modification of something else.

What does it do?

It uses a set of directed questions to help you come up with new ideas. It works by forcing you to ask yourself a set of questions you normally wouldn't think about.

How do I do it?

To use the SCAMPER technique, first state the problem you'd like to solve or the idea you'd like to develop. It can be anything: a challenge in your business; or maybe a product, service or process you want to improve. After pinpointing the challenge, it's then a matter of asking questions about it using the SCAMPER checklist to guide you.

Consider, for instance, the problem "worked example to be determined"

S = Substitute i.e. swap components, materials or people

C = Combine i.e. mix, combine with other assemblies or services, integrate

A = Adapt i.e. alter, change function, use part of another element

M = Modify i.e. increase or reduce in scale, change shape, modify attributes

P = Put to other use

E = Eliminate i.e. remove elements, simplify, reduce to core functionality

R = Reverse i.e. turn inside out or upside down.

4.3.2 Selecting ideas

Use the following tools to help you to organise, filter and select all the ideas generated during the earlier thinking process so you can focus on the best ones. By 'best ones' we mean those you select for future development. The others may be categorised as promising but requiring further conceptual thinking or interesting but not considered worth pursuing at this time. It's important that you don't discard any ideas that don't make it through this process as in time there may be changes that make them more feasible because of new technology or change of company strategy, availability of funding etc…Consider putting someone in charge of managing the ideas.

This step requires a very different mindset, so many people might think that this kind of work is not creative, but in fact, it is. If we want to successfully finish any innovation process, running only the ideation step is useless. In fact, about a third of the time should be spent on ideation and two thirds on selection and development.

Mind Maps

What does it do?

A mind map is a diagram you draw to organise information in a visual way and to show relationships between ideas.

How do I use it?

You can create one as follows:

1. Think of an idea or concept
2. Write or draw the idea an image in the centre of a blank page
3. Add other words, images or any kind of visual keys connected to the central idea
4. Make your branches curved or straight-lined….whatever appeals to you
5. Use one key word per line.
6. Use images throughout.

Connect your major ideas directly to the central concept, and other ideas branch out from those major ideas.

You can draw mind maps by hand, as rough notes during a meeting or conversation, on the back of an envelope…..they do not need to be fancy!
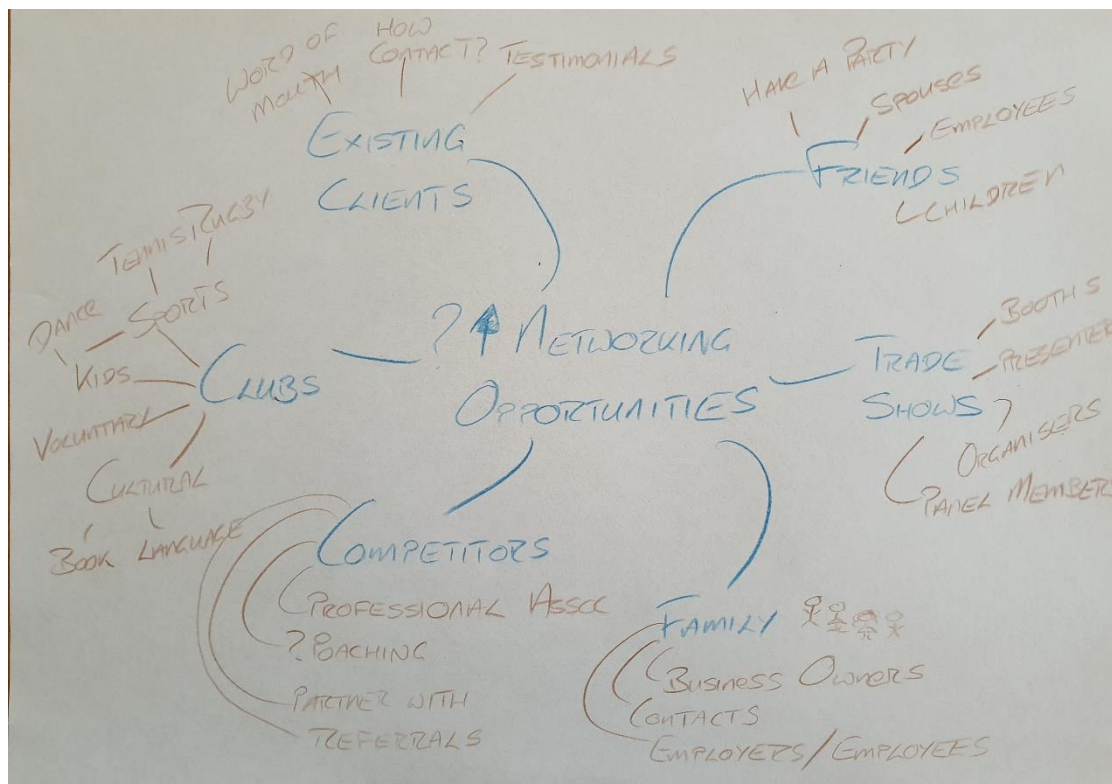

