CREATIVITY IN NEW PRODUCT DEVELOPMENT

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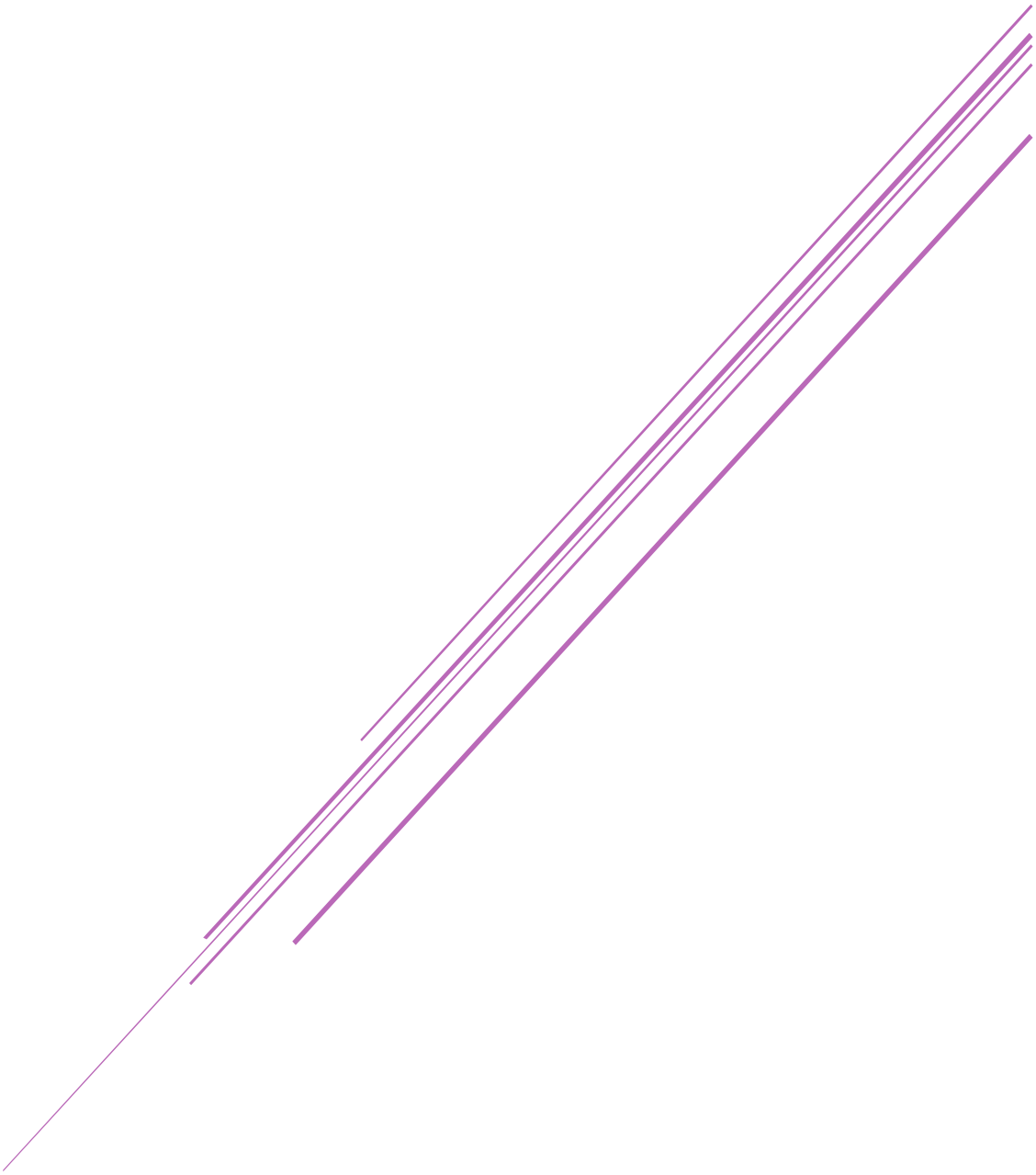

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Summary

The following master thesis addresses the new product development model and the use of creativity in order to enhance the effectiveness of said model.

New product development is a well-known and much used model, relating to the process of developing and introducing new products to any market. The model provides some easily understood steps, and as such it can appear deceivingly simple to work with. However, new products have a staggeringly high fail rate according to Kotler and Keller and as such it stands to reason that there are some issues with the model itself, or how it is being used.

The purpose of this thesis is to suggest an improvement in the use of this model by applying creativity to the process in a more deliberate manner than has previously been the case.

Creativity has become an overused buzzword for both companies and their employees to put on anything they want to sound modern. This makes it difficult to truly understand how creativity will work as a proper business tool. This thesis presents some tangible approaches to making use of creativity through the creative platform concept developed by Christian Byrge and Søren Hansen, and attempts to shed some light on the usefulness of lateral thinking to provide a fresh perspective on one's challenges.

Following these themes is the examination of whether creativity could also aid in the new product development process in works across border, between different cultures.

Different cultural dimensions can make any cooperation strained and people may unknowingly trip themselves up when attempting to work with those from a fundamentally different culture. In order to examine this a cultural analysis based on Hofstede's six cultural dimensions will be made for the countries of Denmark and Japan. The two have quite different sets of traditions and provide a good image of how cultures may clash when attempting to work closely together.

