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Tapping Into Your People
Successfully Managing Idea Generation in Organisations

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Successfully Managing Idea Generation in Organisations

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Under the guidance of Professor Paulo Roberto MOTTA

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Abstract

Over the past few years, innovation has increasingly garnered the headlines as one of the core competencies every sustainable organisation must have. Yet, it is the *idea* which is the foundation of any innovation. This paper draws together knowledge about idea generation, and its management, and how the process of encouraging ideas, creativity and then managing them effectively will enhance the opportunities of successfully finding and implementing innovations which will add value to the organisation and its stakeholders. Extensive review of literature in the field of idea and innovation management, as well as a study of Souza Cruz's recently conceptualised and implemented Idea Management programme has brought together the many facets involved in successfully harnessing and implementing ideas.

Keywords: Idea Generation & Management, innovation, motivation, creativity, organisational culture, leadership

1. Introduction

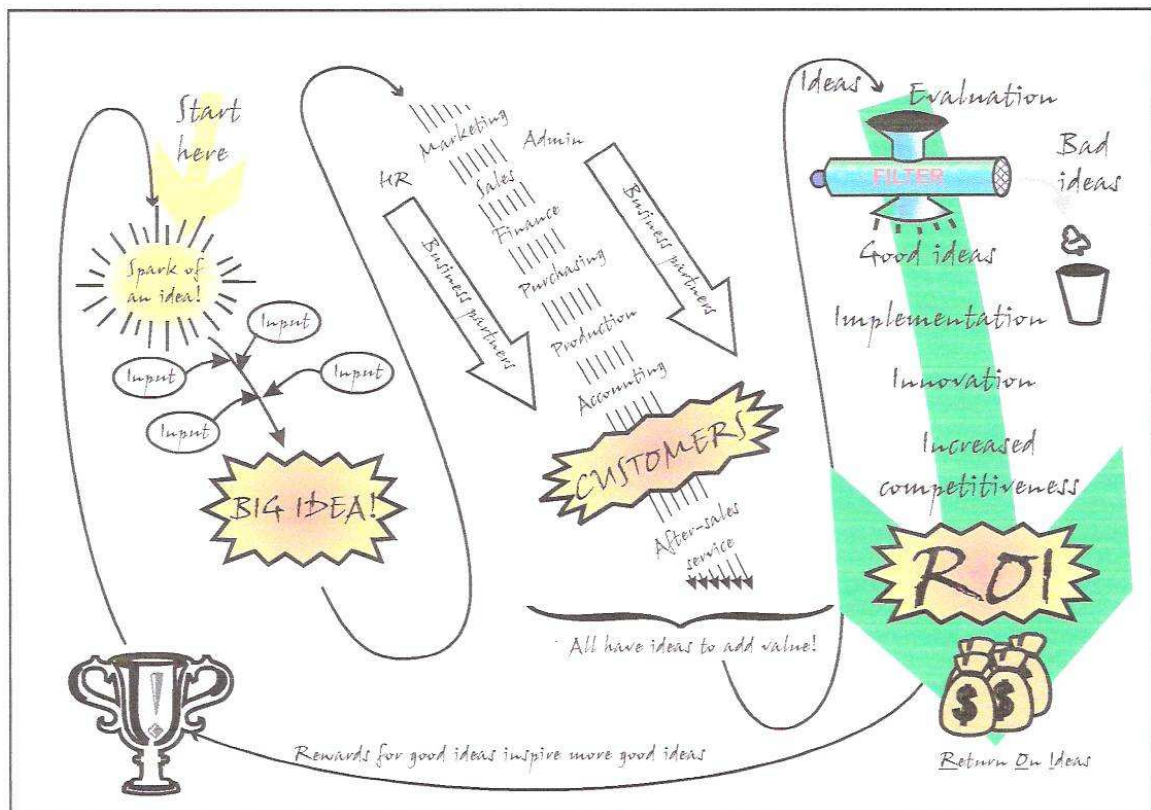
It seems that humans are by nature innovative. As without the willingness to experiment, to try something new, to solve a problem or to confront and overcome a challenge, we would not have evolved as a species over time and would presumably still be living in a cave. Perhaps one of the most powerful ways in which we learn is when our expectations fail, when we try something and it does not work, and so we are driven to try new ways to realise our goals. Through our search for improvements to either quality or processes, be it because we are curious or lazy – and thus seeking to make life easier – innovation occurs. The ability to innovate is in each and every person, to varying degrees. It is this underlying, yet fundamental human imperative, which provides management with the million dollar question of how to reap the pool of ideas that all employees in every organisation represent. And how to stimulate employees to become curious as to how they can impact the environment they work in, and improve products, services and the processes that deliver them. This process of innovating, driven by necessity, curiosity or laziness, could ultimately lead to not just having an idea of how to improve work but also the development of a new “killer app” that will give competitive advantage and will enhance success and sustainability for the business. Or, in the words of Johann Wolfgang von Goethe, “Daring ideas are like chessmen moved forward; they may be beaten, but they may start a winning game.”

According to a recent Boston Consulting Group (BCG) senior management study, innovation remains a “top strategic focus for the majority of companies, with 66% of respondents to (our) survey ranking it one of their top-three priorities”. (BCG Report, “Innovation 2007”). Clearly, companies are willing to invest more resources into the field of innovation, in the

pursuit of higher returns. Another study conducted by IBM of several hundred CEOs from all fields in the business world has also concluded that innovation ranks amongst the top three drivers of business success. To borrow Arthur M. Schlesinger's words, "if we are to survive, we must have ideas, vision, and courage."

Following is one visual demonstration of how idea management could be managed.

Figure 1: Diagram of an Integrated Idea Generation Process



Source: Jeffrey Baumgartner of jpb.com, Brussels

As we can see from the above diagram, an idea is created with the input of various sources, hence the common assumption that it is rarely only one individual that comes up with an improvement idea. In today's working environment, workflows are frequently intertwined with one another thus involving many people, often beyond more than one department, and beyond one business. This is where the second step in the diagram features; the engagement of all stakeholders. Once the input is collaborated, it then goes through the economic screening process, i.e. whether it is applicable and has value-add for the company. If implemented, the rewards from the returns generated by the idea must be shared with the employees who spawned the idea. Through recognition and rewards the company

demonstrates its commitment to the cause, and shows that employees' idea generation is welcome and appreciated.

This all leads back to the initial question: *How does management foster a culture within the organisation that not only allows, but also stimulates the idea generation from employees? What kind of systems and processes need to be in place for employees to come forward with their improvement ideas, their innovative approaches to work flows, products and services? Finally, what kind of monitoring needs to be in place to oversee successful implementation from original idea to fruition.*

Aim of Research

Over the past few decades, much research has been carried out in the area of innovation, creativity and knowledge workers. Whereas the focus of this current study is on the *idea generation and management* aspect, the above three areas are part of, or the outcome of this processes of tapping into the intellectual capital of the employees for suggestions.

This research is aimed at reviewing existing literature in the field of Idea Generation, innovation and creativity within employees, to put together a picture of how to make every employee feel he/she can and should contribute to improve and innovate. It will study the benefits and pitfalls, and how successfully managed Idea Generation & Management can add value not only in monetary terms for the company through savings or profit generation, but also in motivational terms for employees. It will bring together aspects such as culture including organisational culture, employee motivation and reward systems and look at different ways in which to implement a system of idea generation in organisations.

Outline & Methodology

The research conducted in this study is based on two sources of information. It is on the one hand a review of academic and business literature related to the subject of Idea Generation and Management, the findings of which are found in the section entitled "Frame of Reference". It is intended to provide the reader with an understanding of the various sub-topics related to the generation and management of ideas in the business context, and to review the findings of authors relating to this area of study, and which are deemed important features of successfully implementing such a system.

Secondly, primary research was conducted in order to be able to examine whether theory and practice coincide. By describing and discussing the experiences of a company, which has recently implemented a comprehensive Idea Generation and Management system into one of its factories, it is possible to add value to the existing research in the subject matter. It is specifically interesting due to the fact that the research has been conducted in an organisation operating in an emerging economy (Brazil), whereas the academic and business literature reviewed in section three is mainly based on experiences in developed countries such as the United States of America, Japan, Germany and the United Kingdom. The information was obtained through structured and semi-structured interviews with employees of the company, ranging from Board Director to shop-floor level employees at the factory. All in all, nineteen employees of the company have answered questions and provided insights, and interviews lasted from 20 minutes to four hours, depending on interviewee and their scope of knowledge about the subject.

Furthermore, frameworks regarding the conceptualisation and implementation of Idea Generation, which includes the design of an Idea Generation & Management process, structural and implementation implications and a brief outline of software to manage the administration of such a process are presented.

Finally, the paper concludes with a section on discussions; linking the primary research findings to the theory, highlighting challenges and opportunities and based on the literature reviewed and the findings from the primary research, suggestions will be made as to further areas of research to gain a deeper and broader understanding of the topic.

2. Frame of Reference

The following section of this paper is devoted to a review of the current literature on Idea Management. This literature review is aimed at creating a holistic picture of what is being studied and what the findings and trends are. It is worth noting that the majority of academic research and management papers are concerned with employees who already are working in “creative” jobs, such as research and development, marketing, product design and more. Furthermore, the studies examined in the field of employee behaviour have mostly been conducted in the United States, Great Britain and Germany. The studies are therefore based on the findings of workers who have at least a completed secondary education. This point is raised here, as the findings from the primary research span workers with incomplete primary education and literacy problems to those with university degrees. However, the literature provides a foundation, yet it leaves many questions open as to how Idea Management will/can work in other parts of the world, when the labour pool is often unskilled, with a lower degree of education and working on shop-floor level, rather than in “white collar jobs”. This aspect will be discussed briefly within the last part of the study – in section five – as it is not a focal point of this research.

In the meantime, here is a look at where Idea Management comes from, and whether it is indeed just a current fad in management circles, just as for example Total Quality Management (TQM) was a decade ago, or whether we can assume this management approach will be a lasting one.

History of Idea Management

When searching academic and professional literature, there is plenty to be found on Idea Management, and its various other names, such as

- Employee suggestion scheme/system/programme;
- Idea management;
- Employee involvement program;
- Kaizen (= 改 ('kai') means 'change' or 'the action to correct' and 善 ('zen') means 'good'
- Suggestion box;

- Systems for Managing Ideas (SMI) and lately
- Ideation¹

Either which way you prefer to coin the practice, it comes with a long-standing history². One of the earliest records of inviting the opinion and suggestion of others comes from Japan. In August 1721, a small box called the “*meyasubako*” (guide box) was placed at the Takinoguchi entrance to the Edo Castle in Kyoto, by the order of Yoshimune Tokugawa, the eighth shogun. All citizens, regardless of their social standing, were allowed to drop written suggestions, requests, and complaints into the box. The “*meyasubako*” was the shogun's way of finding out how people felt about his policies and what people were thinking in general. The next step towards this kind of feedback within a professional or organisation environment came from the British Navy. They realized the need for a process of listening to every individual in the organisation - without fear or reprisal. At that time, the mere mention of an idea that contradicted a captain's or admiral's opinion was likely to be punished by hanging. Whether it was therefore taken up by the lower ranks and successful remains a mystery...

Probably one of the first successful and systematic approaches to reaping the brain power of the employees was in 1872, at the German company Krupp (now ThyssenKrupp). Its founder Alfred Krupp, as part of the company's “*General Regulativ*” (translates as organisational guidelines) which described the rights and duties of all employees, outlined guidelines concerning suggestions, including submission of ideas, evaluation, non-acceptance, and revival of previously declined ideas. Recognition and monetary rewards for successful ideas were part and parcel of the process. This started the “*betriebliches Vorschlagswesen*” (organisational suggestion scheme), which has been deeply rooted in traditional German companies since.

Further examples from other countries include that of William Denny, of William Denny Ship Building Company of Dumbarton, Glasgow. In the 1880's the shipbuilder asked his workers to suggest methods for building ships at low cost. He set up his pioneering system “*Rules for the Awards Committee to guide them in rewarding the workmen for inventions and improvements*” in an attempt to systematically solicit suggestions from employees and to promote creativity in a company.

¹ Term taken from Olivia Toubia (2006)

² Sources: “Corporate Creativity”, Robinson & Stern, Berrett-Koehler Pub (1998), www.wikipedia.org, and Employee Involvement Association (www.eia.com)

In 1894, in the United States, John Patterson, the founder of National Cash Register (NCR) started a suggestion system which he called the “Hundred-Headed-Brain”. Also, records show that an Eastman Kodak employee named William Connors received a prize of two dollars in 1898 for suggesting that windows be washed to keep the workplace brighter. Frank Lovejoy, the supervisor who accepted Connor's suggestion, later became the president of Kodak.

The Japanese followed suit a few years later just after the turn of the century, in 1905, whereby Kanebuchi Boseki, a textile company, set up "suggestion boxes" that were reportedly an imitation of John Patterson's suggestion system that its management team had observed on an earlier visit to United States. However, up until the 1940s Japanese suggestion systems were generally reserved for only a handful of elite workers who had the ability, the enthusiasm and the social standing, and thus credibility, to submit ideas.

In the wake of the World Wars, the employee suggestion schemes fell onto fertile ground in the industrialised nations. With a shortage of men to work the factories, and a demand for supplies, any means of improving efficiencies, process and output were suddenly most welcome; from all ranks within the organisations.

Today, more companies, often under the auspices of their the Human Resource Departments, have replaced the old fashioned “letter-box” system of collection suggestions, and have replaced them with formal processes which deliberately aim to tap into the collective wisdom of their workforces. The goal is to reduce waste and costs, increase efficiencies and to boost competitiveness. To put some numbers to the text; ABB Germany has been actively supporting Idea Management since 1950. Since the 1990's until 2005, ABB Germany's employees have submitted over 60'000 ideas, resulting in savings of over € 50 million for the company and payouts for its employees of roughly €10,5 mn.

Where do those figures come from? In Germany, for example, the “Deutsches Institut für Betriebswirtschaft³” (a non-governmental organisation for business management, founded in the 1950's by local businesses and universities) is the umbrella organisation for idea management in Germany, and is actively tracking processes and progress in this area since 1975. It has been conducting studies since then as to the utilisation and implications of idea management in the German economy.

³ www.dib.de

Its 2006 report, based on information from 315 companies representing all sectors, with approximately 2 million employees, found that in 2006 alone 1,266,758 improvement suggestions were submitted, resulting in overall savings of €1,48 billion - directly attributed to the suggestions - and €163 million in prize money being distributed amongst the responsible employees. This alone is a tremendous accreditation that the knowledge about work processes, systems and products lies with the employees, and that they are indeed a valuable asset to a company. The challenge lies in reaching out into this knowledge pool, stimulating employees to participate actively and contribute towards the improvement of their organisations. Bearing in mind the potential savings resulting from the knowledge held by employees from shop-floor level upwards, it might be worth considering one's employees not just as cost factors, but actual cost-savers.

According to Lawson (2001), it was probably up until the mid, late 1990's that competitive advantages had their foundations mainly on variables such as efficiency, quality, customer responsiveness and speed. In the new millennium however, these variables have almost become the minimum threshold to "play the game". The factors remain important, for sure, but no longer provide the sustainable competitive advantage they used to; too many companies have caught up and are equally trimming costs, focusing on consumers with efficiency and effectiveness. In this day and age, companies face the additional challenge of having to churn out new innovations, be it through products or services at an ever increasing pace, and with higher success rates in order to survive and increase shareholder return. In Lawson's words, "the sphere of organisational and managerial attention has expanded to incorporate both mainstream variables and an innovation capability". Firms today have to use systems and process innovation to further improve their products, whilst simultaneously adding value to the consumer and stakeholders.

Idea Generation and Innovation – same thing?

It may seem confusing. What exactly is the difference between the concepts of idea management and innovation management? After all, both deal with coming up with something new, one way or another. In its purest sense the word innovation derives from the Latin *innovare*, which means "making something new". Depending on which author one quotes, there are again differences amongst the types of innovation. Tidd, *et al* (2005)

differentiate between the areas in which the innovation takes place by defining the following four types:

1. **Product** innovation: as changes to the things (products and services);
2. **Process** innovation: as changes in the ways in which the above are created and delivered;
3. **Position** innovation: as changes in the context in which the products/services are introduced (i.e. from a marketing perspective);
4. **Paradigm** innovation: as changes in the underlying mental models which frame what the organisation does.

Burgelman *et al* (1996) identify innovation as being either one of these three types:

1. **Incremental** as being an adaptation, refinement or enhancement of products/services or they production and/or delivery systems;
2. **Radical** as being an entirely new product or service, production and/or delivery system;
3. **Architectural** as being a reconfiguration of the system of components that constitute the product/service.

Whereas Tidd *et al* look at the places in which innovation takes place; Burgelman *et al* differentiate according to the means or degree of change/innovation. Whichever definition one feels more comfortable with depends on the purpose of study or application. The main point to bear in mind is that we are talking about actually making the changes – regardless as to where and how. By emphasising the “making” here, it clarifies the difference with regards to the concept of idea generation, which is the creative part of coming up with or thinking of something new.

Idea Generation as a Process

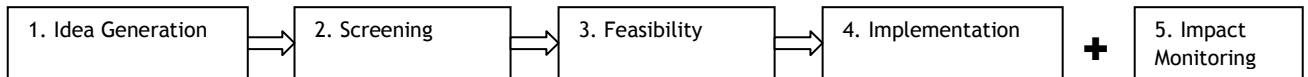
Why do some of the points mentioned above matter in the discipline of idea generation? In accordance with Flynn, *et al.* (2003), the idea generation process is the first step in the overall innovation process. This initial creative process of coming up with an idea of how to do things differently, or something altogether new, is the foundation of innovation. And yes, companies relying heavily on innovation, such as the pharmaceutical industry and the technology sector, have formalised Research and Development (R&D) units in-house, with professionals whose day to day task is coming up with novel products. Yet, there is a plethora of other companies around which do not have formal knowledge and creative workers in

place, and which too benefit greatly from various forms of innovation to remain competitive. It is for precisely this reason that idea generation is being embraced the world over, and why getting it right is tantamount to being “innovative. Not all the innovations and inventions come from skunk works, R&D departments and expert creative thinkers. Some of the ideas became reality because management listened to their employees’ suggestions and had the adequate systems and procedures in place not only to further explore the ideas, but also for them to be brought forward in the first place. Put in the words of Apple’s CEO Steve Jobs, *“Innovation has nothing to do with how many R&D dollars you have... it’s not about money. It’s about the people you have, how you’re lead, and how much you get it.”* (Interview in Fortune Magazine, November 1998). It is this particular area which the following sections will review in more detail.

Being innovative is no one man show, instead it is based on the capacity to interconnect many core-competencies in the interdisciplinary fields (Bolman et. al., 2003 and Ashkenas et. al., 2002). The authors furthermore claim that hardly any one organisation today has all required knowledge in-house to develop, produce and market a new product or service. More than ever, it is the capability to recognise and anticipate sooner than the competition what the future needs are going to be. It is key to maximise and combine own expertise with that of outside partners, to be able to develop solutions ahead of the competition, which will allow companies to sustain a competitive advantage. The challenge lies therefore in having permeable and flexible structures, allowing the flow of communications and ideas necessary to build a web of information, leading to ideas and ultimately innovation.