Figure 12: Hand drawn mind map output example

If you need to, you can produce higher quality pictures when more time is available using software or by hand.

Figure 13: Computer produced mind map example

Cause and Effect Analysis

Also called a Fishbone or Ishikawa diagram, this is like a combination of Brainstorming and a Mind Map.

What does it do?

You can use it to find out the real cause of the problem you are about to try to solve. That means you will have a much better chance of solving the whole problem and not just part.

How do I do it?

You can create one as follows:

1. Identify the problem.
2. Work out the major factors involved.
3. Identify possible causes.
4. Analyse your diagram.

> *A fishbone diagram is a good technique to use when you are trying to fix a particularly complicated problem.*

This one is a bit trickier than the others, so we have included a longer example as follows:

Write down the exact problem you face including who is involved, what the problem is, and when and where it occurs.

Problem: Office Coffee is terrible! All the time.

Figure 14: Cause and Effect Analysis Step 1

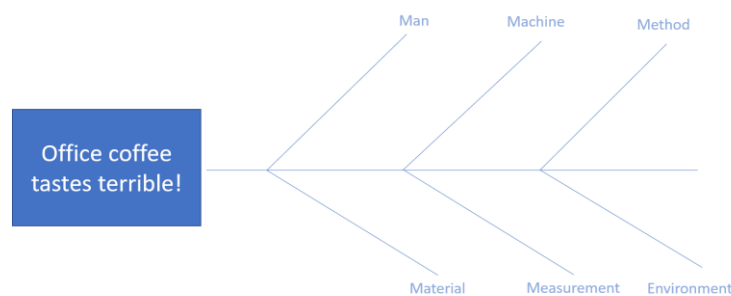Identify what may be part of the problem e.g. systems, equipment, materials, people etc.

Figure 15: Cause and Effect Analysis Step 2

For everything you considered in step 2, brainstorm possible causes of the problem.

Show these possible causes as shorter lines coming off the "bones" of the diagram. Where a cause is large or complex, then it may be best to break it down into sub-causes. Show these as lines coming off each cause line.
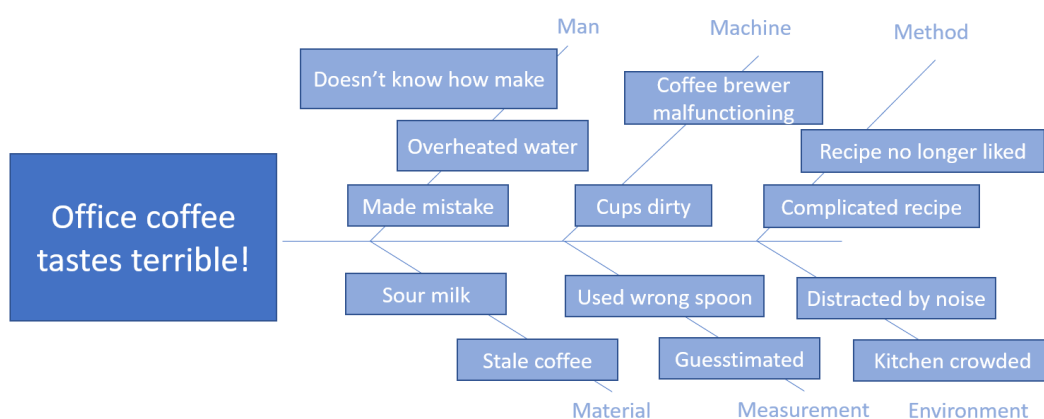

Figure 16: Cause and Effect Analysis Step 3

By this stage you should have a diagram showing all the possible causes of the problem that you can think of.