Methods for applying creativity in such a case will be presented along with some potential advantages and disadvantages for this particular approach.

As mentioned the creative approach will be based on the thinking methods developed by Edward de Bono, the man to coin in the term lateral thinking, and the creative platform developed by AAU professors Christian Byrge and Søren Hansen.

Abstract

The following project examines whether creativity can be used to enhance the new product development process in an international setting. The project analyses existing literature on the subject and uses the information to discuss the pros and cons of the creative platform method. A hypothetical cooperation between Danish and Japanese companies will be briefly discussed.

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Introduction

The new product development model is a very well-known model, not only in a business setting, but in areas such as engineering as well. The model creates a comprehensible step-by-step guide for the user to follow in the pursuit of creating a new product to be introduced to the market.

However, new products have a notoriously high failure rate. Average fail rate is at about 50% with numbers as high as up to 95% in the US market and 90% in the European (Kotler & Keller, 2012).

Clearly, with such a high rate of failure, something is not functioning optimally and thus it provides an opportunity for re-investigation of the model itself as well as its uses.

This thesis takes it basis in the new product development model and works from the standpoint of new product development as suggestions are made to render the process more successful, or at the very least more structured than it has previously been.

Because the model is so popular, there are a plethora of variations and interpretations as to how the individual steps should be performed, what steps are necessary and which are not, the order of each step and so on. The following text will introduce some of the different variations and attempt to sum up a general direction they all take, as well as weigh their differences against one another in order to create a better view of what new product development actually entails.

Common for a lot of the different interpretations, however, is that the idea generation process itself is not explained in depth. It stands to reason that for a product to be successful the development phase should not be taken lightly and ought to be planned out in great detail to ensure the greatest possible product.

Most variations of this process talk about being creative with the development process in order to come up with great ideas, but few explain exactly what is meant by being creative. This leads to the issue of making use of creativity in this model, despite not having a clear idea of what creativity is or how it could be used.

Mostly when we look at creativity it is thought of as something abnormal e.g. a great talent in painting or writing, or as a term used for something we do not entirely understand. It is not uncommon to hear someone call another person “creative” as a derogatory term when they do not understand the about-spoken person and think they are acting strange. Creative

“types” are often viewed as socially awkward and aloof, so why do we want to have those in our workplace?

In the last decade has sprung a focus on workplace creativity where we appreciate people who can “think outside of the box” and present things in a new way. This sought-after ability, however, has prompted every tom, dick, and jane to add creative on their resume, as one of the biggest buzzwords of this past decade according to linked-in sources. As a result, the word creativity has been subjected to verbal satiation and lost meaning in an everyday setting. The word is tossed about by employers and employees alike without anyone being entirely certain of what they mean, other than them meaning something abnormal.

Therefore, the need to define creativity in a development setting and providing insight into how this creativity can be used as a legitimate tool in a working environment is paramount to the success of new product development models, which call for creativity in the idea generation phase.

Mainly brainstorming has been called upon as a favourite tool to induce creativity, but investigations by several educators, including Søren Hansen and Christian Byrge of Aalborg University, brainstorming will, in more cases than not, stifle creativity more than expand it. They have, instead, created a new model for the use pf creativity called the creative platform, which aims to turn creativity into something more tangible than what it has otherwise been.

Through this project the creative platform will be thoroughly investigated and broken down into easily understandable deliberations, from which to be applied to the new product development model’s idea generation phase.

An analysis of the potential for the use of these model in combination will be conducted on the basis of a hypothetical collaboration of a Danish and Japanese company based on the cultural dimensions of Hofstede.

Finally, the discussion of the usability of these models on contingency will be made as well as the dangers of buzzwords, negative impacts of creativity and the difficulty of creating a comprehensible creativity based model without restricting oneself to platitudes and semantic satiation, which renders the whole idea obsolete.

Methodology

The following chapter will be used to explain the methodology of the project. The writer's approach will be briefly explained along with a description of the rationale and legitimacy of the project.

First is a brief introduction of the problem formulation

Problem Formulation

How can creativity be usefully ingrained into the new development process in international businesses?

Approach

The approach in this project is based on the systems approach as presented by Arbnor and Bjerke in 2009.

The systems approach method entails a view of the whole as being composed by several components. In its essence, this means that in order to understand the whole, one must delve into the components and view their interaction with each other. By doing so it becomes clear how the individual components together, can construct a whole that is more than the sum of its parts. This particular method has been chosen, due to the nature of the assignment. In order to realise why creativity can be useful in product development across organisations it is of vital importance to not only understand how creativity, product development and organisations work, but how they interact with one another in various scenarios.

Through an analysis of each component and their interactions a new understanding of the whole will emerge, which may be difficult to realise by simply looking at it alone.

Furthermore, the worldview present in this project is subjective. This means that by attaining the same information people may not reach the same conclusions depending on their personal view of the world. This results in an inability to guarantee that views, interpretations and analysis are correct, as they are merely the result of personal observations and views being applied. Thus, others who do not have the same view may disagree with the conclusions reached.