Yet, innovation *per se* does not guarantee success for a company. Innovating, for the sake of it, can lead to costly mistakes; products and services which consumers do not need or want. Companies need to identify the needs and generate ideas and solutions to address them. (McAdam & McClelland, 2002). So what is the driving force behind innovation? According to several authors, including Amabile (1996), **creativity is the first step in the innovation process**. She, like other researchers (e.g. Mumford, 2000, McAdam & McClelland, 2002, and West, 2002), see creativity as the foundation of innovation; the generation of novel and useful ideas, often based on the recognition of problems and performance gaps. For the purpose of this study, and in accordance with authors like Miller (2008), innovation will be defined as the “commercially successful implementation of creative ideas within the organisation”.

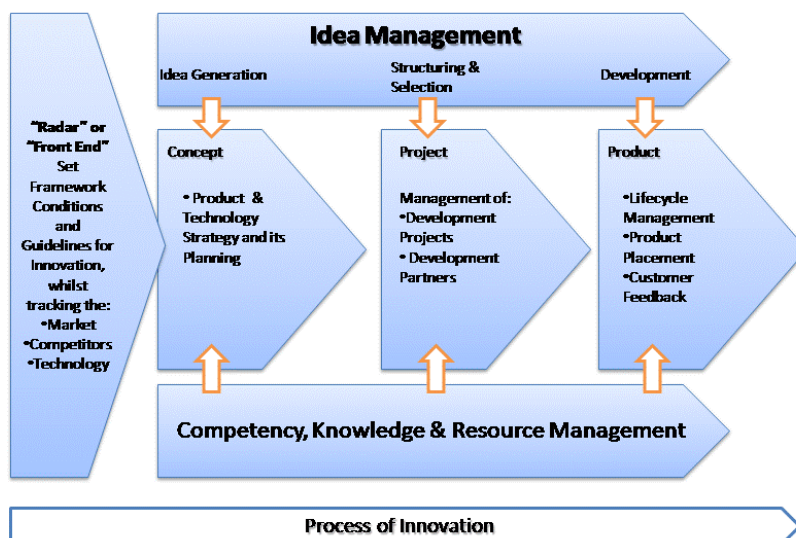
This leads to the next assumption; that **ideas are the foundation of innovation**. Based on a four-step framework developed by Majaro (1988, 1991), innovation is considered a process whereby ideas are generated, assessed for viability and then transformed and implemented into business processes, products and services. The fifth stage of impact monitoring, depicted below, is not part of Majaro's original innovation process, but it is an important one, and for the sake of this paper it should be included and its significance highlighted.



Source: Adapted from Majaro (1988)

There is a need for a structured approach to managing the flow of ideas, and their implementation and monitoring, as all too often ideas float around an organisation, are discussed in canteens or corridors, but then either forgotten, not communicated or implemented properly. In accordance, the past decade or so has seen an increase in the crystallisation of a systematic focus on ideas and suggestions in the wider scheme of innovation. Companies have come to appreciate the value of suggestions made by employees of all departments, not just the formal research & development (R&D) department. In order to implement improvement suggestions effectively, and profitably, all impacted parties need to be involved in the process. For this reason companies have actively adopted the concept of **Idea Management**, which is the practice of gathering and evaluating ideas in a structured fashion, with the aim of sourcing ideas with the potential for implementation and commercial success.

Figure 2: The Innovation Process



Source: Braun, M. & Langemann, C. (2005)

Idea Management, according to Braun & Langermann (2005), has to be more than simply record suggestions put forward by individual employees – it lives through interaction. This is because ideas do not just pop up in a vacuum, they are formed through the interfacing of employees from production, marketing, sales, development, etc. Once ideas are born, the challenge lies in keeping the flow of communication and input at various levels going, to ensure relevance, feasibility and ultimately, success.

Boeddrich (2004), a consultant in the field of innovation management, refers to this collection of ideas and sorting through them as the “*fuzzy front end*”. This is due to the fact that, unlike the developing of projects and producing them, the initial stages of the innovation process are vaguer, more subjective and therefore not as clear cut. It is precisely for this reason that a transparent structure and process for the Idea Generation part is required.

Ideas – where from?

For many years now there have been authors, such as the 1992 Nobel Laureate in Economics Gary Becker⁴, who recognise the *human capital* as an asset of companies. The term, in the modern neoclassical economic sense, dates back to Jacob Mincer's article "Investment in Human Capital and Personal Income Distribution" in The Journal of Political Economy in 1958. In this view, human capital is similar to "physical means of production", e.g., factories and machines: one can invest in human capital (via education, training, medical treatment) and one's outputs depend partly on the rate of return on the human capital one owns. Thus, human capital is a means of production, into which additional investment yields additional output.

Each and every employee possess knowledge – which is the sum of their education and experiences – and will gain more knowledge specific to their jobs, the environment and experiences they are involved in (Troubia, 2006). In this process of communication and sharing, it is not only the individual employee, but also the employer and all the other employees that will become smarter, i.e. gain more knowledge. The crucial aspect here is, as highlighted in Moyer's discussion panel (HBR, May 2004), to transform tacit knowledge into explicit knowledge, available to share with all and to enhance the “body of knowledge” which is the company. For some areas of know-how this is easily done. Manuals, directives, and work procedures; all of which can be written down to ascertain the knowledge is

⁴ Becker, Gary S. *Human Capital*. 1975

accessible to all the employees. This holds true when considering that the employees have the tacit and intrinsic knowledge which is required to operate machinery, perform tasks, provide the services on offer, etc. The tangible input can be purchased; in the open market economies demand for raw materials and operating equipment can usually met by given suppliers.

However, there are some forms of knowledge which are harder to formalise, and human capital is not always easily substitutable. As forums and discussion panels on sites such as the one of the *Deutsches Institut für Betriebswirtschaft* emphasise, finding and retaining the right people to transform the input into competitive output is a real challenge for most organisations. It is for this particular reason that companies the world-over are putting more emphasis on retaining its best people; those with the knowledge and the competencies to turn knowledge, experience and know-how into new ideas, and ultimately new products and services.

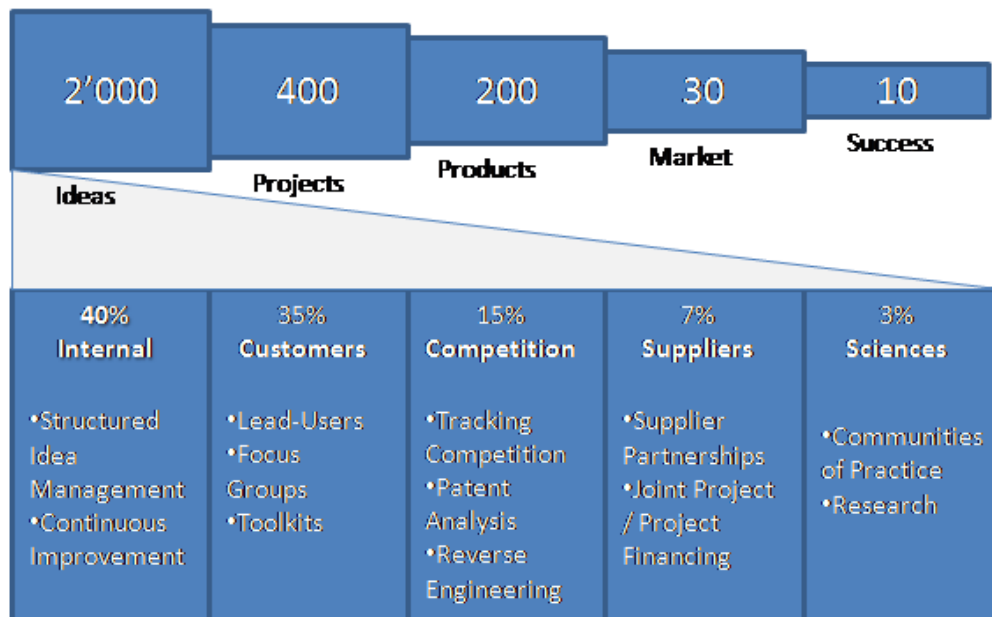
Authors such as Florida and Goodnight (HBR, Jul-Aug 05, pp. 125) concur with this line of thought – that it is in fact the *creative capital* that is crucial to companies. This creative capital is what makes the human capital so valuable; it is as the above authors state the “arsenal of creative thinkers whose ideas can be turned into valuable products and services”, and whose ideas improve the status quo to make it leaner, more efficient and/or more effective.

More specifically, ideas usually originate from a reaction to a certain situation – i.e. compelling people into action, or in a proactive form to exploit potentially new opportunities (Flynn, *et al.* 2003). Van den Ven *et. al.* (1989), as quoted in Flynn, explains further by suggesting that ideas can originate “from a recombination of old ideas, a schema that challenges the present order, or a formula or unique approach that is perceived as new by the individuals involved”. Drucker (1985) ascertains that source of ideas arise usually from one, or a combination of the following situations; unexpected occurrences, incongruities, process needs, market changes, as well as changes in demographics, perceptions and new knowledge. Either which way one looks at the “starting place” of ideas, management is confronted with a plethora of areas to direct attention to, in order to maximise the idea pool.

Having looked at how ideas originate, the next question that arises is “where specifically do ideas come from”? In other words, from which sets of people, or from which areas within the organisation do ideas spring from? Taking the open system’s approach of organisations, it is clear that just like “no man is an island”, no organisation functions alone either. There are

multiple sources of input – in terms of raw materials, products but also information and knowledge. In their paper on the design of an Idea Management system, the German authors Beyer & Seidel (2006) have conducted research within German companies to establish the areas in which ideas originate. The results are highlighted in the table below:

Figure 3: Sources of Ideas



Source: Translated from Beyer & Seidel (2006)

Interestingly enough, the biggest proportion of ideas are sourced internally. Noteworthy is the fact that over half of all ideas stem from *outside* the organisation, from suppliers, competition, customers and research institutes / academia. Therefore, in order to maximise the potential of ideas, it is important to take all the stakeholders into consideration.

Creativity

The foundation of ideas seems to be creativity, in one form or another. It requires a certain degree of creative thinking as to how to change or tweak the status quo to improve it, or to come up with something new. According to Lawson et al (2001), creativity requires divergent thinking, in the knowledge-driven sense of “how do we apply this knowledge to make something different or new” and the vision-driven form of looking at the company’s goals and exploring new ways to reach them. He, along with others as discussed later in this section, sees creativity as the “process of generating ideas”.

Is this creative ability something only a lucky few of us possess? According to Maslow (1954), not just the few geniuses amongst us are creative; rather creativity is the “universal heritage of every human being”. It is the environment in which we find ourselves that can either suppress or nurture our creative senses. Motta (2001) concurs with this stance, in the sense that creativity is a resource all people possess. Some may be more creative than others, and he explains that differences are based on three attributes; firstly are the individual characteristics, then the mental and cognitive processing abilities, and finally the social contexts. Individual strengths and weaknesses in any of the three areas, will ultimately influence a person’s creativity, and thus by default also that of those around him/her.

Amabile (1996) in her studies of creativity and innovation defines that creativity has three core components, namely **expertise**, **creative thinking skills** and **motivation**. The first refers to technical and intellectual knowledge and know-how of an individual, as well as how an organisation manages its collective knowledge pool. Imaginative problem solving and successful task completion are often dependent on the creative thinking skills individuals possess. The final component of motivation plays a huge role in the realm of creativity in the sense that this aspect refers to what makes people strive to do their work and how. It refers to the intrinsic and extrinsic factors which influence individuals. The interplay of these three factors will determine how creative an organisation is. John Kao’s (1989) point of view regarding creativity is in line with this view; in the sense that he sees creativity is the sum of **the person**, **the task** and **the organisational environment** (i.e. the organisational culture).

All of the factors influencing creativity are interrelated, and a change or development in one area will have an impact on the others, in turn impacting the overall creativity.

Furthermore, one can look at *how* creativity occurs. Majaro’s (1991) theory is that creativity can again be divided into three categories, depending on how it originates:

1. **Normative** creativity which focuses on generating ideas to solve specific needs, problems and/or objectives;
2. **Explorative** creativity which refers to generating a broad spectrum of ideas, not necessarily related to current demands, thus allowing for a far larger pool of ideas from which perhaps use is drawn at a later stage, or through
3. **Serendipity**, which refers to ideas coming up almost “by accident”

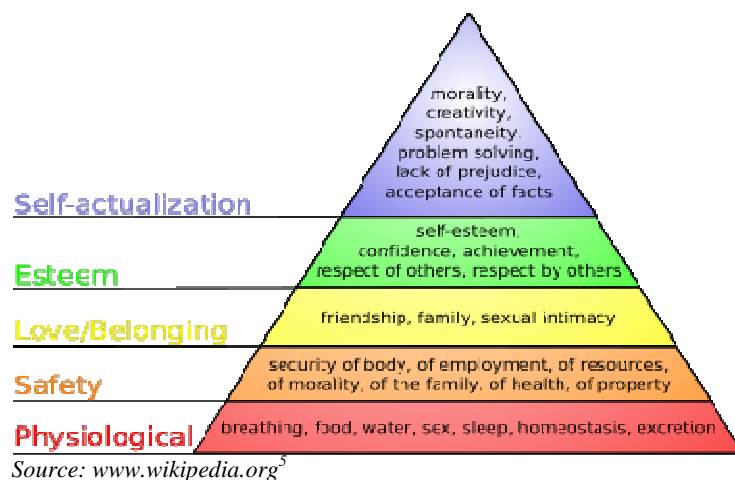
This last point however suggests that one needs to be immersed in the subject matter, or at least knowledgeable to be able to come up with an “accidental innovation”, such as for example Alexander Fleming’s discovery of the antibiotic properties of penicillin. It takes a considerable capability to see the value in an accident, and to build upon it to create even more value. After all, Fleming was not working as a car mechanic when he accidentally discovered penicillin. The point is, and this links back to Amabile’s and Kao’s point of view, creativity does not happen in a vacuum all by itself. The three main drivers of creativity within organisations are **its people and their roles, the organisational culture and motivation**. Therefore, let’s look deeper into the above factors influencing creativity.

Motivation

Fundamentally, according to research conducted by Geen (1994), motivation refers to the initiation, direction, intensity and persistence of human behaviour. Essentially, it is about association positive meaning to certain behavioural patterns, whereby the time delay of rewards impacts the positive effects. The longer it takes to respond, the lesser the effect. Rewards may be extrinsic; such as praise or money, or intrinsic such as a feeling of satisfaction or accomplishment.

Although many theories on motivation exist, the two most applicable to this particular subject matter are deemed to be that of Maslow (1943), and his “**Pyramid (Hierarchy) of Needs**” and Herzberg’s “**Two Factor Theory**”. The next section will briefly describe both, starting with Maslow’s famous pyramid.

Figure 4: Maslow's Pyramid (Hierarchy) of Needs



⁵ http://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs

Maslow's theory's main assumptions can be summarised very briefly as such; humans have needs, desires and wants which influence their behaviour, whereby only the ones not satisfied will wield influence. Given that people generally have many needs, they are categorised and arranged in order of importance, from most basic at the bottom of the pyramid, to most complex at the top. Typically, people progress up the pyramid as the levels of needs are at least minimally satisfied.

The "Two Factor Theory", also known as Herzberg's Motivation-Hygiene Theory, was developed by the psychologist Frederick Herzberg in 1959, and is based on Maslow's theory to a point. Herzberg theory looks in particular at the work environment and satisfaction therein. He agrees with the notion that there are certain motivational aspects which will lead to satisfaction, yet that there is a second set of characteristics or incentives which will lead to work dissatisfaction. Hence the *two factors*, which are by no means a continuum or mutually inclusive, instead they are independent. He further suggests that it is imperative for managers to recognise both sets of characteristics (satisfaction and dissatisfaction) in their employees' jobs to be able to improve job performance and productivity. Simply increasing one aspect does not lead to a decrease in the other and vice versa. Herzberg collected data through interviews with over 200 engineers and accountants in the Pittsburgh area of the United States and found that the characteristics of worker satisfaction relate to what the workers *do* – i.e. the nature of the work – which has the capacity to gratify needs such as achievement, competency, status, personal worth and self-realisation. Interestingly, it seems that the absence of such features do not necessarily imply dissatisfaction. Rather, dissatisfaction stemmed from job-related factors such as company policies, salaries, interpersonal relations, and working conditions. The conclusions to be drawn from Herzberg's finding suggest that management needs to focus on aspects found in Maslow's theory, such as opportunities for gaining status, assuming responsibility, ability to grow through continuous learning, etc. At the same time, when trying to limit dissatisfaction with employees, the onus must be on the working environment and culture, i.e. procedures, policies, supervision and the workplace itself. These two sets of factors were subsequently coined as "motivators" (those which influence satisfaction) and "hygiene" which relates to the working environment, and which are essential to ensure employees are not dissatisfied.

Lately, researchers who have spent considerable time and effort studying the processes of creativity and idea generation amongst employees, such as Teresa Amabile of Harvard

Business School and Robert Sternberg of Yale, have found that creative people are motivated from within (i.e. intrinsically), rather than by extrinsic rewards such as money.

Amabile *et al.* (1994), in their study on motivational orientation have come to interesting conclusions. The results in fact highlight that motivation comes in two forms; extrinsic and intrinsic, which have different impacts on creativity, whereby the latter is deemed to be more impactful.

Extrinsic motivation comes from outside the individual, from external sources in either the form of “the carrot” or “the stick”. In other words, extrinsic motivation can result from incentives such as monetary rewards or the prospect of promotion, or in the form of punishment in cases of failures (humiliation, demotion, firing, etc). Either which way, through rewards or threats, external factors do have an influence on a person’s motivation. Yet neither makes the employee more passionate or interested about their job or the specific task at hand. And it is precisely this passion and interest which drives and motivates people from within, i.e. intrinsically to succeed and exceed. When employees are intrinsically motivated, they engage in their work for the challenge and enjoyment of it, and the work itself becomes motivating. The Nobel prize-winning physicist Arthur Schawlow maintained that “the most successful scientists often are not the most talented, but the ones who are just impelled by curiosity”, and Albert Einstein referred to intrinsic motivation as “the enjoyment of seeing and searching”.

Whereas managers have the ability to influence all three of Amabile’s (1996) components of creativity (expertise, creative-thinking skills and motivation), the first two are more time consuming and difficult to directly have an impact on. It involves careful selection of employees, time spent on training in areas such as creative problem solving, lateral thinking and general skills and knowledge enhancing development. She claims that motivation, specifically intrinsic motivation, on the other hand can be stimulated by even subtle changes in the working environment. This of course is in stark contrast to the Herzberg Theory, which would argue that changes in the working environment (ambience) will not affect motivation, it would just ease dissatisfaction. His theory would argue that in order to increase motivation, the psychological facets such as those found in Maslow’s Pyramid (i.e. self-esteem, respect, responsibility, etc) would be able to increase levels of motivation.

However, if taken to the extremes or even at face value, the above findings seem somewhat unrealistic. One cannot assume that *all* employees enjoy their work, and are dedicated to it. Hence, findings by authors such as Osterloh and Frey (200) have shown that when trying to stimulate all ranks of employees in all departments to think creatively about their work and its processes, and come up with ideas of how to improve them, monetary rewards tied into employee suggestion schemes *can* have motivational powers. The trick seems to be to find the middle ground and a combination of factors with the right mix and proportions, to be able to motivate intrinsically and extrinsically.