Depending on the complexity and importance of the problem, you can now investigate the most likely causes a bit more. This may involve carrying out surveys, and so on. These will be designed to test which of these possible causes is contributing to the problem.

Affinity Diagram

What does it do?

These are really useful for organising information into common themes and discovering the relationship between them. It can help when you have a lot of information to process. The purpose of an affinity diagram, above all, is to stimulate discussion about a problem or issue, opening up possibilities for improvement or solution.

How do I do it?

To create an affinity diagram, do the following steps:

1. Record each idea on cards or notes.
2. Look for ideas that seem to be related.
3. Sort cards into groups until all cards have been used.

Here we have created one using the output from the Brainstorming example in the previous section.

How increase networking opportunities?	
Friends	**Trade Shows**
Throw a party	Booth Visitors
Spouses	Presenters
Employees	Organisers
Children	Panel members

Competitors	**Family**
Professional Association	Business Owners
Poaching?	Their contacts
Partnering with	Their employers
Referrals	Their employees

Existing Clients	Clubs
Word of Mouth	Sports
Testimonials	Kids
Contact Methods	Cultural
	Voluntary

New Product Evaluation Questions

What does it do?

Helps you to determine if it's worth moving on with this idea.

How do I use it?

Ask yourself the following questions:

- Is it relevant?
- Is it practical?
- Will it improve production or quality?
- Will it help to make more efficient use of workforce?
- Will it improve functioning, maintenance or building processes?
- Is it more advanced than existing tools or machines?
- Is it safer?
- Will it help to avoid unnecessary work?
- Will it cut cost?
- Will it improve existing methods?
- Will it improve working conditions?

After thinking of the idea in this way you will have a clearer idea if it's worth pursuing. You can do this individually or as a group.

NAF – Idea Evaluation Questions

NAF consists of trying and understanding the probability of one person who has responsibility for implementing an idea, finally, will take action. **It is not scientific** but rather *gut feel* which, in the context of creativity, is important.

What is it?

This is a simple way of scoring / assessing beginning ideas following brainstorming and potential solutions to a problem after they have been explored and developed. NAF ratings are used with **a group**, when what seems to be a satisfactory solution is reached, they can be used to quickly identified different participants' opinion about a specific outcome.

How do I do it?

1. Form a group
2. Give a score out of 10 for each of the three items, New, Appeal, Feasibility.
3. Mark it on a scale of 1-10

Newness – to you, not necessarily the rest of the world.

Appeal – what does your gut say? If you don't score it high on appeal, you don't like the idea!

Feasibility – how practical is it to do this?

If it is 80% it means that while the idea is not perfect you can see how to do it and the problems, the remaining 20% are to do with implementation (getting others involved, agreement, funding, time, etc.)

Analogy (Case-Based Reasoning) method

What is it?

This method is based on reasoning by analogy, where you use knowledge about previous experiences to find a solution for the present problem.

How do I do it?

1. Recall cases similar to the current problem, and how they were solved.
2. Reapply the process to the current problem by adapting it to the current situation.
3. Revise the process in order to match it with the needs of the current problem.
4. Store the new solution for future use in case a similar problem arises.

Existing Product Evaluation Questions

What is it?

A set of questions you ask yourself about your existing products to see if you can alter them in an innovative way.

How do I do it?

1. Ask yourself the following groups of questions about your product.
2. Generate a list with all the ideas you have to think about
3. Proritise it using concensus mapping techniques

Questions

What can I substitute to improve this?

What if I swap this for that and see what happens?

How can I substitute the place, time, materials or people?

What materials, features, processes, people, products or components can I combine?

Where can I build synergy?

What part of the product could I change?

In exchange for what?

Can I change the characteristics of a part?

What happens if I warp or exaggerate a feature or component?

What will happen if I modify the process in some way?

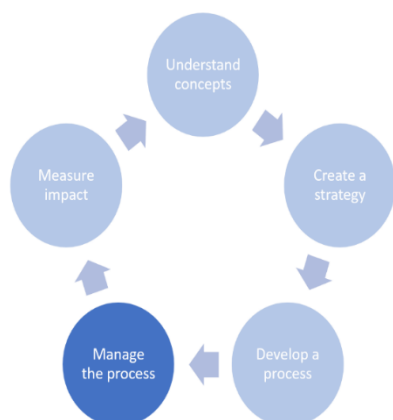What would happen if I removed a component or part of it?