Reproducibility

The project itself should be easily reproduced. The articles, books, videos and other sources are available to others as well, and thus, it is simple to attain the same information as has

been induced to this project. However, something that may not be reproduced are the individual conclusions made by the author.

However, information received through surveys may not be as easily reproduced. The survey itself can be redone and resent, however, results may vary depending on who responds to the questionnaire, and what mood respondents are in.

Precedence

The project itself is based on preceding works done in the areas of product development, creativity and corporate culture.

With creativity being used as a buzzword to enhance the positivity perceived in certain business models and strategies, it can be difficult to discern whether creativity as a tool is actually induced in studies or whether it is merely used as a lose term for anything which entails idea generations or unusual methods.

With this in mind, it is arguable that there is little to no actual precedence for creativity used in this particular form, with the focus lying on the business aspect. Academic texts pertaining to creativity has a tendency to focus on the pure form of creativity which can then be applied in other settings. Business models may be mentioned, but they rarely play a crucial role.

Literature review and acquisition process

The process of attaining the literature used for this thesis will be described briefly and the selected literature will be assessed and analysed in terms of usability, validity and relevance.

Initially the task of finding suitable literature for the project required a breakdown of what the project contents would be. In simple terms the different parts of this project can be defined as pertaining to creativity, product development and corporate culture.

As such there are three distinct areas from which literature would need to be gathered.

First of all, readily available literature was examined. Over the years of studying business at Aalborg university a number of books and texts have been accumulated. Presumably, by being used in the educational process of a bachelor and master's degree, the validity of these books is predetermined by the staff of said university. Furthermore, it is a source which can be accessed at any time without restraint seeing as the books are private property.

The secondary method of searching for available material was conducted through a simple google scholar search with keywords relevant for each theme.

In order to ensure validity of these sources, authors and publications were assessed in terms of background and general reputation.

A third method employed was to look at previously cited sources in projects which have covered similar themes.

This was done because these sources had already been deemed valid and usable through previous assessments, and thus it would save time from having to skim through a large number of sources which had already been discarded.

An additional point that needs to be noted is that some sources had to be excluded simply based on the fact that they were only available past a pay-wall and students do not have $24.99 for every article which may prove useful, or over $50 for a pdf version of a textbook which holds a relevant chapter.

Sources

In the following part, the used sources for each theme will be quickly presented along with an analysis of their relevance and usability.

Creativity

The primary source used for creativity analysis is the book Enhancing Creativity for Individuals, Groups and Organizations written by Christian Byrge and Søren Hansen. The book was chosen based on the familiarity with its contents as well as personal experience with the authors.

The validity lies in the education and experience of the authors. Both Christian and Søren have years of experience with creativity. They have been teaching companies to use the creative platform to better their production and idea generation.

Furthermore, Christian holds a master's degree in creativity attained from the de bono school of creativity on Malta. This school was established by Edward de bono and is the only academy which offers a master's degree specifically for creativity.

The usability in this book lies in the content related to the creative platform. This platform introduces the reader to creativity in a simple manner, which allows for easy access in spite of limited experience. In relation to the theme of product development, it is worth to mention that the book presents ways to develop products creatively through the use of lateral thinking.

Another source used for the creativity theme is the Edward de bono group web page, which contains links to videos, articles and information about creativity as explained by Edward de bono. De bono is a psychologist who had studied creativity for decades and he is one of the leading authorities on horizontal, parallel and creative thinking. the reason this web page is cited here as a singular source is that both videos and information from this will be used, and though they are all different, in the sense of validity the source is the same.

As for the usability of this source, with de bono being one of the leading voices in creativity as well as the inventor of the term "lateral thinking", videos by him are paramount to the study of creativity.

Product development

One of the main source for product development is Kotler and Keller's marketing management. The edition used for this project is the 12th edition, and as such one of the more recent ones. The book is used in teaching situations at Aalborg university and due to previous experience with the book it was selected early in the process. It contains a chapter dedicated to the production in a business which includes a comprehensive illustration of the new product development model.

Another book used is understanding strategic management by Anthony e. henry. This book contains valuable insight into the strategy of running a business and has been deemed usable in the sense

that it helps provide an overview of the need for a solid strategy and the importance of continuous product development.

Furthermore articles on product development processes in japan and Denmark are used from the digital academic library of the university of Cauca where an articles has covered the specific approach used by Japanese companies and the Danish magazine Ingenøren, with it's article on Danish new product development respectively.

Corporate culture

The primary source for cultural aspects, is the book "International Business" European edition written by (Czinkota, Ilkka, Michael, Svetla, & Marin, 2009). The book contains several texts explaining the importance of culture when it comes to international relations, not only inside a corporation, but for customers and markets as well. The book does well in its explanation of key aspects of culture for the international business manager to consider before and during their interactions abroad.

One source selected for this part is the book: understanding corporate culture, by Mats Alvesson. This book provides a good description of the nuances of corporate culture as well as the importance of its correct management and strategizing. Within this it can be argued that creativity also lies.

For comparative studies the website of Hofstede's thinking centre will be used to provide the most accurate information about the cultural dimensions in an easily compared way. This is to ensure that the cultures included are measured through the same parameters and thus will be directly comparable as opposed to taking interpretations from varying texts which may evaluate cultures differently from one another, thus providing a less stable basis of information for comparisons.