The People and their Roles

The annual survey conducted by the Boston Consultant Group (BCG) on the subject of innovation, whereby idea generation is a step *within* the innovation process as a whole, raises some interesting points which are worth mentioning.

The survey involved questioning 2,468 senior executives, in 58 countries and representing all major industries. The results demonstrate how executives view innovation within their companies; its importance, the areas in which spending is directed and the challenges they face. In addition, these 2,500 odd executives were asked to name the most innovative company in their mind. The results and some of the reasoning were:

1. Apple – its continuous reinvention, Steve Jobs (i.e. leadership), its vision
2. Google – organisational culture, high moral amongst employees with focus on innovation, accessibility to senior management
3. Toyota Motor – ability to identify customer needs, manufacturing processes, and focus on quality
4. General Electric Company – innovative management techniques, innovation-supporting organisation structure and culture
5. Microsoft Corporation – streams of new offerings, emphasis on quality, listens to consumers' needs

The authors of the study have been following the total shareholder returns of these nominated, innovative companies over the past five years, and have found that they have continuously outperformed their peers. There seems to be a link between innovation and stock-market performance, as globally innovators outperformed their peers by roughly 400

basis points per year (BCG 2007 Senior Executive Innovation Survey, p. 10; BCG ValueScience Center analysis).

The study also notes that whilst the top-tier management positions (CEO, Chairman, Presidents) were overwhelmingly in the driving seat for innovative behaviour within their company, more than half of the survey's respondents were not satisfied with the financial returns of their company's investment in innovation. They viewed the main reasons why the investment did not seem to pay off adequately to be internal stumbling blocks such as a risk-averse corporate culture, difficulties in choosing which ideas to commercialise, lack of internal coordination and lengthy product development times. Another two factors to be considered obstacles to generating a return on investments on innovation were "*insufficient support from leadership and management* and *[that] compensation [was] not tied to innovation results*" (BCG Innovation Survey, p. 11). Interestingly, it seemed that highest-level executives were most satisfied with the outcome of their innovative efforts (64% of CEOs), perhaps because mostly they are the ones ultimately pushing for more innovation. Whereas financial and operations executives were least content with the outcomes of initiatives relating to innovation (37% were satisfied). This trend can be seen throughout BCG's surveys on Innovation since 2004. This may prompt the question whether the very top level of management – which is mainly satisfied – really understands what is going on in the lower ranks; those 'breeding, living and executing' the innovations. Or whether there is disconnect between what the top level envisions, and yet is not able to convince the rest of the organisation. Either which way, the mere fact that there seems to be a discrepancy in perceptions of satisfaction amongst different tiers of management can only suggest it could exist throughout the entire organisation, thus posing yet another challenge on how to successfully implement a culture of innovators and innovations within companies.

Quoting Cumming (1999), Flynn *et al.* (2003) argue in their paper on Idea Management, the "level of creative output within an organisation is dependent upon the creativity of its human resources". Furthermore, creativity is specific to an individual, which in turn is dependent on their education, skill sets, imagination, in other words their expertise, as well as motivation and the circumstances under which they operate. Moreover, they argue that not every organisation needs all their employees to be creative and/or knowledge workers.

Yet the underlying concept of idea management is that every employee *does* have good ideas about their field of work, and should be listened to. An example of that can be found in Figureido's (2003) study of a Brazilian steel company. In one particular section the author talks about a problem in the manufacture of rolled steel sheets. Management spent many months trying to find solutions to the problem, resulting in vast sums of money wasted due to discarded material, re-moulding, and delays in production lines and delivery. Seemingly by chance one of the supervisors spoke to a line employee about the issue, who immediately came up with a solution to the problem. Given his proximity to the actual work-stream, his in-depth knowledge of the process and its consequences, the matter was fixed in days by simply tweaking the temperature. This insight provided by a line-level employee – someone who by no means falls into the category of the “creative worker” in the academic literature – is the kind of input sought by management these days and rightly so. The challenges for management are what they can do to encourage employees to think about their work, stimulating them to look for improvements and to come forward with their ideas.

Ambabile *et al.* (2002) spent considerable time to study the effects of the actual workplace environment on creativity. She collected more than 9'000 daily diary entries of 177 employees (considered highly educated “knowledge workers”), in seven US companies. The objectives were to examine how employees experience time pressure day to day, whilst working on projects that required high levels of inventiveness, and also measuring their ability to think creatively under the given pressures. Her study's findings support the view that “big ideas take time”. Although there are certainly scenarios in which people have come up with fabulously creative ideas under tight time pressures, and some employees firmly believe that deadlines help them be more creative, Amabile's research has shown the contrary to be true. According to her findings she found that if “creativity is under the gun, it usually ends up getting killed”. The time pressures seemed to yield different results at different stages. Initially, the employees felt invigorated by the high level of involvement, the challenge, and thus felt very motivated. Most of the employees stated they felt overworked, fragmented and burned out.

Take a company like Google, arguably one of the most innovative there is. Laszlo Bock, the head of personnel, was quoted⁶ saying that “creativity comes out of people bumping into each other and not knowing where to go.” The most famous expression of this is the “20% time”.

⁶ “Inside the Googleplex”, The Economist, Aug 30th, 2007

In theory, all “Googlers” (employees of Google), from CEO down to receptionists, can spend one-fifth of their working time exploring new ideas. The idea behind this concept is that it gives employees the freedom and distance from their day-to-day workload to think out of the box and get the creative juices flowing. Good things have indeed come out of this, including Google News, Gmail, and many more.

Gamlin’s *et al* (2007) white paper begins with the quote “idea generation is everyone’s job and no one’s responsibility” and thus highlights the challenge inherent with idea generation and management. Miller’s (2008) arguments are in concurrence with this stance. She maintains that whereas most senior leaders understand the value of innovation, the culture and the skills associated with it, they are not the ones who will execute the idea generation or innovation programme. Middle managers, generally supportive and understanding of the need of such a system, can often be challenged with juggling the priorities and operational issues of day-to-day responsibilities. The line managers, those at the front-line of idea generation and innovation sources, quite often struggle to incorporate the implications of an idea generation system into their operational and tactical responsibilities; the need for training and development, the time to allow workers to grow their skills, yet alone become innovative.

Both authors argue that all too often such systems and programmes lose their potential after the initial launching and marketing phase is over, the excitement subsides and eventually dies. These findings do coincide with those from the BCG studies from the previous years. There seem to be a host of factors influencing and impacting the success or failure of idea generation and management. The following sections will look at some of the relevant ones.

Organisational Culture

The changes of the economic and social contexts in which businesses operate, have forced management and leadership of companies to adapt their styles of running the business too. On the theoretical / academic side, Maslow’s Pyramid of Needs, the concepts of intrinsic versus extrinsic motivational factors, Herzberg’s Two-Factors-Theorem, etc have stimulated and enriched the quest of finding stimuli for employees to perform more efficiently and effectively, whilst at the same time “enjoying” their work – as much as possible. Knowledge, information and therefore the employee, as the bearer of this asset, have become the focal point. In order to optimise the utilisation of this asset, management and leadership need to

look at their organisational structure and culture to ensure congruency with the goals and aims of the business.

There are many ways to approach the definition(s) of culture. The following approaches to classifying organisational culture are taken from Fincham (2000). He argues that some focus on *manifestations* – the heroes and villains, rites, rituals, myths and legends that populate organizations. Culture is also *socially constructed* and reflects meanings that are constituted in interaction and that form commonly accepted definitions of the situation.

Culture is *symbolic* and is described by telling stories about how we feel about the organization. A symbol stands for something more than itself and can be many things, but the point is that a symbol is invested with meaning by us and expresses forms of understanding derived from our past collective experiences. The sociological view is that organizations exist in the minds of the members. Stories about culture show how it acts as a sense-making device.

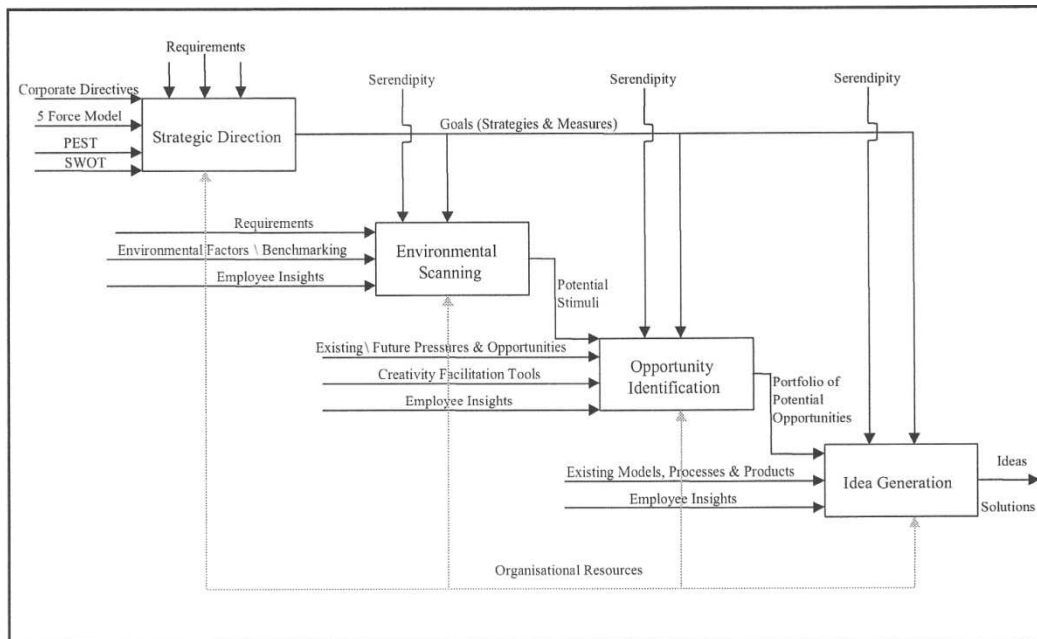
Culture is *unifying* and refers to the processes that bind the organization together. Culture is then consensual and not conflictual. The idea of corporate culture reinforces the *unifying strengths of central goals and creates a sense of common responsibility*. Culture is *holistic* and refers to the essence, the reality of the organization; what it is like to work there, how people deal with each other and what behaviours are expected. All of these elements are *interlocking*; culture is rooted deep in unconscious sources but is represented in superficial practices and behaviour codes. Because organizations are social organisms and not mechanisms, the whole is present in the parts and symbolic events become microcosms of the whole.

According to Martins (2003), organisational cultures are represented and brought to life by various aspects of the organisation. These components, which in their respective combinations and forms create the organisational culture, are the mission and vision, the external environment, image of the organisation, management processes, means of achieving objectives, interpersonal relationships and leadership. It is because all these aspects are unique to each organisation, that business cultures are unique too. The people, with their skills, knowledge, attitudes and relationships form the culture.

By understanding the concept of organisational culture, it is then important to see that it indeed plays an important part in all aspects of the business, including the Idea Management process. The figure below highlights the multiple facets that need to interplay and that have

an impact on the process of sourcing and implementing ideas. Before management commences on the journey of implementing a systematic Idea Management process, it should be looking at the four distinct phases which will impact and define the “seeds of innovation” (Flynn *et al*, 2000), namely the ideas and the solutions resulting thereof.

Figure 5: Idea Generation Methodology



Source: Flynn et al. (2003)

As Flynn's *et. al.* diagram depicts, *strategic direction* is the one most intertwined with the organisational culture. The organisational goals, its vision and mission provide for the overall direction of the Idea Management process. And as the exhibit above visualises, the direction the organisation has embarked on is the one common thread which permeates into all the aspects of the Idea Management process. Moreover, the model highlights the importance for an all-encompassing approach to Idea Management, whereby careful planning, the external environment and factors, resources, training and development as well as a dose of good luck have their part to play.

On a side note, Sommerlatte *et. al.* (2006) makes another interesting point. Companies which in the past have been keen to rationalise workforces in the financially more difficult years, then stocking up on labour when the going is good, doing constant Business Process Reengineering and optimisations (all on account of the employees), and now want to embrace the concept of Idea Generation may find themselves at a loss. Their organisational culture – if it can even be called that, will hardly be fine-tuned and supportive enough to be able to take

on a concept that defies initial cost-benefit and return-on-investment calculations. This emphasises the point of this study; that Idea Management is not a one size fits all system, nor is it possible to push a button and get useful ideas.

Although rules and regulations are necessary, when it comes to aspects such as one's ideas, there also needs to be some freedom and intuition, ideally embodied deep within the organisation in its culture. After all, Karl Benz and Gottlieb Daimler would probably not have gotten very far if they had to "tick all the boxes". They were in all likelihood not able to project the development related costs of getting their car into serial production, nor their market share potentials, let alone the payback periods of said investments. Thankfully, they got to build their cars anyway. It is all the more important then, to collaborate with other parties which will be able to support and provide their input and knowledge, necessary to bring an idea along towards realisation.

Therefore, the link between a company's vision, its strategy and how this links into innovation is crucial to effective innovations management. Lawson *et al* (2001) argue that strategy determines the distribution of resources; manpower, machinery, money, time, and the systems adopted to administer them. Business need to make decisions about its goals, target markets, financials and thus the areas of innovation should fall within these categories or frameworks. Without innovation being guided by the strategy, resources and attention become too wide-spread. Furthermore, Beyer & Seidel (2006) maintain that in order to sustainably integrate the idea management process into the organisation, there needs to be a strong culture *fostering* idea generation and innovation in general. This can be achieved in two ways; one is the link between the strategy and the idea generation process, and having a clear definition of roles, responsibilities and goals of those involved. Secondly, the organisational culture, demonstrated through behaviour and actions from top management downwards, needs to support openness, willingness to try new things, flexibility and recognition to those who live by it. Flynn *et. al.* (2003) summarise the characteristics of an organisational culture in which creativity and the resulting innovation can thrive as:

- Visionary, enthusiastic leadership
- Support by top management (psychological and financial) which encourages creativity and flexibility
- Existence of an effective communication system, in which the business vision is shared through line-of-sight

- A “boundaryless”⁷ focus, within the organisation itself and outwardly toward the consumers and suppliers; after all it does not matter where the good idea comes from.

Another aspect mentioned in a study by Miles (2007) that is specifically pertinent to leadership values, is the creation and atmosphere of trust and recognition amongst employees. Only then can employees freely collaborate amongst themselves, sharing knowledge and information vital in the process of innovation.

Given these points, it becomes clear that the role of leadership within an organisation drives the successes or failures associated with idea generation and innovation – as it does regarding every other aspect of the business.

Role of Leadership

Already back in 1964, Höckel raised the issues associated with lack of commitment, communication and power-brokering that can be related to Idea Management. Vandenbosch *et al* (2006) found in their research that “good ideas are assumed to underlie effective management, and ineffective management implies poor ideas”. Especially in the scenario of a decentralised, supervisor based Idea Management system, the influence over the success of the programme is enormous. The positive aspects when the supervisor is the point of submission for ideas are clear-cut;

- The supervisor can incorporate his competencies and job-specific knowledge to the suggestion, fine-tuning them before the next step in the process, weaning out the weak ideas
- It broadens the spectrum of the supervisor’s job / role, adding responsibility and learning possibilities
- The supervisors play an active role within the process, thus showing support
- Communication between supervisors and subordinates is improved, becomes more active

⁷ Term coined by Ashkenas *et al* in their book „The Boundaryless Organisation“ (2002)

- The processing time of ideas is reduced drastically when dealt with by the supervisor on a day-to-day basis, instead of going through various panels, thus making decisions and results that much more tangible.

On the other hand, there are obvious pitfalls. The “relationship” aspect features more in this decentralised model, making the decision whether to adopt the idea that much more subjective than if it were submitted to a centralised Idea Management team / person. How so?

- Employees are reliant on a cooperative and fair relationship with their superior, as their superior is the one who will decide on whether to take the idea forward, and potentially even as to the scope of the reward
- Therefore, if the manager / superior does not support the system, it is in his / her power to choke it, by not passing on suggestions and ideas or making submission too difficult, or too time consuming

Reasons for this negative attitude towards Idea Generation are plentiful, and include:

- Managers could “fear” the suggestions submitted, as it might reflect negatively upon them higher up the organisational chain, e.g. triggering the reaction of “why did you as the manager not think of this before – this is why we pay you more”... and thus block some ideas, or even pass them on as their own
- The added role / responsibility of evaluating ideas might be seen as a burden to an already heavy workload, as it requires time and effort and more communication and procedures to make the system work effectively

These issues mentioned above, albeit noted in the 1960’s, are still very much applicable to today’s organisational cultures. To be successful, implementation needs to be top-down with the leadership setting the style and supporting the Idea Management system – regardless of who came up with the idea. Leadership must be able to communicate with their managers / supervisor to reassure them of their positions and roles, and listen carefully to the input of those collecting and sorting said input, to make sure that management is compassionate about the cause.

Authors de Jong and Den Hartog (2007) probed into this issue of leadership behaviour, particularly with regards to innovative behaviour of employees. Their study found that indeed

there are certain traits and behavioural patterns which leaders should display and which stimulate creativity and idea generation within employees. Their inventory of leadership behaviours was found to be applicable both to idea generation and implementation of ideas leading towards an open and innovative working environment.

Leadership Behaviour	Consisting of...
Innovative role-modelling	Being an example of innovative behaviour, exploring opportunities, generating ideas, championing and putting efforts into development.
Intellectual stimulation	“Teasing” subordinates directly to come up with ideas and to evaluate current practices
Stimulating knowledge diffusion	Stimulating open and transparent communication, introducing supportive communication structures like informal work meetings
Providing vision	Communicating an explicit vision on the role and preferred types of innovation, providing directions for future activities
Consulting	Checking with people before initiating changes that may affect them, incorporating their ideas and suggestions in decisions
Delegating	Giving subordinates sufficient autonomy to determine relatively independently how to do a job
Support for Innovation	Acting friendly to innovative employees, being patient and helpful, listening, looking out for someone’s interests if problems arise
Organising feedback	Ensuring feedback on concepts and first trials, providing feedback to employees, asking customers for their opinion
Recognition	Showing appreciation for innovative performances
Rewards	Providing financial / material rewards for innovative performances
Providing resources	Providing time and money to implement ideas
Monitoring	Ensuring effectiveness and efficiency, checking-up on people, stressing tried and tested routines (negative relationship)
Task assignment	Providing employees with challenging tasks, make allowance for employees’ commitment when assigning tasks

According to the authors, the above leadership traits serve as direct stimuli influencing employees’ behaviour with regards to idea generation and the application thereof. They also maintain that those employees with greater contact to external partners, e.g. customers and suppliers are more likely to have more relevant ideas simply due to their exposure to

demands and what is possible on the supply-side. It would therefore be unfair to expect the same degree of innovativeness / idea generation from all employees with a more internal focus. The individual situations of employees; in other words the scope of their work, interaction with others, job specifications and much more need to be taken into consideration when designing establishing leadership behaviours.

Rewarding Ideas

In the same respect that companies choose an overall remuneration or reward system to retain and motivate their employees, organisations need to evaluate how to best rewards their employees for their ideas, or whether to reward them at all.