How else would I achieve the solution without doing it the usual way?

What would happen if I did it the other way around?

What if I reverse the order in which it is done or the way in which it is used?

How would I get the opposite effect?

5 How do I manage the creativity process?

After developing and implementing the process you need to manage it.

You can manage this whole process yourself or appoint a staff member, but without an owner the process will not run smoothly.

As with any change it will probably take a while to get it established as a business-as-usual activity and so you may consider implementing a change management plan to help your staff adapt. It's very important you show your constant support for the process.

A lot of the following advice refers to you and your staff but of course it is relevant if you are a sole trader without staff also.

5.1 Critical Success Factors

When managing creativity, you must consider the following 5 keys success factors:

Leadership   Culture

Communication

Structure   Motivation

5.1.1 Leadership

Effective leadership is important for successful idea generation and creativity. Leaders can influence a group to achieve their goals by:

1. establishing and communicating goals
2. building trust and inspiring teamwork
3. defining a clear purpose and strategic intent .

5.1.2 Culture

Companies that create a culture and climate for knowledge generation, transfer and use perform better. Culture is the collection of fundamental values and belief systems which give meaning to organisations and is created from a broad range of internal and external influences, some of which are difficult to manage. Your organisation's culture can either help or hinder creative practices.
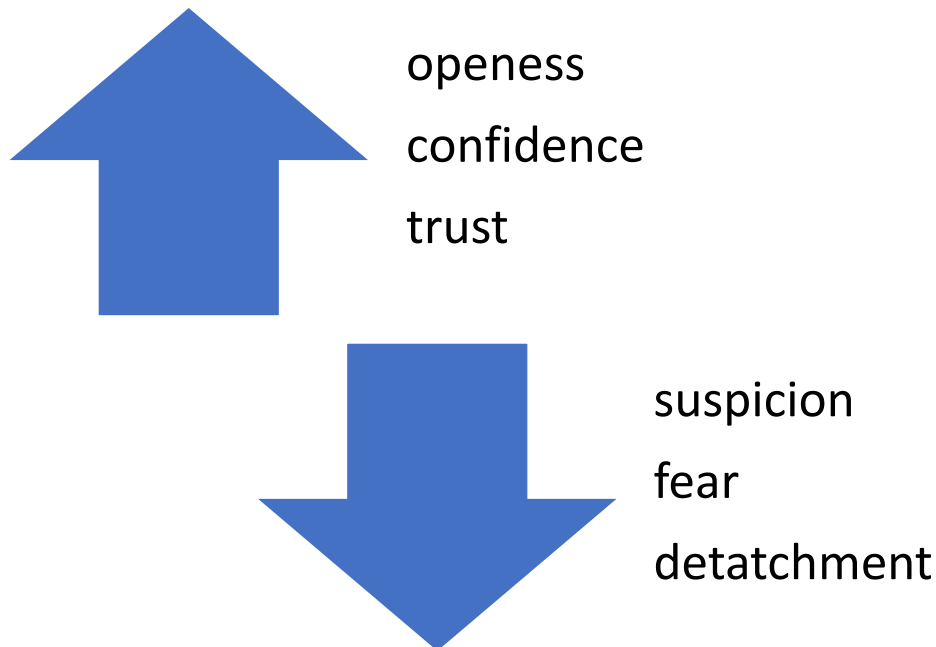
openess

confidence

trust

suspicion

fear

detatchment

Figure 17: Factors that encourage and discourage creativity in organisations

An open culture is associated with sharing of knowledge. Companies that make knowledge available to staff are more likely to come up with new products than those that do not .

You can:

1. develop a visible connection between sharing knowledge and practical business objectives
2. integrate knowledge creation and transfer with an existing key business initiative
3. align reward and recognition structures to support knowledge transfer and reuse (as previously mentioned).
4. try to create an open physical environment with areas where people can have conversations without disturbing others.

5.1.3 Structure

The structure of your organisation is a critical success factors for knowledge-based work. Previously, companies had functional oriented structures which were effective and helped management have control. These no longer work today, when things change so quickly.