The creative platform and lateral thinking

Creativity is a very broad term in itself. It can mean a plethora of different things depending on who you ask. Therefore, in order to use creativity as a tool, one must first attempt to define what creativity is.

The perception of creativity in this project is based mainly on the book Enhancing creativity for Individuals, Groups and Organizations, which was first published in 2014. Further information about the authors and their credibility can be found in the subsection of the literature review labelled creativity, or in a more summarized form in the methodology validity chapter.

Definition

Creativity is the unlimited application of knowledge (Byrge & Hansen, 2014). What this means is that to be more creative we need to relinquish the restrictions we hold on what knowledge is relevant in a certain situation. These restrictions are imposed on us throughout our lives in the form of the knowledge we gain and categorize.

In order to do so, we need to look at things not only for what they are, but for the principles behind them. A classic example of being able to take a principle form something seemingly unrelated and adding it to something else is the invention of Velcro. The story goes that a swiss engineer, was walking his dog one day. when they returned home he noticed the burrs sticking to his clothes. He wondered if it was possible to transfer that to commercial use. (Goodrich, 2013)

By looking at the burrs as something that sticks to something else, the principle of holding things together, rather than a nuisance, the man was able to transfer the principle to other uses. By inventing a material that carried the same aspects as the burrs and the dog fur, it was possible to hold things together quite well, but also be able to take them apart fast, without the need for lacings and a lot of knots.

Furthermore, it is important to note that in this instance creativity distinguishes between two types of knowledge; horizontal and vertical. Vertical knowledge is the knowledge we have assorted in a certain “box” in our head. For example, a business management box, which contains theories, norms and commonly used ideas in this field. This knowledge can be very useful when we need to delve deeply into a subject, like writing a thesis, but in creativity it is also a restriction on ourselves. By looking at only the immediately related box we miss opportunities to gain original ideas.

Horizontal knowledge is all our accumulated knowledge, whether it be grandma's recipe for cookies, or the professors 90-minute lecture on European corporate law. By accessing this information, we literally broaden our horizon and allow ourselves to use knowledge we would not have considered relevant in the set scenario.

The 4 pillars

The base on which creativity lies, is the four pillars represented in the figure below

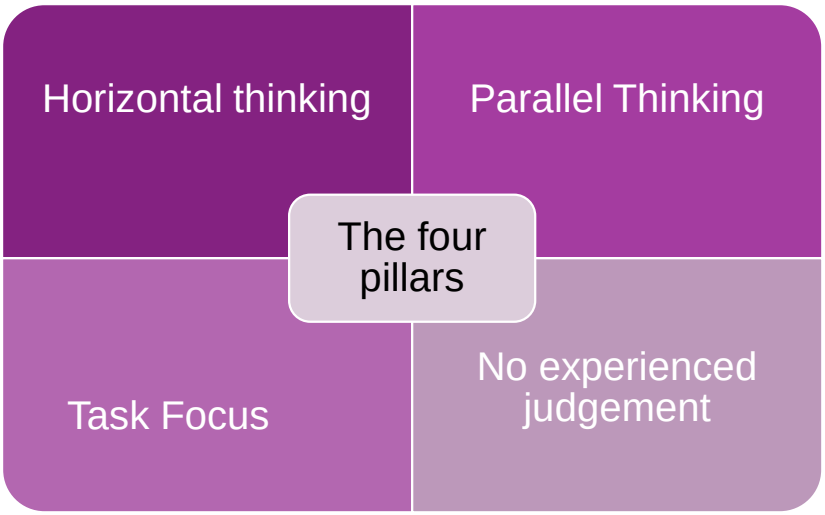

Figure 1 Source: (Byrge & Hansen, 2014)

The purpose of these four pillars is to construct an environment where creativity can flourish. They are designed to make people more open to ideas they would otherwise have dismissed without much thought. The pillars teach us to enter a state of mind where no matter how preposterous an idea sounds we are willing to entertain the thought and say, "yes and"

Horizontal thinking

Horizontal thinking is the use of horizontal knowledge in idea generation. Horizontal knowledge, in opposition to vertical knowledge, is the wide knowledge we possess spanning across many fields, and as such it is much broader than vertical knowledge.

By thinking horizontally on a problem, we are capable of using our entire span of knowledge, even from areas which are not naturally associated with the topic at hand. Through this we may allow ideas to form, which would otherwise have been pushed aside before they could even be recognised as ideas.

Parallel Thinking

The main idea with parallel thinking is to get everyone into the same state of mind, and thus enable them to follow the same line of thought. There are several reasons why this is important. First, the human mind is accustomed to multitasking (Byrge & Hansen, 2014). We

have several thought processes running in our heads at the same time, however we are not capable of maintaining an unlimited amount of knowledge, and the more complex the thought processes are, the less we can keep track of at the same time. In relation to creativity this means that we are restricted to knowledge we feel comfortable with in a certain topic, the vertical knowledge, which in turn severely reduces the creativity. Parallel thinking holds the purpose to ensure that all participants are focusing on one task at a time and all on the same task. It is important to keep the mind from being distracted by currently unimportant things, like the next coffee break or what to buy for dinner.