Looking briefly at the philosophy of a flexible, meritocratic remuneration system based on employee participation and results, we will find parallels to the drivers that lie behind rewarding ideas. Typically, reward systems are set-up not just to promote one particular area, but to cover a number of goals. In 1983 the *Deutsches Institut für Betriebswirtschaft* conducted a detailed study (the sample included companies of all sizes and sectors) to identify the main goals of a remuneration system based on profit-sharing. Their findings show that motivation – with regards to increases in productivity, interest in the job, economic consideration and general effort – rank as the top drivers of such a system. Other factors include Human Resources aspects such as retention, attractiveness of job, lower turnover, as well as financial benefits.

The findings of the BCG's survey on Innovation in 2007 with regards to rewarding innovation are startling by contrast. Only 28% of the companies surveyed tie incentives and rewards – formal and informal, monetary and nonmonetary – to their innovation metrics. In other words, regardless of how organisations recognise and/or reward employees for being innovative, less than a third do so systematically. This leaves a vast number of companies that either inconsistently acknowledge innovation and results (48%), or do not do so at all (24%). It then does not come as a surprise that employees surveyed are not all together happy with the innovation efforts of their companies. Rewards fall into the same category as leadership styles, motivation, creativity, job specifications, etc – all areas which need to be taken into consideration in establishing an Idea Generation and Management system.

In some countries, such as Germany, guidelines are produced by the *Deutsches Institut für Betriebswirtschaft*, in the form of booklets such as the one entitled “Ideenmanagement für mittelständische Unternehmen⁸” published in conjunction with *Bundesministerium für Wirtschaft* (the German Federal Ministry of Economy) targeted specifically at SMEs. In accordance with local tax laws and based on remuneration agreements between industry and the unions, these suggestions actually form a non-binding guideline for businesses which actively promote and encourage idea generation and innovation. They stipulate that if the monetary gain can indeed be calculated for a given idea, it suggests that rewards should not exceed 30% of the net savings the idea will generate. For those ideas for which the net gain / savings cannot be quantified (easily), the rewards could be allocated as follows:

Figure 6: Sample Reward Allocation for Ideas Submitted

Ideas & Suggestions that cannot / will not be implemented	
1. Idea is good, but not implementable	➤ Gift (limited in value in accordance with tax)
2. Idea already existent, in planning / implementation stage	➤ Monetary reward (gross) in the range of €50 – 150
3. Well analysed and thought through idea, yet not able to implement for various reasons	➤ Monetary reward (gross) in the range of €50 - 150
Ideas & Suggestions that will be implemented	
4. Ideas which gains can be quantified in monetary terms, and which can without major issues be implemented	➤ 25% of the value of the first year of implementation
5. If an idea's value cannot be calculated, the following guidelines could apply	➤ See table, in Figure 7

Source: Adapted and translated from “Ideenmanagement für mittelständische Unternehmen“, p.34

⁸ Translates into “Idea Management for SME”

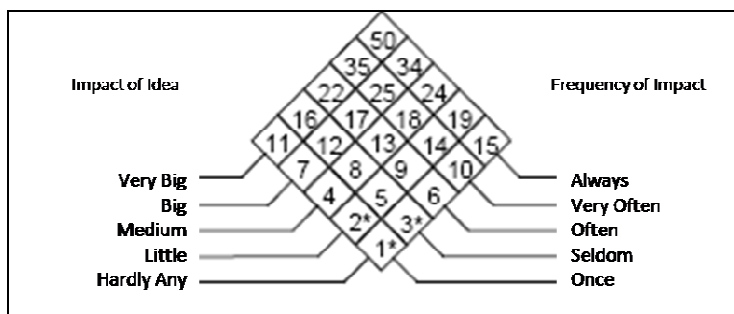
Figure 7: Table to calculate monetary value of reward, based on impact that idea has on the business

	<i>Scope of Application of Idea</i>		
Value of Idea	Small: <i>e.g.</i> <i>individual work place</i>	Medium: <i>e.g.</i> <i>department</i>	Large: <i>Entire organisation</i>
Big	€450	€750	€1200
Medium	€180	€450	€750
Small	€80	€180	€450

Source: Adapted and translated from “Ideenmanagement für mittelständische Unternehmen“, p.34

One large German company, which has implemented a formalised Idea Management system to promote creative input from all levels of employees, uses such a points-based reward establishing scheme. Similar to Figure 7, above, whereby ideas might not have a precise monetary value, Demag Cranes uses a point allocation chart for each and every idea. In the case of Demag, all ideas are valued through points, which measure the impact of the idea on the systems, processes, work, etc and the frequency in which this new idea will be used. The points are then allocated to specific financial rewards, which are added to the employee’s salary that month. Below the table highlights how the guideline in Figure 7 is adapted and put to use.

Figure 8: Reward Allocation Chart



Source: Demag Cranes AG (Gesamtbetriebsvereinbarung, Ideenmanagement, Januar 2002)

Each of the points allocated, as shown above, represent a monetary value, and as such employees are rewarded.

Yet, this issue of rewarding employees for coming up with ideas and suggestions can be found to be ambiguous. Authors such as McCullers (1978, p. 14, as quoted in Toubia, 2006, p. 412) point out that incentives do enhance performance when working in simple, routine

processes. However, the role of incentives is “far less clear in situations that depend heavily on flexibility, conceptual and perceptual openness, or creativity”. In other words, when trying to incentivise creative workers to become more innovative, a simple monetary reward scheme does not seem to be sufficient, or rather research cannot make a clear link between the incentives offered and an increase in creativity. It is hypothesised by the likes of McGraw (1978) that if a task is interesting enough, incentives seem to be superfluous in stimulating employees further. This of course is in line with Ambabile’s (1994) assessment of intrinsic versus extrinsic motivation. Furthermore, the role of incentives was also deemed questionable when the “solution is open-ended enough that the steps leading to a solution are not immediately obvious”. Meaning, if the idea or suggestion is only a small part of a larger, ongoing innovation in a system or process, it is very difficult to reward one individual for their contribution, out of fairness and lack of measurability (McGraw 1978).

Which leads to the examination of individual versus group based rewards. According to research in the business setting done by Schneider and Fritz (2007), there are two noticeable trends emerging:

Firstly, achievement-based systems are being substituted by **success-oriented remuneration systems**. This marks a shift in the remuneration practice, as until most recently the individual achievements stood at the centre of flexible rewards. These were typically quantified, and the addition to the base salary calculated thereof. This new shift in focus clearly demonstrates that personal achievements alone - no matter how significant – are no longer sufficient. The emphasis now is translating those achievements into success. For who will benefit if one employee pushes up production to his / her target rate, but the market has changed and there is no longer demand? This link to targets / success at the end-user stage is also pushing a change in attitude with employees. No longer is one person’s achievement enough, it needs to be seen in the context of the entire business performance – only then will bonuses be paid out.

Secondly, **group-based incentives and rewards** are becoming more predominant, indicating a change of thought here too. No doubt can individual incentives at times increase the motivation of one or another employee, but to survive the company’s overall vision and mission need to be realized. Group incentives are also deemed to move away from egotistical behaviour towards one that sustains the group, i.e. the department and the company.

Schneider and Fritz' (2007) research has shown that it is precisely this behaviour which strengthens the potentials of efficiency and success. The overall positive picture is not diminished by sporadic problems, arising for example from fear of peer pressure or from "free-riders". Group incentives can indeed lead to more pressure on the individuals members of groups, urging all to contribute to more or less the same degree, as not to let the team down. The "free-rider" issue describes the problem of individual employees having to share their success with those who have not contributed or participated, but will gain from the benefits. One could argue that some employees will therefore not deliver to their full potential due to frustration of having to drag along others who do not contribute sufficiently. However, Schneider and Fritz (2007) assert that this scenario is not the norm. Most often, the group dynamics seem to regulate themselves, tracking performance deficiencies, applying pressure where necessary and thus pushing or pulling along weaker members.

The Audi AG, a German car manufacturer has experienced this ambiguity over the years as well. In a speech⁹ by one of the members of the board, Dr. Andreas Schlee commented on how although the company had an Idea Management system in place from 1967, and was rewarding with money, based on values of ideas, participation was not high, and realisation / implementation hovered around 20%. In 1994 management overhauled the system for the third time, and realised that intrinsic factors such as being valued, the process and time it took to bring forward ideas and implement them, as well as recognition played a more dominant role than just "throwing money at the problem" i.e. the idea. The company moved from searching for the big ideas to "every idea counts", made the process more transparent and faster, put emphasis on factors such as the quality of the idea, and its formulation (the mental effort involved in bringing it forward) as opposed to only the material gain thereof, as well as the degree of involvement for implementation on behalf of the idea submitter. These kinds of factors now account for roughly half of the consideration of allocation of rewards, which it should be said are still monetary. However, the realisation that money is not everything; that timing, recognition, and the process of submitting, evaluating and rewarding ideas does play a major part in the overall participation and success rates of Idea Generation and Management.

⁹ Führungsaufgabe Ideenmanagement – Unternehmer stellen Ihre Konzepte und Erfahrungen vor, www.wkr-ev.de/bmwitagu/schleef.htm

3. Frameworks

Designing an Idea Management System

As the authors reviewed in the previous pages find, the idea is the first and defining step towards any kind of innovation. Ideas arise from either individuals or groups. They require a certain degree of creativity and freedom for the employees, as well as access to multiple sources, such as suppliers, customers, competitors and the sciences / academia.

However, ideas as such are not yet an innovation, as seen in the previous chapters. Instead ideas are the cradle of innovation.

In most companies it is the latter stages of the innovations process which get all the attention (BCG Study on Innovation, 2007) and some managers argue that a structured approach to reaping ideas kills the very essence of them; the creativity. This is not totally true. Sure, over-engineered process and too rigid structures can and will nip creativity in the bud. They are however necessary to a certain degree in order to actively promote and manage the generation of ideas, create the framework and basic conditions for an optimal process of maximize their potentials to be implemented successfully (Boeddrich, 2004).

The importance of idea generation in the context of organizational survival and success cannot be stressed enough. Especially in the economic environment of growing globalization and the resulting intense pressures from competition, consumer demands for newer and better products and services, and thus shortening of product life-cycles, an ever growing pool of ideas to satisfy these needs seems necessary (Tidd *et. al.* 2005). To highlight this change in the business environment, it can be noticed that the average life-span of a company listed on Standard & Poor's has decreased from 75 years in the 1930's to only about 15 years in the early years of the 21st century. Although scale and scope still account for much benefit these days, it is the right ideas and the capability and capacity to transform them into innovative and commercially successful products and services that will ensure sustainability.

As Figure 3 (p.15) shows, depicting the sources of ideas, the largest single portion of ideas come from inside the company (40%), yet over half of all ideas will originate from external sources such as suppliers, and picking up trends from the market-place and competition. It is therefore tantamount to harness all sources to fill the "innovation pipeline" with as many good ideas as possible. This aspect, of harnessing ideas, is one of the main *raisons d'être* for

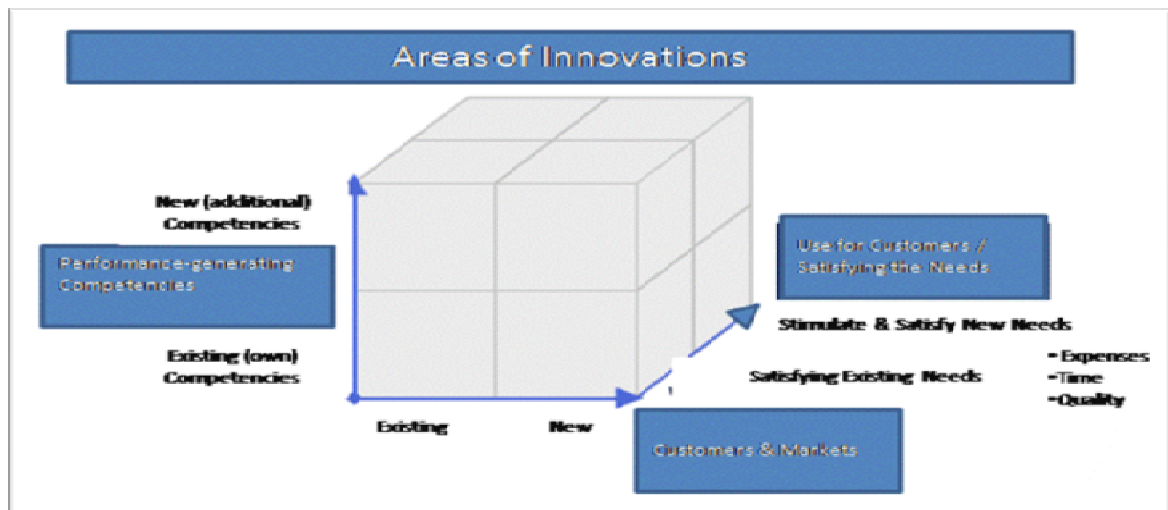
the structured Idea Management system; to establish the channels to the external stakeholders and to include them – where possible – in the process. The following pages will provide a structured overview of the conceptualisation and implementation procedures, based on the findings of an in-depth study conducted by Beyer & Seidel (2006) in Germany.

The 3 Stages within Idea Management

Typically, the Idea Management process can be subdivided into three stages. In line with Flynn (2003), Beyer & Seidel (2006) maintain that during the **first stage** the overall frameworks and guidelines of Idea Generation and Management need to be established, i.e. the *strategic direction*. This is the phase in which management needs to have a clearly defined vision and overall strategy for the company, as the “quest for ideas” needs to be intricately linked to said direction. Thus arises the need to narrow the scope of ideas for innovation, to maintain congruence with what the company is trying to achieve. Providing focus and direction not only allows for more applicable results, but according to the authors also higher levels of motivation for employees as they are guided towards certain areas, and to unleash their creativity not at total random. As the definition of areas of innovation need to be set at the outset of the implementation of an Idea Management system, and then adapted and fine-tuned on a regular basis or when necessary, it becomes obvious that this system requires a top-down approach. Not only is it important to have the buy-in of management for the actual implementation and delivery of ideas through the pipeline to ultimately product launch. Moreover, the mere fact that Idea Management should be linked with overall strategy and goals of the organization, to become meaningful illustrates, that the leadership’s participation and support is essential.

What is implied with the “definition of areas” of innovation? The below cube exemplifies how by plotting ideas according to their characteristics and business needs, it is possible to identify the sources of ideas and the impacts these ideas / innovations will have on the various aspects of the business. This narrows down the playing field in which to explore incremental and radical ideas, and hopefully therefore increases the quality and the chances of success. Also, it gives an indication to the employees and external participants as to the areas which the company is currently placing most emphasis based on needs and demands of the business. After all, a universal “call to ideas” – unstructured and unguided – does not seem to be the most effective way of trying to coax people to be creative.

Figure 7: The Innovation Cube



Source: Translated from Bayer & Seidel (2006)

Fundamentally, the areas of innovation may be characterized by three axes. The first one defining the competencies and abilities of the organisation in relation to the relevant capacities to innovate, i.e. should the idea / innovation be useful only for the existing competencies, or will it enhance and expand them? The second axis (horizontal) indicates whether the idea / innovation will be geared towards existing customers and markets, or whether it will open up new end users. The third axis then explores the options of whether current customer needs are to be satisfied through improvements, or whether hence untapped needs can be fulfilled.

By defining the needs into one of the eight fields, it becomes evident what kind of an approach needs to be taken in order to develop this new entity. For example, if the primary goal is to expand the existing customer market by enhancing the range of products / services which hitherto have not been satisfied, then it would make sense to involve consumers into the process. Equally, if the competency profile of the company needs to be increased, to be able to better cater for the existing customers, it might be wise to include suppliers into the Idea Generation process. Going along the horizontal axis of “customer needs”, will indicate how willing the company is to explore radical innovation as opposed to incremental changes.

Narrowing and defining the areas of innovation, and placing emphasis on certain fields are the responsibilities of the leadership and management. By re-evaluating the choices and weighting on a regular basis, the organisation can ensure that ideas generated are pertinent to the current business environment and demands.

This first step within the first stage of the Idea Management design achieved; having created line-of-sight and relevance, the next one is just as important; the definition of the “rules of the game”. From the outset the structure, the process itself and the criteria for selection and ultimately rewards have to be established and transparently communicated for all employees.

The **second stage** of the Idea Management process concerns itself with the *idea finding process*. The goal is to be able to fill the funnel with as many (good) ideas as possible, to enlarge the possibility of finding a successful idea. There are several ways of encouraging the creativity within the “supply-chain” of ideas.

One would be an Idea Competition. Especially for larger organisations this is a viable option to stimulate creativity. Top-management is required to define the areas of emphasis, which need to be communicated to participants. A panel for selection and evaluation of ideas needs to be determined, as well as the criteria by which submissions will be judged. Furthermore, there needs to be an established time frame and crucially the supporting structures in order to assist submitting members in the subsequent stages of the process. Those managers running Idea Management and the competitions have to plan and allocate sufficient resources to be able to bring together the authors of ideas with specialists who possess the know-how and technical understanding to be able to turn an idea into a business solution. Assistance needs to be available from the word go, to be able to answer questions such as ‘how is an idea formulated, and how can it be conceptualised in order to be presented to the management, including resource requirements, financial projects, etc’.

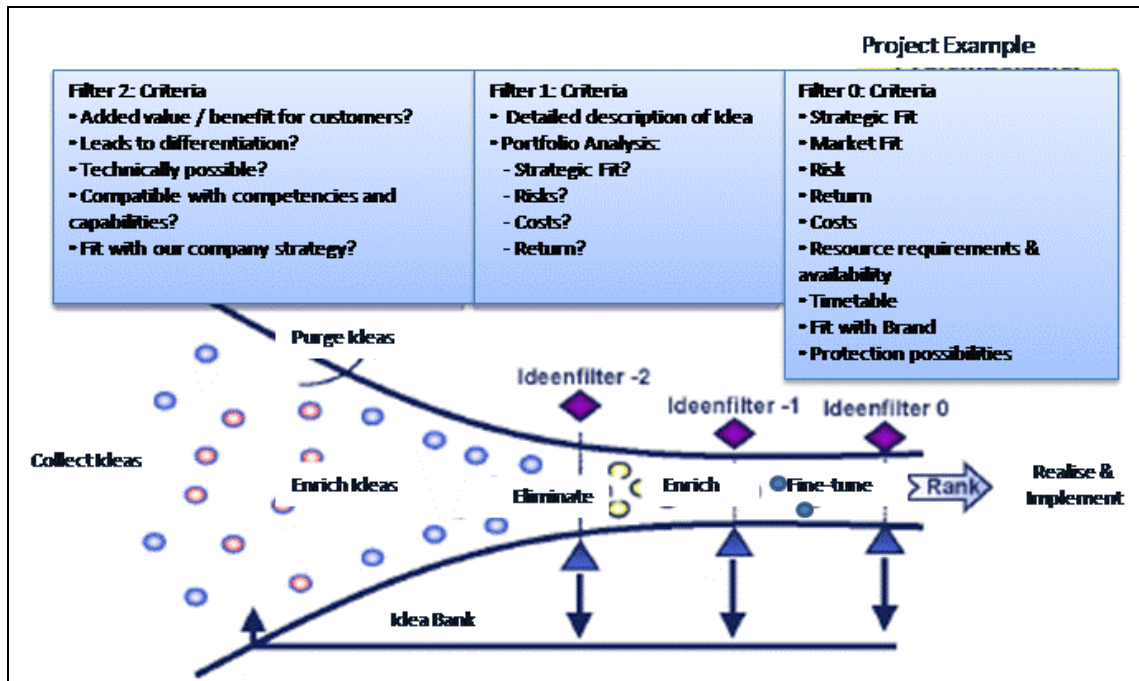
One example of such an event is IBM’s *InnovationJam*. These are on-line brainstorming sessions, which bring together more than 150,000 people from 104 countries, including IBM employees, family members, universities, business partners and clients from 67 companies. Over two 72-hour sessions, participants posted their ideas onto the online portal, as they explored IBM’s most advanced research technologies and considered their application to real-world problems and emerging business opportunities. Recent *InnovationJams* have included the automotive and telecommunications industry, with over 46,000 and 60’000 ideas submitted respectively. "Collaborative innovation models require you to trust the creativity and intelligence of your employees, your clients and other members of your innovation network," said IBM Chairman and Chief Executive Officer Samuel J. Palmisano (Nov, 2006). "We opened up our labs, said to the world, ‘Here are our crown jewels, have at them’.