To create and transfer knowledge, different parts of the business or staff with different roles and skill sets need to communicate. Research also indicates that when staff collaborate, their individual talents add up to collective achievements . Work teams are emerging as the dominant organisational component of the new economy. They are more consistent with flatter, more flexible and more responsive organisations. Cross functional teams and Communities of Practice are ideal mechanisms for capitalising on multiple perspectives. They create value for their individual members as well as the organisation.

Even if they do not work on the same thing your staff can learn from each other's experiences and apply this new-found knowledge to their work. Mixing staff allows employees from all sorts of different social and work backgrounds to learn from their colleagues' experiences from a different perspective. Thus, they can bring fresh ideas to the project by thinking out of their comfort zone.

> *Research indicates that when staff collaborate, their individual talents add up to collective achievements*

5.1.4 Motivation

As we talked about in the previous section, your staff will do a far better job if they are inspired by the interest, enjoyment, satisfaction and challenge of the work itself rather than because it's part of their job. As a result, if you wish to encourage creative activities such as knowledge sharing and reuse you must design motivation and measurement systems that incorporate these activities.

5.1.5 Communication

The creative process is an information transformation process where information is gathered, processed and transferred. The right information must be made available to the right place, at the right time, and in the right format. Therefore, communication is vital. Frequent communication increases the amount of information directly in that more communication usually yields more information. Collaboration facilitates the cross fertilisation of ideas. Communication among employees and with outsiders stimulates their performance. Thus, the better that members relate to each other and with key outsiders the better their performance.

> *Make the right information available to the right place, at the right time, and in the right format*

5.2 How do I do it?

If you have carried out the self-assessment and self-reflection exercises to broaden your understanding you will understand that your role as a leader is key in creating the conditions for creativity and innovation in the workplace and that you should

- Start with yourself
- Include everyone
- Encourage continuous learning
- Have an open attitude towards taking risks and making mistakes
- Use and share knowledge and information
- Conduct fair and informative evaluations
- Reward creative performance
- Offer management support to your staff
- Don't worry about implementation
- Create a culture that encourages staff people to share information with each other.

5.2.1 Start with yourself

Think of the last time you made a real effort to make a real change in your behaviour or your business. Think of the investment and effort that went into identifying the first wave of improvements and changing how you and your people work and lead every day. Did it stick? Did the changes become part of your daily behaviour or the new culture in work? If not, it may be because you haven't fundamentally changed how you lead and manage. With any change you need to first consider your own attitudes and behaviour and make sure you are giving yourself the opportunities to make the new behaviour part of your routine.

5.2.2 Include everyone

All of your staff have the capacity to be creative and hiring a broad range of staff will increase the diversity of ideas and solutions available to you. If they need help, encourage and teach them to be creative.

5.2.3 Encourage continuous learning

You can alter culture by using formal and informal approaches and tools, such as training and education. A good place to start is with an introductory training session for all your staff to help them understand what creativity is and that your company is going to try to encourage it from now on. You can also teach your staff specific techniques and tools for problem identification and creative thinking. Research and knowledge are also key factors.

5.2.4 Have an open attitude towards taking risks and making mistakes

You need to create a culture where your staff feel safe to try to be creative and innovative and know that there will be no negative consequence if they take risks and explore ideas. You can consider creating a playful office environment, install a breakout area to facilitate random conversations, discuss both good and "less good" ideas at staff meetings, with equal positivity towards both.

5.2.5 Use and share knowledge and information

You don't just want your staff to have ideas but also to share them, with you and with others. Make sure your staff know that you encourage creative thinking and receiving

suggestions for improving or altering the way things are done. If you think you may need more help to change your own way of thinking to do this you might consider assigning the task to a staff member or getting an external consultant to assist. You can also help your staff by making decisions on what knowledge your company needs in the future i.e. what is strategically important and high added value.

The fourth chapter of Innovation Management standard on intellectual property management provides support for knowledge management.

5.2.6   Conduct fair and informative evaluations

Don't punish mistakes but try to learn from them. Otherwise your staff will stick with the tried and tested ways of working.

5.2.7   Reward creative performance

Consider introducing a drop-box for ideas and a celebration of or reward for any ideas that lead to innovation. Give your staff responsibility for their own work and if possible let them choose what to focus on as this will increase motivation.