Second, parallel thinking is there to ensure we look at the task from the same point. This essentially means that it is important to ensure that no discussions ensue. Discussions on a task may seem like a good idea, like getting the pros and cons of a case before moving along with it. However, when conducting a discussion there are always those who are thumbed down and those who take charge. This leads to a skewed balance and judgement, which we will get to later.

Task focus

Task focus is the pillar which ensures that everyone is focused on the task at hand. A quote from Byrge and Hansen sums it up very eloquently:

"*Task focus is equivalent to 100% focus, which enables the application of all kinds of knowledge related to the task. This means that it does not matter what pops into one's mind, or whether it comes from dreams, leisure or work; everything can be applied in an unlimited way and put to use when performing a task, solving a problem or engaging in a situation."*

(Byrge & Hansen, 2014)

This means that if we focus on the task presented before us, our minds will automatically start to relate all our knowledge to this task. Of course, this takes a lot of practise, but it is of vital importance to the creative process that we do not restrict or dismiss knowledge simply because it comes from somewhere "odd".

The more attentive we are to our focus, the greater is the likelihood of developing new ideas, thoughts and knowledge (Mendelsohn, 1976). Without task focus we cannot properly connect the knowledge we have in our minds. We cannot apply unconventional knowledge and as such, we cannot be original, or the likelihood of said is severely reduced.

No perceived judgement

This is perhaps the most important pillar when it comes to product development. In a business setting, there are always pre-perceived roles, which everyone undertakes.

Whether, this role be a manager, a buyer, an expert or a blue-collar worker, there is a certain hierarchy to things which must be kept in usual business. However, when dealing with creativity, there can be no perceived judgement, no one is above the other and no one has a greater influence than the rest. The importance of this lies in the simple fact that if people feel like they are being judged on their statements they will rescind from making any that could potentially cast them in a negative light. This means that ideas which could have the most potential will not be presented and thus the company as a whole is missing out because of that perceived judgement.

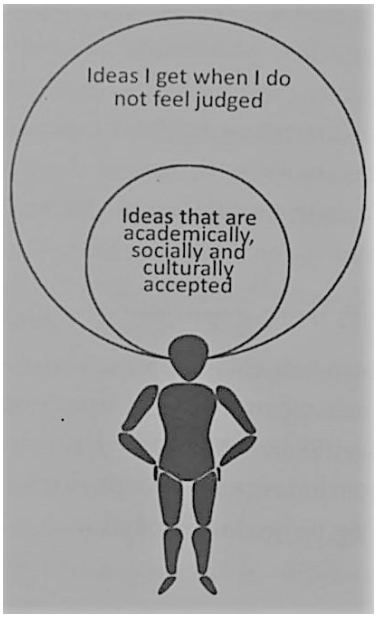

Figure 2 Image source: (Byrge & Hansen, 2014)

To create an atmosphere of no perceived judgement is not necessarily an easy feat, we are all fairly used to judging and being judged. One way of attempting to avoid judgement is to simply delay it. By attaining the proper level of task focus, it is possible to push evaluation back to the very end of the process. Furthermore, in some cases it helps to have a written set of rules to remind participants to not judge.

There are several ways of feeling judged and not all of them are rendered by our peers. Another feeling of judgement may be quite subtle and not something we consider at all, bodily judgement. For example, if you make a mistake it is ingrained in most of us that we should respond negatively. It is a difficult pattern to break, but by conducting some exercises that actively celebrate mistakes in exaggerated poses you force the body to do something that is so contradictory to what is usually does, that you can manage to change the feeling of defeat from a mistake to one of amusement, or even intrigue.

The Creative Platform

Below will be presented the creative platform, its steps and their uses. There are many ways to induce a different way of thinking to a process and especially when it comes to idea generation, we see a number of methods with which to attempt to create a new approach to the problem.