The *Jam*, and other programs like it, will greatly accelerate our ability to innovate in meaningful ways for business and society."

A different and more continuous approach is the concept of "Communities of Practice". Their foundations are usually specific subjects/fields, and the members comprising each Community add through their knowledge and skill set to the group. The common area of expertise and the complementing skills are vital components driving the Communities. Typically, members of a Community include both internal and external "experts"; employees, suppliers and customers. Their roles are defined at the outset, ensuring that goals are set, and resulting ideas will be documented, examined and presented to management. Hence, the linkage between the Communities of Practice and the Idea Generation and Management is assured. Some of the world's most famous "Communities of Practice" are undoubtedly Wikipedia, an open-source encyclopaedia, and Linux the open-source software provider.

Having set the strategic direction of the company, defined the areas in which ideas are sought, and having encouraged idea submission through various groups and dynamics, filtering submitted ideas comes next. During the first phase of this process, ideas which do not relate or apply to the current requirements set in the Innovation Fields (the Cube), should be purged and perhaps added to an "Innovations Bank" for future reference. During this filtering process ideas will be sorted based on the criteria set forth by the management. Criteria become successively more detailed and critical, particularly in the last filter, in which economic variability is assessed. Criteria should be related to business objectives, and should be set and applied at different phases of the innovation process and need to be *reasonable*. They are very important in ensuring sustainability of the system, and more significantly for the motivation of the employees.

Figure 8: Criteria for Idea Selection



Source: Translated from Bayer & Seidel (2006)

Beyer & Seidel's diagram visualises the process of filtering, and calls attention to some of the aspects which should be considered when evaluating ideas, whereby the filters seem to go from general to narrower and finely attuned to the individual business requirements. Issues such as feasibility from a technical perspective, financial viability, return on investments to timeframes and fit with existing brand portfolio all need to be taken into consideration before embarking on the process of implementation.

The *third stage* is that of the realisation and implementation of ideas. Naturally, the more radical the idea, the more complex the implementation will be due to more uncertainty, complexity and greater need for resources. Depending on the individual organisation, its structure and nature, implementation can be either done in a decentralised process, i.e. the team with the idea implements within its function or alternatively through a centralised unit such as a "new ventures" team, or a "business development" unit.

Administering an Idea Management System

The most pertinent question regarding the implementation of an Idea Management System in an organisation is as to how it is to be administered and managed. Briefly touched upon in the section of the role of leadership, and based on the findings of Vandebosch (2006), de Jong *et*

al (2007), there are two opposite approaches of managing the flow of ideas in organisations; namely the centralised and the decentralised approach. Of course there is plenty middle ground of how to mix and match these types according to company requirements, and the following paragraphs will examine in greater details the factors and implications of different models of Idea Management. The findings here are based on information collected from hundreds of companies in Germany, and published by the *Deutsches Institut für Betriebswirtschaft* (www.dib.de, 2008).

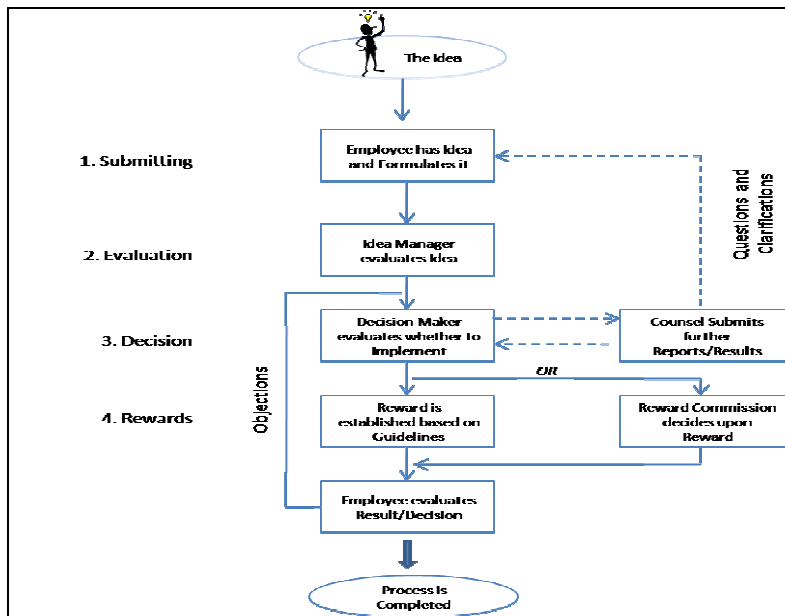
Before looking at which type of Idea Management System to implement, leaders of an organisation need to consider the role of all levels of supervisors, management and leadership, as they will prove to be a pivotal stepping stone for success of the system. Why is the role of the leadership so important? Too little involvement and support for the Idea Management System, and it will collapse before it even gets going. After all, “in science the credit goes to the man who convinces the world, not the man to whom the idea first occurs” (Sir Francis Darwin, *Eugenics Review*, April 1914), which in the case of the business world cannot be taken literally. However, what is true is the fact that a person with a great idea cannot make it alone. It is inevitably a team effort, and it is up to the leadership of an organisation to set the tone and rules of the game in order to make the process from initial idea to successful product as smooth and effective as possible.

Coming back to the actual management of the Idea Generation process, the following figures, depicting flowcharts of the Idea Management Process are based on those available at the *Deutsches Institut für Betriebswirtschaft* (2008) and give insight into the players, their roles and influences / responsibilities in the process of sparking, reaping and implementing ideas.

Centralised Idea Management

This is the “classical” model of Idea Management, whereby a centralised body - usually led and represented by an “Idea Manager” – is the hub for all suggestions submitted. The person in this role is usually the one dealing with the employees, assisting them in the formulation of the idea if need be, is responsible for the processes of evaluating the idea for feasibility and implementation. The “Idea Manager” submits the suggestion to a relevant decision maker, who based on technical competencies, can understand the implications and cost savings, and furthermore does (or initiates) the necessary testing required, and establishes rewards based on the information gathered as to savings resulting thereof.

Figure 9: Centralised Idea Management Model



Source: Deutsches Institut für Betriebswirtschaft¹⁰

The roles involved in this centralised process would be:

Employee (Submitter of Ideas): The employee (or a group of employees) is the foundation or starting point of the Idea Management process. He/she has the idea or suggestion of improvement.

Idea Manager: Is the coordinator of the idea management process / system, and has a function of advisor and mediator between the Employee and the Decision Maker.

Decision Maker: The person(s) with the technical know-how and skills to be able to evaluate the idea, and its implementation and benefits. He / she is also involved in the budgeting of the project that results from the submitted idea.

Council/Consultant: In some (more complex) cases, there is a requirement for an outside counsel or consultant, which (who) would have to study the feasibility in greater detail and conduct a technical study on the matter. They would be called upon by the Decision Maker to add a non-partisan opinion to the suggestion.

Reward Commission: This body establishes the parameters of rewards, depending on impact of the idea. It is led by the Idea Manager, and should regularly be reviewing and negotiating

¹⁰ <http://www.dib-ideenservice.de/ideenmanagement/zentralesmodell.cfm>

relevant reward schemes, based on past cases, profitability and resource calculations, etc. This commission should be made up of vested managers and employees to balance the input and to allow for greater transparency and representation.

The involved parties all bear the responsibility to submit, evaluate, and reward the idea as speedy and fairly as possible. As seen in Exhibit 8, the employee whose idea is being evaluated has the opportunity until the very end to partake in the process and add further input. Also, one needs to bear in mind that not every single employee with an idea will have the capability to formulate its impacts, resources required, etc. Therefore, it is all the more important to have sufficient support and feedback for employees all along the path of idea generation, submission and implementation to allow those ideas which have the potential, but lack of eloquence in their formulation, to survive.

The advantage of the centralisation of the process is mainly that there is a dedicated body dealing with the matter, and that biases and preferential treatment should therefore be minimised. Also, by involving a dedicated Decision Maker, supported by Commissions and Councils, there should be a fair degree of expertise involved in making the decision and committing to the idea. The drawbacks on the other hand are that it is a time consuming process which could stymie the rapid implementation of a good idea simply because it has to go through the entire process. Especially in small and medium sized enterprises (SME), in which the above roles are additional responsibilities of existing employees, and not dedicated positions/roles dealing only with Idea Management. It is a fine balancing act of trying to ensure fairness and due diligence, yet not overcomplicating matters and bogging the ideas down with too much process.

Decentralised or Functional Model

The alternative to the centralised model is the functional model. This model is leaner than the aforementioned centralised one, because each functional manager is responsible for their own idea generating and implementing stream within the organisation. It involves the employees submitting their ideas directly to their line manager, who will be the one deciding on whether to implement the idea, and on the reward.

```

graph TD
    Start([The Idea]) --> Submit[Employee Submits Idea]
    Submit -.->|Questions and Clarifications| Submit
    Submit --> Decision[Functional Manager decides whether to Implement]
    Decision -.->|Counsel Submits further Reports/Results| Decision
    Decision -- OR --> RewardComm[Reward Commission decides upon Reward]
    Decision --> RewardGuid[Reward is established based on Guidelines]
    RewardComm --> RewardGuid
    RewardGuid --> Eval[Employee evaluates Result/Decision]
    Submit -.->|Objections| Eval
    Eval --> End([Process is Completed])
  
```

The flowchart illustrates the Idea Management Process, which is divided into three main stages:

- 1. Submitting:** The process begins with "The Idea" (represented by a person with a lightbulb). An arrow leads to "Employee Submits Idea". A dashed feedback loop labeled "Questions and Clarifications" returns from this step to the initial idea stage.
- 2. Decision:** An arrow leads from "Employee Submits Idea" to "Functional Manager decides whether to Implement". A dashed feedback loop labeled "Counsel Submits further Reports/Results" returns from this step to the manager's decision stage.
- 3. Rewards:** From the decision stage, two paths emerge, both leading to "Reward is established based on Guidelines":
 - A direct path labeled "OR".
 - A path through "Reward Commission decides upon Reward".

Both reward paths lead to "Reward is established based on Guidelines", which then leads to "Employee evaluates Result/Decision". A feedback loop labeled "Objections" returns from this evaluation stage to the "Employee Submits Idea" stage. Finally, an arrow leads from "Employee evaluates Result/Decision" to the end state: "Process is Completed".

In this Functional/Decentralised model, the involved parties are:

Functional Manager: All suggestions are directed to this Functional or Line Manager. He/she can add functional expertise to assist in the formulation of the idea and which is necessary in the evaluation thereof. The Manager decides whether to implement the idea, and based on company-wide reward schemes will allocate the respective reward. In some cases, the Reward Commission might be consulted too.

Reward Commission: This body establishes the parameters of rewards, depending on impact of the idea. It should meet regularly to review and negotiate relevant reward schemes, based on past cases, profitability and resource calculations, etc. This commission should be made up of vested managers and employees to balance the input and to allow for greater transparency and representation.

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This main advantage of this model is its leanness. Decisions can be taken rapidly, given the decision maker's direct, day-to-day involvement in the subject matter and thus knowledge of the area. However, the main drawback is that human relations can play a complicating role in this process. For example if there is preferential treatment towards some employees due to personal relationships, or on the other hand a dislike towards individuals which could result in unfair evaluation of ideas. It is crucial for successful Idea Management to be deemed fair and just by the employees, as well as showing tangible results in a timely manner. Furthermore, there is the aspect of power, ever present in every organisation. Some managers might fear their power-base subsiding if it becomes too obvious that there are too many good ideas coming from the employees in his watch. Here organisational culture and its manifestation within all employees can play an important role, e.g. with a mindset of "all being in the same boat, heading in the same direction" (Sommerlatte, 2006).

The Hybrid Model

The last option, and there are plenty of variations thereof, is a hybrid between the centralised and functional (decentralised) model. It tries to take the best of both, and to avoid the pitfalls either of them can provoke. This process involves submitting trans-departmental ideas to a centralised Idea Management function, which perhaps deals with more holistic ideas such as those which transcend individual departments or work processes. A Functional Manager would still be available for ideas more specific to a given department/area of work, who would have the freedom to accept and implement, or reject ideas within his/her area of responsibility.

There are several advantages by having a dedicated Idea Manager. One being the employee has the opportunity to obtain non-biased feedback, assistance in the formulation of the idea and its implications, as well as the knowledge that there are "checks and balance" in the process to avoid preferential or unfair treatment. Furthermore, with a dedicated Idea Manager, the communication about Idea Management within the company will be more vibrant, and there is less chance of the Idea Management to be just a fad, and fade away over time once routine day-to-day work takes over again. On the other hand, being able to submit "localised" ideas to the line manager allows for more timely implementations of so-called "quick fix improvements" and hopefully enhanced communication within the function as ideas are discussed. The roles of the people involved are a mixture of the ones found in the Centralised and Decentralised model.

Software Options

Numerous software companies ranging from the big “blue chip companies” such as IBM, HP, Computer Associates, etc to smaller, niche providers offer programmes, portals and platforms which can manage the Idea Management and Innovation Processes. Some are custom built, fully integrated into existing software, some are off-the-shelf auxiliary programmes. Interviews with a Sales Director for Telecommunication Solutions at IBM, as well as research on the company’s website have yielded the following information as to what is currently available. The supply of software is vast, and the following is only a small selection of what is out there. Yet it will give an indication of what is possible, and how indeed there are links to the theory discussed in earlier sections of this paper.

IBM’s response to finding a new approach to traditional suggestion boxes is a dedication to open collaborative innovation and an understanding of idea-rich communities, the *ThinkPlace*, an internal collaborative innovation platform, based on *alphaWorks*, the portal for emerging technology. It is a web application for facilitating innovation through idea generation, collaboration, and refinement. It is very much unlike a traditional suggestion box, as when used within a company, it shares ideas within the entire company. By providing a common place for sharing, refining, and recognizing ideas, *ThinkPlace* encourages all employees to innovate and to collaborate on further improvement of the ideas. Even if employees don't have an idea to post, they can look around, collaborate, rate others' ideas, or find ideas for their own use. Improvement suggestions to current ideas in the pipeline are encouraged, both from within and outside the company, with up to 60% of users being external. Anyone registered can suggest ideas, comment on them, refine them, express support or even explain why the idea might not work. More importantly, the ideas that employees think have the greatest potential to grow the business, solve existing problems, or improve the company’s culture will automatically be considered. Behind the scenes, a global network of subject matter experts use data mining tools to track the most promising ideas and help manage top-rated ideas through the formal review processes. Additional business methods then carry the idea forward for implementation. "We're taking the best aspects of jams, wikis and online communities and applying them to our understanding of innovation in the 21st century," says Nick Donofrio, senior Vice President Technology and Innovation, and one of the executive sponsors of the *ThinkPlace* programme. "We're blessed with more than 300,000 of the most innovative employees in the world, but it hasn't always been clear how they could share their ideas - until now. *ThinkPlace* provides an open, collaborative and

global platform for tapping into their collective expertise." In terms of man power behind these online portals, IBM allocates so called "catalysts" to the different projects; employees with the appropriate knowledge and skills in the area, to drive the suggestions forward and ultimately to transform them into business solutions.

The actual software which drives these platforms and portals supplied by IBM is called "*InnovationFactory*". It is a leveraging software, using the current brands such as Lotus®, Websphere® and Information Management. By providing Web 2.0 capabilities such as blogs, wikis, social tagging, profiles it becomes interactive. It promises to reduce development cycle times by involving the relevant business partners in the feedback process, which also means ideas not deemed adequate, or with little chance of success are weaned out in the early stages, reducing risk and costs.

Contrasting the solutions provided by IBM, there are a plethora of smaller companies offering products and services. One such company is BrainBank Inc. A company dedicated to Innovation and Idea Management, in providing product and service solutions to companies large and small, including Johnson & Johnson, the International Olympic Committee, Wachovia Bank, and many more. Their patent-pending Idealink™ technology delivers both the cultural and technical elements necessary to deliver the measurable ROI that's at the core of the innovation mission. The IdeaLink™ software is made up of four different segments; Employee, Customer, Supplier and Investor, thus covering all areas – internal and external – which are ultimately involved in the Idea and Innovation Management process.

By just having briefly introduced two companies supplying businesses with Idea and Innovation Management software, it become obvious that the days of the "letter-box" style suggestion scheme, located near the staff canteen, are history. What is important today is an all-encompassing, interactive scheme which takes into account the open systems approach to business, in which external partners and customers become (heavily) involved.

In Numbers

Using the numbers provided by just one company, BrainBank Inc, it estimates that Idea Management and the resulting innovations typically fall into five main categories, and their impacts are distributed as follows:

- 42% Cost Savings
- 31% Revenue Generating
- 13% Environmental
- 11% Customer Service Improvements
- 3% Safety

These percentages quoted are based on a composite of over 300 individual and partner-assisted programmes spanning a 15 year period, as well as current industry statistics associated with innovation and ideas. Statistics for the US and Canada confirm that over the year 2005 – 2006 there has been a 623% increase in the use of innovation programmes in companies. Based on BrainBank’s research, the average financial value of an approved cost savings idea was \$27,901/year. The average financial value of an approved New Product idea was \$46,772,000/year. Of all the approved ideas tracked, only 0.98% were one-time gains.

Monitoring

Each year billions of dollars are spent on “innovation” in all its forms and dimensions. Yet a critical part of the process is often missing, or at least neglected; that of measuring the impact and results. Consequently, lack of information or incorrect information often leads to wasting of resources such as manpower, time, money, etc and thus lowering the returns on the initial investment. For this reason, the fifth element of Majaro’s (1991) flowchart¹², that of monitoring, is crucial in the overall process of innovation. This is pertinent specifically within the area of idea generation. As research by, for example Wells (2005) underlines, when an employee suggestion scheme is mismanaged, the efforts and resources spent on keeping it alive can be wasted. In the case mentioned in her study, management was rewarding ideas with cash, but not tracking the ideas or the use thereof. After the initial enthusiasm, the company saw a rapid decline in ideas submitted and motivation levels of employees. Scrutiny of the situation brought to light that the implemented system created

¹² See page 11 of this study

rivalry amongst different departments, and ideas brought forward and implemented affected some areas positively, whereas others negatively. Enquiries and monitoring of employees' work habits found that recognition and cross training would generate far greater motivational levels within the workforce. An urgent need for better internal communication structures was also discovered. Once these factors were established and implemented, the idea generation system became much more effective, morale increased and for many years the company has reaped the benefits of a more rounded workforce supplying ample ideas of improvements.