5.2.8   Offer management support to your staff

Let them know that you support this new direction and are there to help. The most important keys to success are human factors: innovative thinking and charismatic leaders who support this work. A culture that supports innovation can be promoted by top management through supporting ideas, communication, openness, conflict consciousness and tolerating failure.

5.2.9   Don't worry about implementation

Leaders unknowingly weaken their team's creativity by focusing too early on implementation. The fastest way to kill the creative process is by requiring your team to produce tactical solutions at the same time as creative ideas.

5.2.10 Create a culture that encourages staff people to share information

If possible, give your staff a little extra time to complete their tasks so they have more down time to think about the process or to have conversations with others that might generate some insight or spark some ideas. Make the right information available to the right place, at the right time, and in the right format

There's lots of ideas about making your work environment more conducive for creativity on the web. You can read some at: https://www.huffingtonpost.com/alison-a-quirk/fostering-a-culture-of-cr_b_7615498.html and https://www.inc.com/quora/how-to-build-a-work-culture-that-encourages-creativity.html

Nothing kills creativity like a risk-averse, play-it-safe leader. To spark creativity, be curious and bring a beginner's mind to problems. Channel your inner life-long learner and ask appreciative questions, like: "What would we do if we knew we couldn't fail?" "What possibilities are there if we look elsewhere?" And then listen!

6   Measure Impact
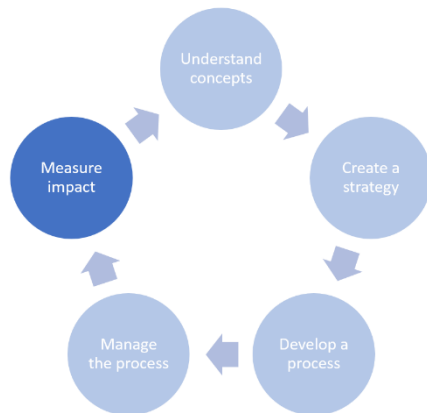
The final step of the process is to measure the impact that your Creative Management Strategy is having. You should consider this step when you are writing your strategy and determine some measures which you will use to guage the success or otherwise of your initiatives bearing in mind that they may take some time to show results. You can check your progress against your measures to make sure that your objectives are progressing. Make sure that your measures meet the following criteria. Ask yourself, are they:

Quantifiable: Make sure your measures are objective (based on statistical fact) and not subjective (based on instinct or "gut feel").

Understandable: Your measures should be easily understandable to everyone in the business. Consider using Easy-to-read charts and graphs that can be quickly uuderstood.

Actionable: You don't want to choose measures you can't impact. It's important that your employees feel they can influence the measure through normal work or specific projects you put in place.

Repeatable: You need the measure to be useful more than once. You should be able to track progress on the measure over time, so you can analyse critical trends.

Timely: At the very least, strategic measures should be looked at annually, and at the most, monthly. Any time frame longer than that makes it difficult to tie the measure in with your strategic plan.

Another way to measure the impact of your efforts is to re-use the Creativity Scorecard we recommended to assess your initial position and see what changes have occurred. It will help you to identify gaps between your current and desired performance and enable you to identify where successful strategies can be further exploited and pinpoint where problems, or potential, problems lie. Furthermore, it will provide the necessary information that can be used to develop action plans to improve performance as you move forward with your creative organisation.

When setting your objectives for measurement you could ask yourself if creativity had led to any of the following:

- Increased sales?
- Improved operations?
- An increase in market share?
- An increase in customer satisfaction?
- An increase in employee satisfaction?
- Any other relevant goal.

6.1 The end….or is it?

Now you have learned the basic concepts of creativity and innovation, and discovered that the leadership, culture, communication, structure and motivation greatly impact people's creativity. You have also learned that your staff are already creative but probably need guidance and encouragement to exercise their creativity and that when employees improve their creative abilities, it enhances the innovation performance of the whole firm.

You also now have some practical strategies for supporting the creative process of you and your staff. This will help you to come up with more opportunities to innovate and be commercially successful. Using established tools and techniques will help you improve your approach to solving the problems that your team and your organisation face. You'll be more successful at solving problems and, because of this, more successful at what you do. You will also be more successful at generating ideas. To maintain and capitalise upon this opportunity you must develop your process for managing creativity. In other words, you must focus on the processes and systems that allow creativity, and thus innovation to occur. This is good news because process is scalable and repeatable. Much more efficient than waiting for a spark of creative genius!