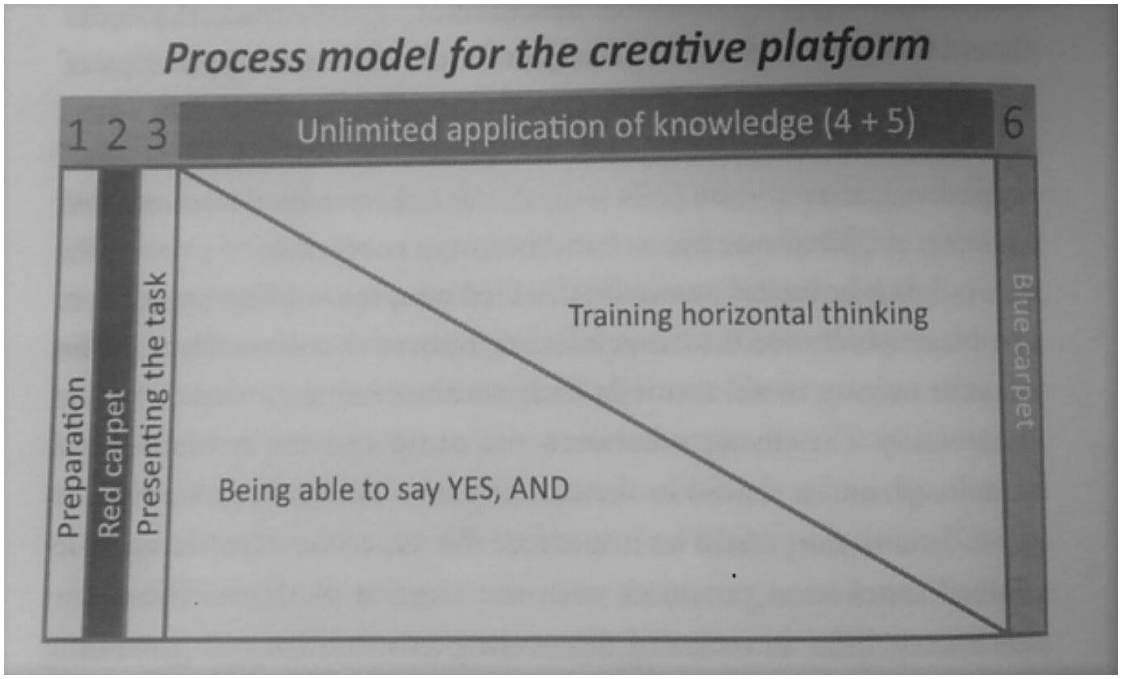

Figure 3 Source (Byrge & Hansen, 2014)

Above we see the process model for the creative platform this model outlines the facilitators task in the creative process the reason step four and five are combined is that they are built over the same pattern and are sometimes joined to one.

The creative platform in itself must always contain the following six steps:

1. Preparation
2. Red carpet
3. Presentation of the task
4. Generating and developing ideas
5. Academic and professional input
6. Blue carpet

These steps are designed to aid in keeping the creative process within the four pillars.

Preparation

This step is related only to the facilitator role. In order to facilitate a creative process, it is of vital importance that a script is produced based on the four base principles of creativity, along with a strict time schedule.

The facilitator must consider what needs to be done when and plan activities back to back over the entirety of the process down to the minute. The need for such a detailed time schedule is so that participants can disappear mentally into the process while still being able to regain an overview of the next activity (Byrge & Hansen, 2014)

Byrge and Hansen suggest preparing everything to be said on instruction cards so that one does not need to worry about what comes next whilst conducting a 3D exercise or 3D activity.

Red carpet

The red carpet is used to allow participants to enter the correct state of mind to enter the creative platform.

The tool most typically used here is 3D cases in a small number – two to five, but it may also contain energizers in order to raise the level of energy present (Byrge & Hansen, 2014).

Presentation of the task

Presentation of the task is where the topic is presented. It is necessary to restrict oneself to a concise presentation in order to abstain from encouraging the participants to evaluate or think too hard on the topic. the task must be presented in layman's terms so that it is easy to understand for anyone who may be taking part in the process.

Furthermore, the task must be introduced two ways. First, concretely, in order to ensure familiarity to the task. This will make it easier for people to work with, because it is more tangible. Second, the task must be presented on an abstract level in order to ease the use of horizontal knowledge and in order to pull the task away from being stuck in a set pattern.

Generating and developing ideas

This phase consists of several rounds of idea generation and development, typically aided by various types of stimuli, which will be presented further along in the chapter.

The structure of this step is quite rigid and would typically look as the following schedule

Activity	Time frame
Individual idea generation	5-15 minutes
Pair idea generation	5-15 minutes
Group idea generation/development	No set time frame

Table 1 Table source (Byrge & Hansen, 2014)

Idea selection follows the same pattern with individual selection followed by pair and group selections respectively.

Academic and professional input

The main point to this phase is the further development of the ideas selected in the previous step, in a joint effort between students and teachers, or participants and facilitator.

This is also the phase where additional knowledge will be needed. Oftentimes, ideas will have been generated which hold a great potential, but raises questions that cannot be answered by the expertise of the present participants. Thus, it may be necessary to identify and acquire further knowledge in order to verify the viability of certain ideas.

It is important to note that this phase must be conducted as a development phase. Experts will need to be included in the development process in order to increase their willingness to entertain unusual ideas. Rather than asking if we can do it, we should ask how can we do this, even if the steps sometimes become tangled they may eventually lead to a eureka moment where the final idea arises.

Blue carpet

This is the final step and perhaps the most important one. This is where evaluation and reflections on the process can be shared. The point to this phase is to reintroduce participants of the creative process to the real world. Whilst we are on the creative platform, there is no experienced judgement, no hierarchy and no one person's suggestions hold more merit than the next. This frame of mind can be very frustrating to have when entering the real world where there is a constant stream of judgement and thus, it is important to phase back into reality so that it does not end up slapping you in the face.

3D Activities and 3D cases

The purpose of 3D cases and activities is to enable participants of the creative process to more easily transition from one step to another on the creative platform. There are many variations of these activities and cases.

Common for most is that they are best performed on one's feet. All cases and activities follow the same six steps (Byrge & Hansen, 2014):

1. Go to the floor
2. Find partners
3. Instruction
4. Demonstration
5. Performance
6. Finish

Each step and the importance of it will briefly be recapped in order to create a broader level of understanding.