With regards to measuring the idea output by employees, research conducted by Dean *et al* (2006) has focused on constructs and scales to define ideas, both in terms of quality and quantity. The latter has been the more relevant point for most companies in the past, assuming that the more ideas brought forward, the greater the chances of good ones amongst them. Briefly summarising Dean's criteria and findings, it emerges that they are based on three constructs. The first is the regarding **idea quality**. Here three characteristics need to be fulfilled: that the idea should apply to an existing problem, it should offer an effective solution and it should be implementable. In short, it should be workable, relevant and specific. Secondly, is the aspect of **idea novelty**, which is measured along a scale of how rare, unusual and uncommon it is. Finally, there are the **creative ideas**, which in the minds of the authors is a quality idea that also requires novelty. In other words, it is a combination of the first and second construct. The authors' research suggests that grouping submitted ideas into these three categories, or constructs, supports an organisation in their monitoring of the idea management system.

Yet, the monitoring of ideas seems to provide managers with some difficulties. One aspect which does facilitate this process is perhaps a close link to the reward structure. Depending on how an organisation chooses to reward employees' ideas, the process of monitoring can become easier. For example, if rewards are based on point systems, or the monetary value the idea generates (or saves), then keeping track of the value generated by the ideas becomes manageable. This is particularly true for ideas pertaining to new products or services, the revenue of which can be traced through the accounting systems. However, how does a company monitor whether the resources spent on implementing and running an idea generation system is recouped by the ideas pertaining to small improvements to processes and operating systems – which may save time, effort and increase motivation – yet are hard to quantify? The answer lies, at least in part, in the reason an idea management system was implemented in the first place. Not every company will employ such a system purely for

increased return on investment. For some, particularly those in the “non-creative” domains, an idea management system can contribute to the soft issues, such as motivation, whilst simultaneously reaping benefits from cost savings, process enhancements and the likes (Sommerlatte, 2006). Whatever drives an organisation to invest time, money and manpower to establish an effective idea management system, they should monitor the results based on the “output” they expect to achieve. Be it increased revenue or profit, lesser expenses, greater motivation and thus lower employee turnover, etc. One way or another, it is possible to establish whether the resources committed are put to good use, and whether the system in place delivers on the expectations of its creators. For if it does not, it will need to be adapted, changed or scrapped in order not to cause damage – just like any project which started off with the best intentions can – by bleeding too much money, or causing disenchantment and ultimately frustration (Höckel, 1964).

4. Idea Management in Practice

In order to put the theory described in the previous sections to the test, and to discover whether all the issues relevant to the subject are taken into consideration, the following section is dedicated to the findings of one company in Brazil; Souza Cruz. It ranks among Brazil's five largest businesses and is a subsidiary of British American Tobacco, the most international of the tobacco groups, whose brands are sold in 180 countries all over the world.

Brief History of Souza Cruz

Founded by Portuguese immigrant Albino Souza Cruz in April 1903, with just sixteen employees, the company produced cigarettes through an innovative rolling machine at a town-house in the heart of Rio de Janeiro. This 'revolutionary' machine was able to roll five cigarettes simultaneously... The instant success of this product in the tobacco stores of what was then the capital of Brazil forced this young entrepreneur to step up his output. In 1910, Souza Cruz purchased a snuff plant, the Imperial Fabrica de Rapé Paulo Cordeiro in the Rua Conde de Bonfim, framed by the forests of Tijuca. The industrial facilities were transferred there and snuff was gradually replaced by cigarettes.

But more funds and better technology were needed to speed up the growth of this enterprise. In order to attain these objectives, Albino Souza Cruz took his company public in 1914, with the stock control transferred to the British American Tobacco (BAT) Group. This transaction spurred the growth of Souza Cruz, which developed steadily into the largest tobacco company in Latin America. From then on, Souza Cruz stepped up its output and went international, developing in technological terms and becoming an unchallenged market leader and international benchmark for marketing mass consumption products. Today, Souza Cruz works with the entire product cycle, from leaf-growing and processing tobacco through to manufacturing and distributing cigarettes. Souza Cruz operates two factories. The newest one is located at Cachoeirinha in the Porto Alegre Metropolitan region in Rio Grande do Sul State, inaugurated on the same date as the Souza Cruz centenary: April 25, 2003. In Minas Gerais State, the Uberlândia factory is the largest facility of its type in Latin America, with

some 1,100 employees and an annual cigarette production capacity of 95 billion sticks, and in operation since 1978.

The Uberlândia factory includes a constructed area covering 150,000 square metres, framed by landscaped settings that cover 872,000 square metres, with artificial ponds and gardens. The industrial sections were designed to make the best possible use of natural light and ventilation, upgrading the quality of life for its workers.

It is this factory in Uberlândia which has launched a new initiative to create a long-term culture of innovation. In November 2007 the pilot project “VIA” got underway, standing for “**vemos, inovamos, atuamos**”, which is Portuguese and translated means “see, innovate, implement”. VIA is part of a global pilot project, running also in Japan, Venezuela and Russia; however it is only Brazil which is focusing on the production, i.e. the factory, for the venture.

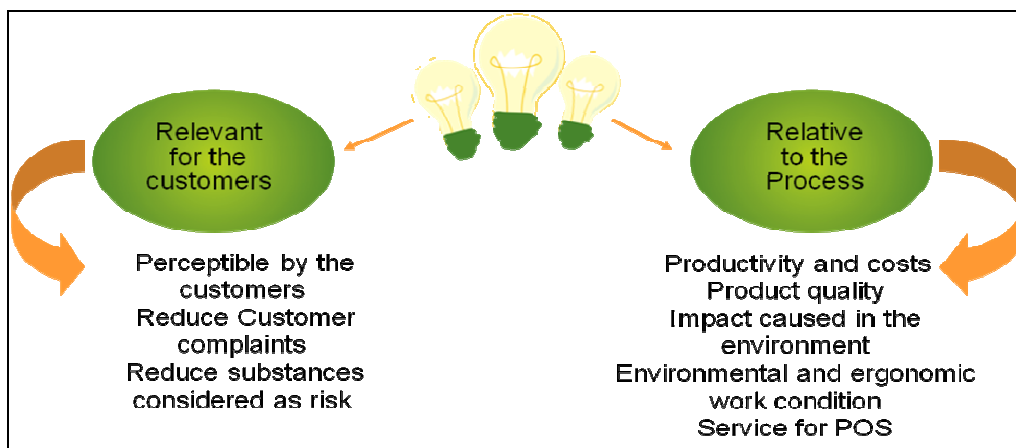
The foundation for VIA was laid in 2004, when the BAT Group launched an initiative they called the “Garden of Innovation”. The company has over the years become a leader in process and systems innovation, with the lowest operating costs in the industry. However, to remain competitive in the restricted environment of tobacco sales (in terms of regulation and marketing possibilities), the company is turning to consumer innovation to remain a leader in the tobacco industry. Furthermore, VIA supports and is aligned to the overall vision of Souza Cruz, namely to be “leading the Brazilian market of tobacco products in a responsible and innovative way, assuring the sustainability of the business and the development of our talents and of our brands”.

The VIA project was implemented in the factory in Brazil to generate (stimulate) and manage innovations proposed by the employees, and its aims are four-fold:

- Provide a platform to develop an environment more favourable for innovation
- To prioritises ideas and innovation related and geared towards the consumer
- To manage the structure of generation, selection and implementation of ideas, supported by an IT system
- To create an *Innovations Culture*

The organisation followed the overall Group strategic direction by focusing on consumer-relevant ideas, as they want to be able to add value. VIA is targeted at the shop-floor level employees in particular – managers are excluded from rewards available - by harnessing their expertise and creativity on processes and technological equipment, to drive the culture from process related innovation to product innovation. Briefly, the distinction lies in the focus to the value-add for the consumer. Whereas process innovation at Souza Cruz lies in the areas of productivity, costs, environmental impact, and workplace efficiencies, the product related focus is geared towards consumer perception and experience, product quality and consistency, harm reduction and reducing negative customer feedback.

Figure 11: Consumer & Process Ideas

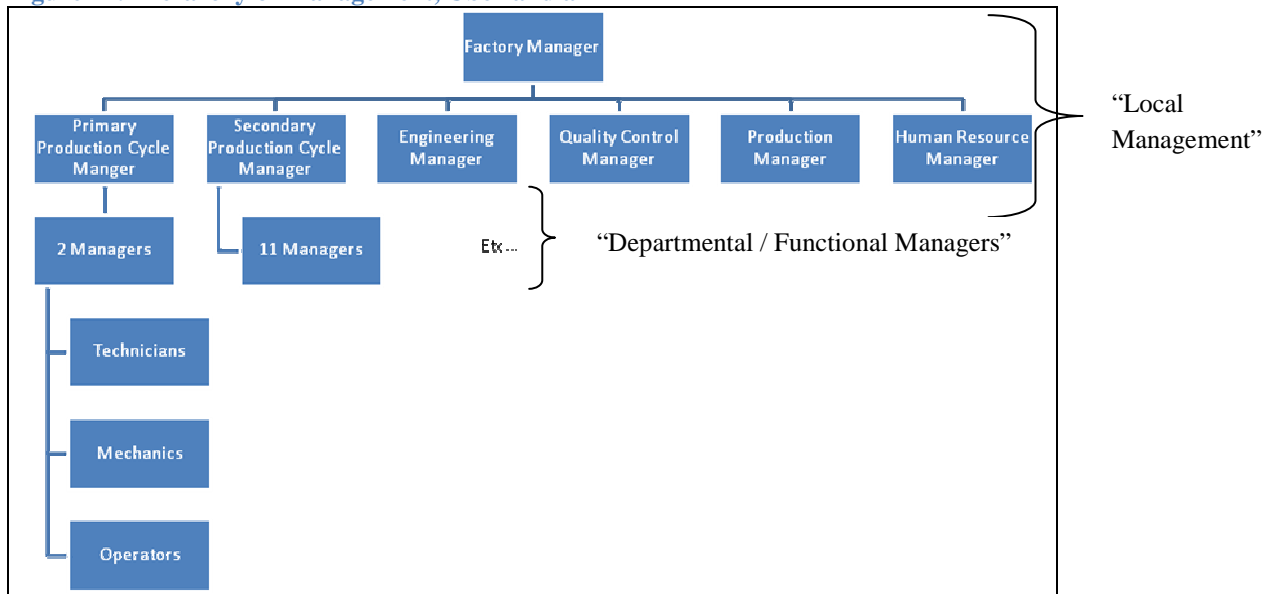


Source: Souza Cruz 2008

The VIA project was researched, planned and implemented through a range of stages and with input from many sides. All along the way it was driven by a multifunctional management team of the factory, supported by outside consultants, and input from academic research, innovation forums, and best-practice benchmarking.

The below organisation chart, based on information provided by the interviewees, should assist in the understanding of the different roles, responsibilities and helps visualise the flow of information which the following sections will refer to.

Figure 14: Hierarchy of Management, Uberlândia



Source: Based on Interviews with Uberlândia Management, 2008

To better understand the reporting levels, and the flow of information and feedback within the setting of the Uberlândia factory, here a brief explanation of the organisational set-up.

The factory is lead by the Factory Manager, and his team of 6 “local” managers. These are responsible for one area of the operation and have between two and eleven managers reporting into them. These functional managers are responsible for teams varying in size between 10 and 80 people, split into three shifts, who in turn elect a “self-directing working group” (SDWG) leader for a one year term at a time, for each shift. Each SDWG elects a representative for each of the five areas of cost, quality, product, human resources and since last year’s launch of VIA also innovation. These five team leaders meet on a regular basis with their functional manager, to discuss and solve the relevant issues.

The intention behind these so-called SDWG is to allow functional managers to focus less on the day to day operational issues, such as machine maintenance, staff scheduling, etc, and to move towards the tactical and strategic issues involving the department instead.

The structure and processes resulting in the launch of Project VIA at the Uberlândia factory will be discussed in detail in the following sections, starting with the conceptualisation and implementation of the project.

Implementation of VIA

The entire process, from initial idea that a structured idea management system would be piloted at the Uberlândia factory, to launch of the programme took seven months. In May of 2007 the Director of Operations of Souza Cruz, together with the Factory Manager at Uberlândia, kick-started the initiative. By June an eight member strong implementation group, comprised of an external consulting firm, factory management and managers from IT, HR, supply chain, training, finance and the Regional Product Centre (RPC), started working on the structure, aims, communication and roll-out of the project. By July the project was presented to the company board and approved.

The structure of the project consisted of four stages, namely communication, training, process and follow-up. Some of those involved only pre-launch activities, others would permeate continuously. The communication was deemed particularly important and various channels were employed, to initially stoke interest and awareness and further along the process to keep it alive.

The first part of communication was viral communication, which focuses on flexible, scalable and collaborative systems with maximum impact. It addresses both the ubiquitous channels such as radio and TV, yet is also embedded in everyday life; such as clothes, furniture etc. The Uberlândia factory went about to apply bright coats of paints to benches, pillars, walkways, banners with word games and teasers were hung in areas of high visibility¹³. This ensured that the up-coming project was speculated and talked about, thus increasing the awareness of the launch. The second stage included different channels such as face to face, information “hot-spots”, a dedicated intranet site containing a mock-up of the VIA platform and all the relevant information, a show room, games, gifts, leaflets containing information regarding VIA and T-shirts that were distributed to all employees, also pre-launch. The actual launch was done in November of 2007, over three days, with three presentations each day – during which time the factory’s machines were stopped, allowing all three shifts to attend in full. The factory management, as well as Souza Cruz Board members and those involved in the conceptualisation of the project were present to explain the concept behind VIA, how it works and its benefits.

¹³ See Annexe 1 for examples

The second part of the communication, of continuous information, commenced immediately after the launch. Aspects to ensure continuity of the project included:

- Weekly Follow-up, demonstrating the progress of the program;
- Up-dates on VIA website – containing the ideas in practice, ranking of ideas, goods, illustration of the prizes, interviews and link with the System VIA;
- Electronic panel, with the daily publishing of the evolution of the ideas;
- New intervention highlighted on special billboards;
- Exhibition of the activities developed by the employees in trainings (paintings);
- Lounges with the evolution of the products, brands and innovations

Immediately after the initial launch in November, the training of employees began. Management level employees had already received their training in sessions prior to the launch, assuring they would be able to answer questions and assist in the guiding of employees when they submit ideas.

Each and every one of the roughly 1'200 strong factory workforce was to undergo a four-stage training programme, to enable them to understand the product, the process of manufacturing and the important elements of marketing and consumer knowledge to be able to have a holistic view of their work and its consequences. According to the Factory Manager, only if and when employees see the “big picture” will it be possible for them to tweak and twist the processes to improve them, or better still have ideas concerning improvements for the consumer. The training focused on all these aspects, and the sessions attended by groups of up to 40 employees. The first two trainings were presented and conducted by the external consultancy involved in the project’s implementation, and focused on innovation and employees’ frame of mind. Entitled “Innovation in Practice” and “Open Mind”, they lasted four hours each, and were conducted in the first three months after the launch of VIA. The third course, “Product Knowledge” was given by a panel of eight factory employees, who had previously been sent to the Regional Product Centre to learn about the entire production process from leaf growing to shipping the final product. Employees were thus exposed to the complete manufacturing process, giving them an understanding of the raw materials, methods of production, brands and the innovations pipeline. This was deemed important as a foundation for future process relevant ideas and innovations. Finally, the last stage of training was conducted by marketing specialists sent over from Souza Cruz’ head

office, again four hour sessions educating the employees in consumer behaviour, marketing techniques, brand awareness and specifications, to stimulate consumer relevant ideas. All in all, each employee will have received 16 hours worth of specific training by July of 2008, thus within the first eight months after VIA's initiation. Management not only hopes for more ideas, but also to use the training as a motivational and developmental tool for employees.

The “Components”

First and foremost is the **employee**, as the source of ideas. Taking into consideration the fact that ideas submitted even before the VIA system was in place were rarely submitted by just one individual, but instead a group of people, the company has allowed for this in their setting up of VIA. Therefore, an idea can have **authors**, and **co-authors**. The former being the one with the original idea and/or who made it feasible, resolving restraints and/or problems associated with implementation. There can be up to two authors per idea submitted. Complementing the input of the author(s), the company recognizes up to four co-authors, who would have participated in the development of the idea, contributing to improving it, without changing its essence.

The infrastructure to manage the ideas, to register them, keep track and record is a custom-built **portal** which integrates into the existing software of LotusNotes. Here employees can learn more about the VIA programme, register new ideas, go back to their previously recorded ideas, browse ideas that have already been implemented, learn about the rewards, search through the “Idea Bank” where all ideas not implemented or approved to date are stored.

The first point of call for any new idea registered on the portal is a dedicated **Idea Administrator**. He does not have any authority about whether or not ideas should be implemented, and does not pass judgement. Instead, the administrator checks whether new submissions are actually new ideas, and is the link between the employee, management and the next team; the **Reinforcement Team**. This team is pulled together on a needs basis by the functional manager, whose employee submitted the idea. It consists of a group of 2- 5 employees from the idea-relevant departments, selected not only for their technical, professional and people's skills, but also for their interest in the project and their own initiatives displayed in the past. They do not have a regular meeting schedule, instead this team is called to life whenever an idea is submitted and approved as a “new idea” by the Idea

Administrator. The participants of the Reinforcement Team work together to assess ideas, to formulate their potential, create a business plan and generally to support the employee whose idea it is. This team is supported by the respective top managers in charge of each division, i.e. the factory management, referred to as the **Local Management**. They are drawn into the process as required. Furthermore, the **Marketing** and **Regional Product Centre (RPC)** also gets involved in the evaluation, feasibility and implementation processes for ideas which will have an impact on their respective areas. This RPC is a centre, located in the Brazilian town of Porto Alegre, which deals only with the sourcing, production and innovation of prototype products, testing of innovations, blending of tobacco to create new flavours, etc. Their findings are fed back into the organisation for implementation.

The System

The platform onto which VIA was built is the company's LotusNotes system. The custom made software, developed in-house together with the external IBM support services provides the tool to record, track, store and share ideas.

Figure 15: Opening (Home) Page of VIA Software



Source: Souza Cruz (2008)

The opening page of the programme allows employees to register ideas, track the ideas they or others have already submitted (either by employee name, or topics), see samples of implemented ideas, a virtual tour explaining the system as well as the rewards section.