Go to the floor

As was mentioned previously it is important that participants of the creative process do not have hindrances between them and their partners in order to avoid distractions and to create a better flow between participants. Furthermore, learning is done with one's entire body and thus it should enable participants to more easily grasp the concepts of the creative tasks if they make use of their whole body. Therefore, the easiest approach is to perform both 3D cases and 3D activities by guiding all participants to a common floor area.

Again, a rigid control of events is necessary, so the facilitator will conduct this step in the following manner:

- Put everything down
- Stand up
- Come to the floor

By giving only simple commands and not explaining further we create an environment that can reduce the stress levels of participants significantly i.e. it is not weird or scary to put things down, or stand up, and by doing these simple tasks at first, we are more likely to accept the following task. This is a well-known psychological method called the foot-in-the-door technique (Freedman & Fraser, 1966), which states that by asking a simple favour a subject is more likely to comply with a bigger favour later on, meaning that by asking

participants to simply stand up and walk to the floor, we have primed them for more demanding and alien tasks.

Partners

Partnering up should be done quickly and without allowing for too much consideration into who one end up working with. It is imperative to avoid people only seeking out familiar faces in the case works in order to allow the best utilization of horizontal knowledge.

The simplest way of aiding the selection process is to introduce a criterion for partner selection, for example the colour of one's trousers or style of one's shoes. Alternately an added few steps can be introduced, where participants close their eyes, hold up a number of fingers between 1 and 10 and partner up with someone holding up the same number.

Instructions

Here is another rigid step where it is of utmost importance for the facilitator to be well prepared.

Instructions should be given precisely and to the point. No more information than is immediately needed should be offered. There must be no explanations of the purpose of the instructed task in order to avoid discussion. Additionally, all unrelated foci should be avoided, facilitator should not hold random objects and props that may be needed later should be kept out of sight until they become necessary.

Furthermore, it is important to note that the facilitator should avoid any small talk that could distract focus from the task at hand. For example, by commenting on the weather we lead focus from ourselves to the weather and thus lose some flow.

Demonstration

Immediately following instructions come a demonstration of the task to be performed. This is done mainly to ensure that everyone has understood the task and to provide an example of its conduct.

In this step, it is important that the facilitator only performs the task as the participants are expected to perform it, without any further explanations or instructions along the way, these should have been taken care of in the previous step.

It is important to note that participants should not be used in the demonstrations of tasks, despite the majority of 3D activities and cases being conducted in pairs. This is to ensure there is no person focus and thus reduce the perceived judgement in concordance with the four pillars of creativity.

However, should a volunteer come forth on his or her own accord this is acceptable, provided the remaining participants are made aware of the situation so that they do not fear being randomly selected to aid in demonstrations further along.

Should no aid be available, the facilitator is expected to undertake all participant parts in the demonstration, easing the understanding of who does what by indicating when he assumes different roles, for example by taking a step to the side when switching persona.

Finally, it is important to note that the facilitator should strive to portray themselves only. Too much acting can draw focus from the task and leave the participants wondering about the oddity of a one man show rather than paying attention to the task being demonstrated.

Performance

The next step is to allow the participants to undertake the 3D case or activity presented to them. Here it is of utmost importance that the facilitator makes themselves scarce or undertake a different task so as to not appear to be observing the participants. It is vital that an atmosphere of no judgement is attained in order to ensure the highest level of creativity.

Should participants fail to conduct the task in the intended manner the facilitator may opt to stop the task prematurely and reinstruct everyone without pointing out individuals who may have gotten it wrong, or, alternatively, choose to conduct a second round after the planned task ends without mention of it not initially being the intention.

During this stage, no feedback is allowed. The idea is that ideas should flow unabashed and without being measured in any way on whether they are feasible, permeable or physically possible.

Finish

The ending of an experience holds a greater impact of our recollection of said experience than anything else (Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993). This holds true for pain experiments as well as creativity training. Therefore, it is important that a task is stopped whilst the participants are still in ‘experience’ mode (Byrge & Hansen, 2014). If subjects run out of ideas or get bored, their minds will begin to wander and they will start to discuss or evaluate the experience rather than remaining in the desired mindset.

It can be difficult to figure out when exactly a group is moving away from experience mode, but here it is important to remember that it is better to end the task a bit too early than a bit too late. Usually after a while it is possible to get a feel for the specific group and adjust task lengths accordingly, but in in the beginning one would naturally want to stick to predetermined timeframes. Ideally, a 3D case or activity should be between 5 and 15

minutes long depending on the skill and familiarity level of the participants (Byrge & Hansen, 2014).

Furthermore, when ending one task, in order to abstain from entering into a judgement based mindset, it is paramount that the next task is introduced quickly (within 15-30 seconds) (Byrge & Hansen, 2014).

Final points

The previous steps are what makes a 3D case/activity, and should these not be followed, what you are doing is no longer truly either of the two. This does not mean there is no educational value in the task, however, it does mean that there is a higher risk of deviating from the four pillars, and thus lose some of the creative freedom we attain through their use.