Figure 16: Submitting an Idea

The screenshot shows a web interface for submitting ideas. At the top, there's a header with the Souza Cruz logo and several yellow sticky-note-like buttons: 'Tire uma nova ideia', 'Minhas ideias', 'Ideias em prática', 'Como funciona', 'Cesta de prêmios', and 'Pesquisar ideias'. Below the header, the main content area is titled 'Manianne Dias, conte sua nova ideia!'. On the left, there's a sidebar with instructions: 'Aqui você poderá descrever a sua ideia que contribuirá para atender melhor aos nossos clientes. Conte da forma mais detalhada que puder. A ideia pode ser compartilhada por vários autores, inclua quantos for necessário. Verifique as regras de publicação.' The main form area has a 'Solicitante' field (Manianne Dias) and two text areas: 'Descrição da ideia' (containing 'Filtro maisigáral caber canala') and 'Benefícios da ideia' (containing 'Valor agregado ao produto'). On the right, there's a section 'Adicionar Autores e co-autores' with a list of authors: 'Autor(es) da ideia: MARCIO ANTONIO NEVES [x]', 'Co-Autor(es) da ideia: MARIANNE DIAS CARDOZO, ANATOLIO [x]'. The bottom of the page shows a 'Done' button and a 'Local intranet' link.

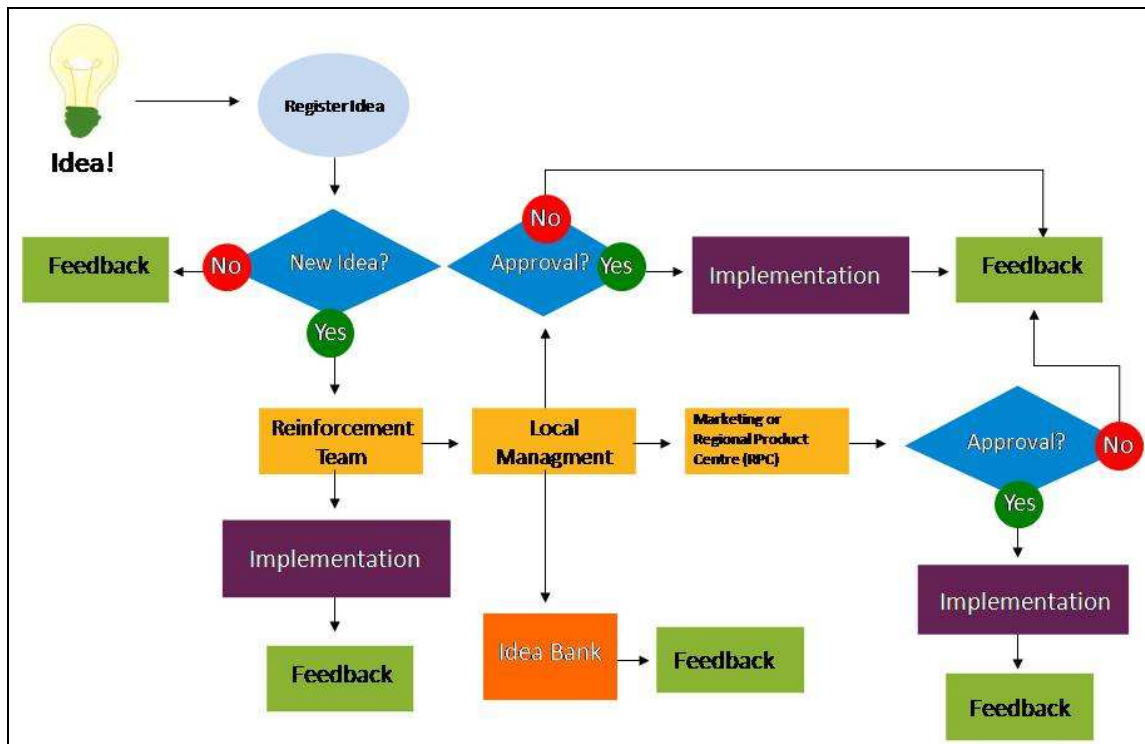
Source: Souza Cruz (2008)

Submitting the idea is easy enough, and the system tracks input, feedback and status of the idea in the process of approval or rejection. All ideas are registered into the system, allowing for future calling up of ideas, building on old ideas, etc. The system works similarly to a blog, in which conversations are added to the page, logging name of contributor, date and time, thus allowing employees to follow the process and status their idea is at.

How does VIA work?

The flowchart on the following page depicts the flow of ideas, and the people and bodies involved in making decisions on implementation.

Figure 17: Flowchart of Ideas



Source: Souza Cruz (2008)

As the diagram shows, employees register their idea on the internal portal VIA, by logging onto the company's intranet site. The dedicated Idea Administrator is the first person to verify whether this idea is in fact new, or already exists in one form or another. Whether the idea is new or not, feedback is given to the employee, both face-to-face, and it is recorded in the system for future reference. The Administrator does not have any decision-making capacity; the function is purely that of contact person and collaborator between management and employees. In case the idea already exists, the Administrator organises a letter for the employee, which is actually given to him/her by his/her manager. This process is intended to foster the communication and relationship between employees and managers, and to ensure that motivation is not lost, by demonstrating the appreciation of involvement and through justification of rejection.

If it is indeed a new idea, a multi-functional panel called the Reinforcement Team will be pulled together, to evaluate the idea for its potential. This team is comprised of a handful of employees from the relevant departments, who work on the ideas submitted on a needs basis, in addition to their regular jobs and responsibilities. Should they find the submitted idea relevant and easy to implement without further consultation or approvals, i.e. within their departmental budgets, without impacting other departments or sections and without much

implementation assistance from other departments (e.g. engineering to build new components for a machine), the idea is immediately approved and implemented. This is logged into the system.

For ideas which require more input, resources and consideration, the Reinforcement Team consults with the management of the factory, i.e. the Local Management. There is a monthly meeting scheduled to review all these suggestions. Specifically for consumer relevant ideas the marketing department at head office in Rio de Janeiro and the RPC in Porto Alegre are consulted and involved in the feasibility study and implementation.

As the flowchart depicts, at each and every stage the feedback features prominently. Management believes in the importance of keeping employees informed at each stage of the process, and that only with explanations and comments will employees be motivated to continue to think about their work, search for improvements and innovations and to submit their ideas.

Leadership & Culture

Leadership was deemed very important by the management, and they all are conscious of the responsibility they carry in driving the innovation and innovations culture within their organisation. Management takes time every day to walk through the factory and all its departments, to communicate with people, listen to concerns and suggestions, building relationships, reinforcing the “open-door” policy.

The factory’s top management, the so-called “local management” is well aware of the additional workload the VIA system is placing particularly on its operational / departmental management. After all, it is those managers who need to participate in the Reinforcement Teams, who need to support their employees with the formulation, calculation and articulation of the ideas. It is them who need to provide feedback to the submitters of ideas. And, two of the managers interviewed did display displeasure and additional stress due to the new responsibilities they bear. The factory manager is also aware of incidents of complaints from departmental managers, but is confident the situation will be resolved – for two reasons; initial submissions of ideas were very high indeed, due to novelty of the programme. It is only natural for the flow of ideas to ebb over time, and the challenge will be to ensure sufficient ideas filling the idea pipeline and idea bank. Therefore, the time taken up by participating in the Reinforcement Teams will decrease. Secondly, the factory’s top management is hoping this additional workload created for department level management

will reinforce a change implemented in the past years with regards to how departments, sections are run.

The aim is to gradually move departmental manager away from operational tasks and duties, towards more tactical and strategic, i.e. forward looking issues. Instead of him/her having to deal with minor technical problems, basic personnel administration, etc the recently created “self-directed work group” leaders should be arranging those day-to-day duties. It was for this reason the groups and their leaders were created in the first place, to shift focus and emphasis for managers into visionary leadership, away from operational execution.

Naturally, as with most changes, they have been greeted with mixed feelings and some resistance, as it means moving away from safe (known) grounds, into the unknown. By putting more (time) pressure on the managers to support the idea generation and innovations process, the factory management is hoping to enhance this transition of focus and emphasis.

In combination with this open leadership style and managing by examples, the organisational culture felt on the premises of the Uberlândia Factory enhances management’s quest of becoming a truly innovative organisation. Employee turnover is exceptionally low in the single digits, even though employment opportunities are ever growing in the vicinity due to favourable taxation and legislations by the local government to attract more businesses. Benefits and working conditions are above average, but according to employees the most attractive aspect of working for Souza Cruz are the long-term opportunities. Although Uberlândia boasts one of the best engineering faculties in the country, many shop-level employees lack formal training and skills. The company thus invests heavily in training, both on-the-job and off, to ensure its employees have a holistic view of the production processes. Furthermore, this practice allows for greater cross-functional transfers, which are very much encouraged, ultimately leading to greater numbers of internal promotions.

According to management, many ideas for improving machinery and equipment stem from its employees at Uberlândia, and have over the years been implemented and adopted by manufactures. Hauni, for example, is the most successful supplier of technologies and solutions for tobacco processing, filter and cigarette production, with customers all over the world. Its trademark drying tower for tobacco leaf was developed at Uberlândia, based on suggestions by technicians and operators, and conceptualised in collaboration with Hauni. Now, most factories use the same technology, which was innovated in Brazil. This

innovations and learning culture is source of much pride for the employees, and adds to the intrinsic motivation to perform better yet.

Motivation

The majority of operators, technicians and mechanics interviewed, claimed that through the implementation of VIA, they feel more motivated to think about their workplace, their work processes and beyond – to what the customers might appreciate. Although ideas had been submitted prior to VIA, the interviewees felt that their success and implementation depended basically on whom they were presented to, and under which circumstances. On a “good day”, ideas might have been taken further and even implemented. However, several interviewees did recall ideas they had, which were drowned and lost in the non-formalised process of “if I have time I’ll pass it on”.

By now having a system in place, which is transparent and deemed fair and just by those interviewed, employees have more faith in the system and results have already been proving them right. They feel motivated to think about their work, the products and processes of manufacture, and to explore ways and means of improving them. All of the interviewees had indeed already logged at least one idea into the VIA system, and although not all ideas had been approved, felt encouraged by the feedback given to them by their managers to keep on trying.

The aspect of demonstrated “ownership” of ideas was seen as a boon for motivation and encouragement by the employees. Whereas previously ideas tended to “float” around, they could now easily be “allocated” to a certain employee, or group of employees. The interviewees mentioned this aspect as a particularly positive outcome of the implementation of VIA.

Finally, another motivational aspect related to VIA was the visibility with which ideas were recorded. One mechanic was eager to share that he had already submitted 18 ideas, two of which were pending implementation. For him, the procedure was important as he was keen to demonstrate to his superior come appraisal time that he was being proactive and had knowledge exceeding his immediate area of work – thus hoping for a promotion. In his mind, and in accordance with other interviewees, VIA provides another channel of “formally” demonstrating to superiors the initiatives undertaken, as well as the results.

Rewarding Ideas

In line with the strategic direction the factory is following, as set by the BAT Group, the focus for ideas is more on consumer relevant innovation, rather than process innovation. This then drives the way ideas are rewarded. The longest discussion in the conceptualisation of the project was apparently about rewards, and the dilemma of how to reward; with money, with recognition, or simply viewing it as “part of the job” and thus not justifying additional rewards. After much contemplation and consultation, the project team decided to reward ideas submitted and approved with a point-based system, which would not pay out monetary rewards. Instead, points would be allocated to a basket of goods, divided into three categories; “Culture & Education”, “Digital Gadgets” and “Quality of Life”¹⁴. The items within the basket were chosen specifically to either allow employees to save up points for items they could otherwise not afford, or for items that would enhance their education and quality of life. They were also chosen to overall add to the development of employees, e.g. language courses, internet access at home, books, cultural trips, etc which would ultimately feed back into the working life. In other words, allow employees to access and/or gain more knowledge which is stimulating and rewarding, for both parties.

The actual allocation of reward points are driven by the idea – not the economic or value impact the idea has – but whether it is consumer or process related. As noted earlier, the company is trying to “push and pull” ideas related to the consumer, more so than the process. Therefore, approved ideas receive a score of points depending on which area the idea is applicable to. Idea related to process, technology and internal services are rewarded with 10 points for each of the authors (there may be up to two authors) and 2 points for each co-author, of which there can be up to four per idea. Alternatively, if the idea is related to consumers, each author receives 30 points, and each co-author is accredited with 6 points. By means of this differentiation, the company underlines the emphasis it is placing on consumer related ideas and innovation. At the same time, by not distinguishing between the value add of an idea, it highlights the message it is trying to convey that indeed “every idea counts”, no matter how large or small the economic consequences.

Furthermore, fitting with the overall business culture, in which innovativeness is nurtured and rewarded, the point allocation system is linked to the company-wide rewards “Destaque” and “Excelencia”, which merit projects, launches, working teams throughout the entire company of Souza Cruz twice a year. If an idea will also be nominated for one of the above awards,

¹⁴ See Annex 2 for detailed table

and wins, the point allocation (10 or 30 for authors, 2 or 6 for co-authors) is then multiplied by either 5 for “Destaque” recognition or by 10 for the winner of “Excelencia”

Once points are awarded, they are tracked on the VIA portal and can be redeemed as the holder sees fit. Either exchanging them for smaller items, or waiting for an accumulation of more points to be able to exchange them for a bigger value item.

Success Criteria & Monitoring

The big question remains; is the system working? Are ideas flowing in to the extent anticipated by management, and how does one measure success when the economic value-add is not tracked?

Management decided to initially measure the success of VIA by users, i.e. participation and by ideas implemented. As a reference, ideas officially submitted in 2006 are used. These were 38 ideas in total, of which 36 were process related and only 2 related to the product and therefore the consumer. In order to set a bold target, the programmes’ developers and management set the tenfold number of ideas submitted in 2006 as their goal for 2008; namely 380 ideas, which translates into 0,4 ideas per employee per year. The results from the first six months after launch exceeded expectation by a wide margin: the participation of employees lies at just over 40%, meaning that 433 employees have submitted 776 ideas on the VIA platform, of which 179 (23%) were product/consumer ideas and 542 process ideas. Of these seven hundred odd ideas, 77 have been approved and the majority of those implemented already, resulting in roughly 1’500 rewarded points amongst those 77 employees.

These numbers leave management confident that the initial investment of time, money and resources will pay off, especially since six months after launch of VIA not even all factory employees had undergone all of their training sessions, to increase awareness about the project, the processes and the product itself.

On the other hand, management is aware of the “novelty factor” driving the numbers of ideas submitted up. They realise the challenge lies in keeping up the momentum, and being able to continue to engage and stimulate the employees to develop and share their ideas.

Management of the factory is keen to measure the value added by the VIA project, however given the limitations of the system at the moment, i.e. insufficient manpower to administer all the numbers, it is content with having a high participation in the programme for the time

being. Later next year, once the VIA is fully established the aim is to focus more on the value ideas add, in order to be able to quantify the economic benefits. Given the enthusiastic uptake of the project to date and the number of useful ideas submitted so far, the factory managers is satisfied with the implementation of VIA. It has fulfilled its main objectives of formalising the idea contribution by employees, increasing participation and serving as a motivational tool on many fronts; employees feel included, their know-how is in demand, and their ideas are being acknowledged and rewarded.

Challenges

One of the company's goals is to create an "innovation-led culture which inspires and promotes an environment favourable to the creation of ideas". This aim is linked with the overall strategy of the factory to, "create, develop and launch new products, services and processes in order to ensure a sustainable business model". Developing such an organisational culture and maintaining it and keeping it alive it over years to come, will be the challenge. There is always a risk of the novelty factor encompassing new initiatives and programmes wearing off, resulting in a slow, de-motivating "death". For this reason, it is important to know in which areas the challenges lie, and to tackle them head-on.

One of the tests currently facing the Uberlândia Factory is actually being able to keep up with the influx of ideas, and being able to process them in a timely manner. With only one Idea Administrator having to process the ideas – the first six months after launch have generated on average 6-7 ideas each weekday – who also has to mobilise the Reinforcement Teams, ensure managers communicate feedback to their respective staff and act as the conduit of information for all parties involved, timely response and action is at risk. As management admits, and feedback from shop-floor level employees demonstrates, the timely processing of ideas submitted is crucial in the sustainability of high employee motivation, and to ensure continued input of their suggestions for improvement and innovation.

Management understands the importance of administering the VIA intranet site, the flow of idea through its various stages, the collaboration amongst employees and management, as well as the process of implementation and monitoring. Given the relative newness of the project, the intention is to review the progress of the project at the end of the first year of initiation. Options already under consideration are whether to create a dedicated "Implementation Team", which would take upon them all the approved ideas, and ensure

they are put into practice efficiently and effectively. This would inherently change the structure of the project, from a decentralised and functional system, towards a more centralised approach. In addition, unless the inflow of idea abates, a second full-time Idea Administrator will be required. For one of the areas thus lacking attention is regular feedback to employees who have submitted ideas on the progress of their idea. Whereas the VIA website will indeed show details of the stages of approval or rejection, individual's feedback and input, not every employee at the factory is comfortable using the platform yet, or simply put, lack the skills. Management is confident however that over the course of the next year, with more training scheduled, more internet terminals available in more areas of the factory, the efforts of the so-called multipliers¹⁵ will enable even more employees to access the site, use it to its full potential and contribute with more ideas as their brand and consumer knowledge increases. The aim is to keep the inflow of ideas high, in order to have a larger pool of ideas available to draw from, and to increase the chances of high impact / high value ideas being amongst them.

¹⁵ A multiplier is an employee trained in certain skills, who will then himself/herself pass on the knowledge and skills to other employees, thus "multiplying" the knowledge gained in the initial training.

5. Discussion & Recommendation

The preceding chapters have drawn together previous research on the subject of generating and managing the flow of ideas brought forward by employees from all departments and levels within an organisation. The underlying assumption that creativity and ideas are the foundation for innovation has been discussed. Schumpeter in the 1950's was one of the first to develop a theory of innovation. He defined innovations as "new ways of doing things, or [as] better, unique combinations of the factors of production" and identified them as the core of an entrepreneur's work. With all these definitions of innovation compiled in this study, Miller's deduction on innovation as a "commercially successful implementation of creative ideas within the organisation" is the one most appropriate in this case.

Most importantly for the sake of this study, innovation is not merely the new killer application. Instead, innovation occurs on several levels and to varying degrees within an organisation and the departments within. Furthermore, an innovation can be an idea, practice, process, or product that transforms a new problem-solving idea into an application and is perceived as new by an individual. Small changes to production processes can generate large savings, in the same way that new goods or services can generate substantial revenue increases. This study has contributed with both its "theory" and "practice", i.e. the literature review and the primary research conducted in Brazil, that indeed it is worth tapping into your people for ideas, given that it is not exclusively the creative minds which supply ideas to build innovation on, but everyone can contribute valuable ideas. And innovation – the ability to invent and reinvent services and products demanded by the consumer – is undoubtedly a key component ensuring sustainability of a business in today's fast-moving business and product life cycles.

Referring back to the Innovation Survey by the BCG (2007), and the companies with top rankings with regards to their innovativeness, an interesting point emerges which is worth highlighting. Between the five of them they cover the most important aspects discussed in this study, relating to Idea Generation and Management systems; namely leadership (Apple), organisational culture (Google), customer needs (Toyota Motor), stream of new offerings (Microsoft). This underlines the importance that companies should place on these various aspects within their organisation, to ensure success in innovation.

It thus seems as though there is more to a company which is actively pushing for innovations and the input from its employees than merely putting up a suggestion drop box along the corridors or installing software which will capture ideas. A plethora of components need to be considered, and a comprehensive, all encompassing system needs to be developed taking in the people, the existing culture within the organisational, as well as the so called “soft issues” such as creativity and motivation. Furthermore, the strategic direction of the organisation – its mission and goals – needs to be defined and an idea management structure implemented which is congruent with these matters. Only after the aim of the system is defined, and the various components are understood and in place, should the reward structure be established. This last constituent should ideally be the *additional* motivator, not the primary. Rewards should *enhance* the intrinsic motivation which should be fostered if all else is holistically combined.

In the beginning of the study the following questions were raised:

“How does management foster a culture within the organisation that not only allows, but also stimulates the idea generation from employees? And what kind of systems and processes need to be in place for employees to come forward with their improvement ideas, their innovative approaches to work flows, products and services? Finally, what kind of monitoring needs to be in place to oversee successful implementation?”

From both the literature and the primary research it becomes apparent that the actual implementation of an idea generation and management system requires careful planning and well-timed execution. Especially the first few months are the key stage to future success, as they determine whether employees can be convinced of the merits of such a project and can they be motivated to contribute in a manner which indeed will add value?

The interplay of the planning, research and implementation – in line with each company’s individual needs – highlights one of the key messages of this study. Namely, that there **is no one model which will fit and work for all companies**. Instead, each and every company intending to *formalise* the idea generation process – for ideas are abound in every organisation – should establish their own, individual aims for such a process, and then build a concomitant system which will deliver on these goals. The organisation studied, for example, took into consideration their overall strategy and direction, and found that in order to have an “innovations culture” they were looking for as many ideas as possible, unlike narrow and focused ideas depending on suggested direction provided by management, as found in the literature reviewed (e.g. Beyer & Seidel).

The assumption that there is no “one size fits all” approach is particularly true when taking into consideration organisational culture and leadership behaviour – deemed the feeding ground of ideas and innovation. Just like every individual is different from the next, due to his / her background, education, influences, in other words their culture, every organisation is different. Naturally, leadership styles and the culture which is found within a company will have an impact on approach to work, creativity, and motivation, which ultimately enhances or stifles ideas and their proliferation.

The study of the idea management system at Souza Cruz’ Uberlândia Factory complimented the frameworks presented in the academic literature. Although their system has not stood the “test of time” given its recent implementation, it nevertheless gives an indication that indeed a lot of work needs to be done before, during and after implementation to launch an effective idea management system. Not only did the team in charge of VIA spend time finding best practices in the country, and consulted a communications company for the initiation and launch of the project, they also took into consideration their own organisation; its goals, strategic direction, the culture and the employees.

Most of these aspects raised in the academic literature, and deemed important by scholars and business people alike, were taken into account by management of the Uberlândia Factory. Briefly, the following paragraphs will recapitulate the main points.

The **people** play a very important part in the company’s success and competitiveness, given that generally speaking a company’s creative output is dependent upon the **creativity** of its human resources. The employees at Souza Cruz’ Uberlândia Factory are already very creative in their approach to work, demonstrated by the countless suggestions of improvements to products and services made over the years. In fact, within the entire organisation world-wide, this particular factory is deemed the most efficient and innovative due to its suggestions as to how to improve production cycles and facilities. Now, by implementing VIA, the factory has taken the next step in officially recognising and rewarding their employees for their creative input. Not only that though. VIA has had a **motivational** benefit too, as the findings from interviews with employees on all levels have shown. Employees felt their work was being valued more, due to the official acknowledgments by superiors and the rewards. Furthermore, in line with Geen’s findings of motivational levels linked to time delays in action or recognition, VIA has dramatically improved employee motivation due to the fact that they can now track the progress of their submitted idea either

online or in communication with functional managers and the Idea Administrator. As a by-product of VIA's launch, some of the factory's work and leisure areas have been up-graded, and some work flows altered. There is more and better communication and consultation with supervisors and management. All this has had an impact on the intrinsic motivation of employees, whereas the rewards have stimulated them extrinsically. Particularly these intrinsically motivating factors seem to be in concurrence with Herzberg's two factors. On the one hand, recognition, reward, etc enhance the "motivators", whereas the improvements to the working environment, internal communication, etc have enhanced the "hygiene" factors in the sense that reasons for dissatisfaction were being decreased.

In line with Souza Cruz' aim to become an organisation with an "innovations **culture**", the management underlines this drive with its engaging **leadership** style, fostering collaboration, teamwork, learning and thinking outside the box. The Uberlândia Factory has spent a lot of money and resources in getting all their employees up to date with the latest trends, systems and processes applied in the factory and applicable to the consumers. By ensuring that each and every employee, from manager to cleaner, will have attended training sessions in product knowledge, marketing, consumer behaviour and production, management at Uberlândia has ensured that all its employees are able to contribute to its aims – being innovative.

When it comes to "**finding ideas**", the Uberlândia Factory is not only asking for purely individual contribution. It has learned from the behaviour of its employees in the past, and recognises contributions not only from the individual, but from a group of authors and co-authors, all of whom are entitled to rewards. Also, management has factored in that not all employees are fully skilled, with qualifications and know-how about entire work-flows or processes. Therefore, in allowing employees to work in teams, and recognising the team effort, management is supporting informal learning processes and the socialisation of knowledge. In addition, through the Reinforcement Teams and their inputs, and also through the ability to add to existing ideas on the VIA web portal, the company is maximising input from all relevant sources. One could argue that the approach is very similar to Beyer & Seidel's "Communities of Practice" in the sense that during the Reinforcement Team stage, experts are drawn together based on qualifications most suitable to a particular idea. Together, they will work to improve the idea, and to plan the implementation of it.

With regards to the **implementation** of ideas, currently the Uberlândia Factory is trying to continue with the decentralised process, in line with the decentralised decision making teams.

It is finding however that the sheer number of good ideas is taking up much time from management, and is considering creating a special team to ensure sufficient time and research allowing for best possible results. This would move the entire system towards a more centralised approach, with the benefits of greater oversight, better communication and a faster process overall. On the flipside, there are issues such as those of subjectiveness, greater bureaucracy and less functional management involvement resulting in less communication, team building and the loss of VIA's direct motivational function. Particularly this point in case demonstrates yet again that managing an idea generation system is a complex task, with many factors to consider which can greatly impact the success rate. Many pros and cons need to be weighed to find the optimal structure for managing ideas. In this instance, management needs to weigh the risks involved in a decentralised process, which may be deemed fairer, but is not as thorough and perhaps more time consuming, leaving employees without information and feedback regarding their idea for too long a time span. Also, implementation of ideas will take a long time. On the other hand, if the process is changed to a more centralised approach, feasibility checks and evaluation of ideas and their implementation will be executed faster, yet all decisions and input is done by a small, select team – potentially resulting in biases, favouritism and more bureaucracy. It poses a decision to be taken with care and consideration, which only once implemented and monitored will yield the answer of whether it was the right path to take. Here the monitoring becomes particularly important, as over time dynamics will change, as will behaviour. In order to maintain an effective idea management system, it requires ongoing examination and scrutiny, and potential adjustments over time to ensure its sustainability.

Recommendations

Finally, a few words with regards to recommendations for future research in this area. As this study has drawn upon academic literature, as well as examples and studies from the business world, much what is written about the subject of idea generation and management has been reviewed. The one area which I found lacking was that of findings and experiences of idea management in a wider range of countries. Within the Introduction section of this study, employees' levels of education were briefly mentioned. This point is not important for the purpose of this study, yet it deserves a mention as the literature reviewed was chiefly from authors based in the so called "first world" countries, whereas the primary research was conducted in what would be labelled an "emerging economy". It is therefore only in passing,

and without much in-depth knowledge in this area that I would like to mention the following observations. Annexe 3 and 4 are figures obtained from the International Labour Office database on labour statistics operated by the ILO Bureau of Statistics (LABORSTA), showing the latest figures of levels of education within the population. The two countries chosen to compare are Brazil and Germany, the reasons being that the primary research was conducted in Brazil, and much of the research and figures pertaining to idea generation are German.

Whereas the latest German figures are from 2006, Brazil's are from 1999. Still, a striking difference emerges which would not have changed dramatically over the past decade or so. The majority of the population as a total have a completed upper secondary education in Germany, whereas the greatest number of Brazilians at the time of the compilations of numbers completed pre-primary school (see Annexe 3 to 5)¹⁶. It therefore begs the question whether indeed input from employees in Germany would be the same as that from say Brazilian employees. This question is not intended as an assessment of ability of employees, for as the research in a Brazilian factory showed that employees there have many, and good ideas to contribute. However, it would be interesting to study this aspect further. Specifically, how companies working with un- or semi-skilled labour can circumvent lower levels of skills by means of in-house training to allow employees a holistic business view and thus enabling them to bring forward ideas on how to improve processes and procedures. This would, as the experience at the Uberlândia Factory showed, contribute to achieving greater levels of motivation (particularly intrinsic), as well as knowledge and creativity to tap into the vast pool of ideas available to them.

Another reason in recommending more research in this area is the fact that the new economic “powerhouses” in the world, the likes of Brazil, Russia, India and China (the so-called BRIC countries), and will no doubt have their own history in idea management, which other countries could benefit from – once made accessible to the rest of the world. Albeit by no means a scientifically researched fact, yet in my opinion indicative nonetheless, the insights provided by Google's search history and records¹⁷ do give some clues as to future demand for idea management as a formalised process. When looking up the history of search results for the term “idea generation” and “idea management” (see Annexe 6 for details), one finds that India comes up with the most search results. Of course, one need to consider that the terms

¹⁶ Please see <http://laborsta.ilo.org/applv8/data/isc97e.html> for full details on schooling levels and ages

¹⁷ <http://www.google.com/insights/search/#>

used are in the English language, excluding some large countries such as China, Russia and Brazil. All the same, from those countries in which English is widely spoken, it is India which has the highest incidents of searches. Given that all the results in “Google Insights for Search” are normalized, which means that they have been divided by the sets of data by a common variable to cancel out the variable's effect on the data, it allows the underlying characteristics of the data sets to be compared. “Google Insights for Search” shows the likelihood of users in a particular area to search for a term on Google on a relative basis. Therefore, one can assume that there is indeed a growing demand for a structured approach to managing employees’ ideas. In order to provide more information and “best practice” for rapidly emerging economies such as India and Malaysia – both with relatively high search volumes in the domain of ideas – more academic research is needed. Particularly from countries in which perhaps laws and regulations are not yet in place to support rewards and incentives for employees’ ideas. One country which does have this support from the political sphere is Germany. It seems that German companies – from Audi to Siemens - in all sectors and sizes are talking about idea management, and how to involve its employees to play a greater part in coming up with innovative ideas that improve the company’s standing. Handbooks¹⁸ are compiled by the private sector and regional governments on how to improve idea management, specifically in small and medium sized enterprises (SME). More of such kind of support is needed; for example by simplifying regulatory laws which would make rewards to employees for innovation tax deductible.

A final word or two. As the historical review of idea management has indicated, the concept of asking for input from employees is not a recent fad or trend. Indeed, it has been around for over one hundred years. And it has evolved tremendously from simple “mail box” style drop boxes in dreary corridors next to the staff canteen, to complex IT systems and platforms, supported by many of the “soft issues” commonly found to be the concern of the Human Resources department – motivation, training, communication, enhanced collaboration and multifarious reward structures. For those companies seriously considering the implementation of a formal system and structure, to “collect” all the ideas that are invariably floating around the organisation – especially in the areas dealing with production, research and innovations, and those dealing with third parties such as suppliers and customers – soul searching and definition of expectations should be done before embarking on this journey. Areas and

¹⁸ E.g. *“Ideenmanagement für mittelständische Unternehmen – Mehr Innovation durch Kreative Mitarbeiter”*, published by the Ministry of the Economy (Title translated: Idea Management for Medium-Sized Organisations)

aspects discussed in this study are those to be taken into consideration, to increase the chances of success. Moreover, they need to be taken into account from the perspective of the individual organisation, and the outcomes to be achieved. The first few questions to ask pertain to the organisation itself. Where are we currently, where do we want to be? How will we get there? Then comes the focus on the ideas themselves; do we want many, in all areas? Or do we want a few, only pertaining to the strategic focus of the current time? Once this fundamental is established, the real work can begin to create an idea generation system geared towards the goals, and management processes installed to administer it effectively. For, even though this last quote by Francis Crick¹⁹ pertains to the field of molecular biology, it is applicable in business too; “if you want to have good ideas you must have many ideas. Most of them will be wrong, and what you have to learn is which ones to throw away.” For regardless if your organisation is looking for many ideas, in all fields, such as Souza Cruz’ factory in Uberlândia, or you have narrowly defined areas of innovation (such as the research by Beyer & Seidel recommended), not all ideas will be feasible or successful. The trick lies in harnessing the Idea Generation and Management system and process; with which you harvest the ideas, evaluate them, implement them and monitor them, whilst simultaneously maximising the positive impact on soft issues such as increased motivation, productivity and communication. If managed well, Idea Management systems can have “win-win” effects; as effective tools to increase value for the business and its stakeholders, whilst providing for a more stimulating and rewarding workplace for the employees.

¹⁹ Francis Crick in his presentation "The Impact of Linus Pauling on Molecular Biology" (1995)

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Internet Resources & Sites:

Deutsches Institut für Betriebswirtschaft GmbH (www.dib.de) publishes the annual report on Idea Management in Germany. "*Ideenmanagement in Deutschland*" (2007) and serves as an information sharing platform

Deutsches Institut für Betriebswirtschaft GmbH – Ideen Service (www.dib-ideenservice.de/) is the services arm of the Institute. (2008)

LABORSTA, an International Labour Office database on labour statistics operated by the ILO Bureau of Statistics (www.laborsta.ilo.org)

IBM at www.ibm.com

BrainBank Inc. at www.brainbankinc.com

Primary Information & Research from:

Souza Cruz, Rio de Janeiro and Uberlândia

IBM, Rio de Janeiro

7. Annexe

Annexe 1: Example of Viral Communication

Viral Communication: Provoking Curiosity



- Conceptual sentences that inspire and stimulate the reasoning



- Optical Illusion games that you allow to see the same thing in different ways



- Colours to stimulate the mind

Source: Souza Cruz 2008

Annexe 2: Details of Reward Basket

Culture & Education	Digital Inclusion	Quality of Life
<ul style="list-style-type: none"> • Books • Newspaper or magazine subscription • Courses (Computer, Languages, Skills Enhancing) • Culture Trips • Tickets for theater and shows • CD's , DVD's 	<ul style="list-style-type: none"> • Computers • Subscription to Internet access at home • LCD monitor • Printer • DVD recorder • Pen drive • Mouse 	<ul style="list-style-type: none"> • MP3 player • Video game • Mobile phone • Digital camera • Board games (chess, domino etc.) • Dinner for Two • Women's Beauty Day • Beauty Case • Kits (tools, fishing, barbecue etc.) • Sport material

Source: Souza Cruz 2008

Annexe 3: Education Level Brazil, 1999

BRAZIL (1999) ¹								
<u>Source: (BA) Labour force survey</u>								
<u>ISCED-97</u>	Total	X	0	1	2	3	4	5A
Total	64007.5	3523.6	32980.7	6435.0	4372.8	10195.3	1740.0	4391.5 ²
10-14	2774.1	246.1	2496.9	23.9	- ³	- ³	- ³	- ²
15-17	4560.9	138.1	2863.6	704.9	759.5	54.2	- ³	- ²
18-29	14862.5	409.2	6130.2	1716.4	2099.4	3391.1	758.3	229.2 ²
30-39	18493.7	798.5	8433.4	2102.7	929.6	3771.3	555.5	1775.7 ²
40-49	13409.2	783.9	6853.6	1291.7	436.2	2114.4	335.1	1538.1 ²
50-59	6609.9	630.0	4029.1	443.5	110.1	667.9	76.9	641.2 ²
60+	3297.2	517.7	2173.9	151.9	33.1	196.4	14.3	207.4 ²

Source: <http://laborsta.ilo.org/cgi-bin/brokerv8.exe>

Annexe 4: Education Levels Germany, 2006

GERMANY (2006) ^{1 2}										
Source: (BA) Labour force survey										
ISCED-97	Total	X	0	1	2	3	4	5A	5B	6
Total	41607			1102	6398	21274	2952	5719	3657	499
15-19	1503			151	1155	185	-	-	-	-
20-24	3449			84	891	2078	241	55	100	
25-29	4007			97	483	2094	522	534	266	11
30-34	4178			109	452	2022	450	739	351	55
35-39	5688			134	583	2897	522	921	548	83
40-44	6546			162	703	3451	497	948	694	90
45-49	5550			128	667	2968	331	805	577	73
50-54	4828			101	596	2615	202	766	483	65
55-59	3802			93	545	2014	118	582	392	57
60-64	1508			38	206	715	47	284	174	44
65-69	369			-	70	165	11	58	48	14
70-74	117			-	28	49	-	18	15	-
75+	60									

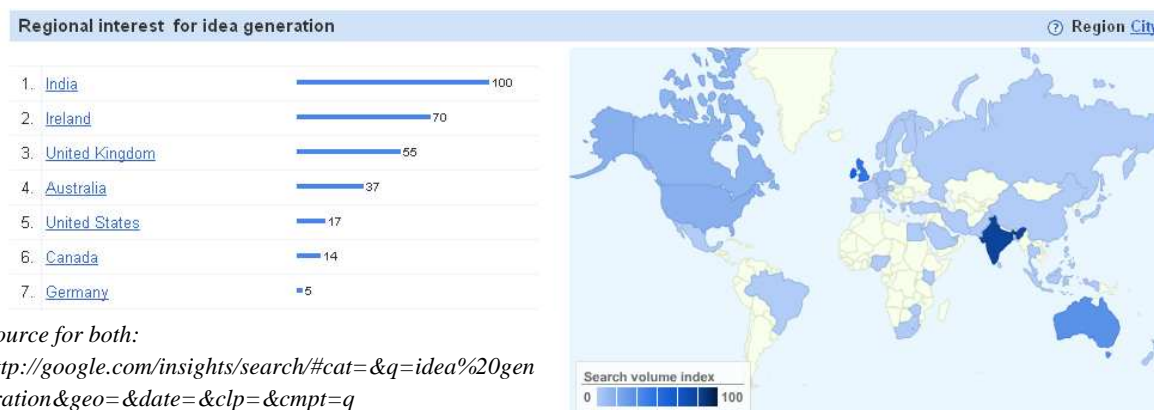
Source: <http://laborsta.ilo.org/cgi-bin/brokerv8.exe>

Annexe 5: Legend for Levels of Schooling

X: No schooling
Level 0: Pre-primary education
Level 1: Primary education or first stage of basic education
Level 2: Lower secondary or second stage of basic education
Level 3: Upper secondary education
Level 4: Post-secondary non-tertiary education
Level 5: First stage of tertiary education (not leading directly to an advanced research qualification)
Level 6: second stage of tertiary education (leading to an advanced research qualification)
?: Level not stated

Source: <http://laborsta.ilo.org/applv8/data/isc97e.html>

Annexe 6: Google Search History for Idea Generation & Idea Management



Source for both:

<http://google.com/insights/search/#cat=&q=idea%20generation&geo=&date=&clp=&cmpt=q>