There are a number of brief guidelines to the conduction of 3D cases and 3D activities, which are mentioned as well in the book by Byrge and Hansen, which can serve as a brief checklist when one attempts to conduct a creative process:

- No breaks
  - Breaks disturb the creative flow, and should people need to leave the room it is important to be considerate of when they return so that they do not end up acting as observers
- No questions
  - Questions should be held until the end of the creative process to avoid judgement and reflection too early on in the process. Often things that appear odd will make sense later in the day.
- No instructions about what the participants ought to experience
  - Everyone experiences things differently and the idea of a creative process is to broaden peoples' horizons, not dictate in which direction it is broadened.
- No watches, phones, computers or irrelevant people
  - Any distractions can disrupt the flow and after a while people will find that it is not so difficult to abstain from using these gadgets.
- Change partners often
  - New people means a whole new range of horizontal knowledge and by working with someone you had not considered working with before you may strike gold.
- One task – one deadline
  - Common task focus is one of the most important things in the creative process and by allowing participant to focus solely on the task ahead and not

what it may be used for later on, we free their minds to entertain ideas that would otherwise have been dismissed as nonsense before even being uttered.

- Everyone should be able to participate
  - Whether they be seasoned creative geniuses or complete novices fresh in from the street, the instructions and demonstrations should be accurate and detailed enough that anyone can undertake the task, and clear enough that they undertake only the given task.

Lateral thinking

One of the main driving forces behind lateral thinking is Edward de Bono, who introduced the term in 1967. In its essence lateral thinking is the purposeful deviation from standardised thought patterns.

According to de Bono there are four types of thought. Natural thinking, logical thinking, mathematical thinking and lateral thinking.

Natural thinking is the most basic line of thought. It is where the primitive thought patterns exist, the simple easily accessed thoughts. here we believe what we hear, and the more we hear it the more right it feels. They are also related more to basic needs than other types of thought and strive to find satisfaction to these needs. For example, if you are hungry you think of a particular kind of food you enjoy and the action of eating it, leading you to seek out nourishment. These thoughts are immediate and direct, but also easily subjected to error, seeing as no filter has been added to them.

As an example, natural thinking is where prejudice comes from. If we see one obnoxious drunk, natural thinking will subject that all drunks are obnoxious.

Logical thinking is the attempt to restrain the natural thinking patterns in their more extreme instances. Logical thinking serves to give direction to the natural patterns so that they are guided into the correct path and banned from incorrect ones.

In this sense, the education of an individual relies heavily on logical thinking. Not only n an academic sense but also in a behavioural sense. Logical thinking is, for example, where we learn that not all cultures act the same way we do and how to approach these situations without succumbing to natural thought patterns which may be perceived as rude.

Logical thinking, is then an improvement over natural thinking in the sense that it strives to build and shape our thoughts and memories into something we can make use of in an academic and social setting. In other words, logical thinking is what we use to coexist with people without being overly rude or obnoxious.

Mathematical thinking is the translation of information into number, symbols and predetermined patterns. Rather than responding to a situation as it comes, like natural and logical thinking, mathematical thinking hold pre-existing patterns in which it sorts incoming information. This is useful for processing large amounts of information and is responsible for things like techonological advances where complex inputs can be transformed into algorithms and sorted with relative ease.

The difficulty here is that mathematical thinking has a tendency to not consider the easiest way of doing things.

An example in the book by (de Bono, 1969) a mathematician was posed the following problem: two cyclists start 30 miles apart and cycle towards each other at 15 miles per hour. On one cyclists nose sits a bee, which takes off at 50 miles per hour. This bee flies from the nose of one cyclist to the other back and forth. How far has the bee flown when the two cyclists meet, assuming the rests in between each cycle is no time at all.

After a while the mathematician wrote up a complicated formula for diminishing series.

A group of young schoolboys were askes the same question and deduced that since it will take an hour for the cyclists to meet and the bee flies 50 miles per hour it will have flow 50 miles.

the weakness of mathematical thinking is illustrated here in the sense that the mathematician made the problem a lot harder than it needed to be and used a difficult formula, simply because he could. In his mind the predetermined pattern for dealing with incoming information on math questions was to find a corresponding formula to apply the problem to, rather than looking for a simpler way to solve the question.

Lateral thinking is used to avoid the errors in the other methods of thinking. Where natural thinking can err in the sense that it allows for both incorrect information and inefficient use of information. Logical thinking attempts to reduce these errors by modifying the natural thinking patterns, but it is unable to generate new ideas t obetter use information available. Mathematical thinking avoid natural thinking errors by setting up strict systems, but this does not allow the best use of information, seeing as it can only make use of what has already been deemed relevant by natural thinking in the first place.

Commong for these methods is that they all settle for the first usable option. If this works there is no need to look for anything different. in the words of a famous idiom: if it ain’t broke, don’t fix it.

In a sense, these three thinking methods are all selective processes, in that they rely on what the memory has judged to be relevant.

Lateral thinking attempts to force past these limitations and create a thinking method where it is possible to change one’s point of view and one’s direction. Further opposed to the other methods lateral thinking does not need to necessarily make sense in the initial part of the process. In lateral thinking, as long as the end product provides a clear path, it does not

matter if the method used to find this path is connected or not. This allows the thinker to search for the best solution to a problem by trying to consider different scenarios.

As mentioned previously things such as forced stimuli reactions and attempting to look at a problem from a conceptual point of view, are efficient tools for the lateral thinker to use.

A way to illustrate lateral thinking is by looking at photography. Before digital photography was invented a photographer would spend a lot of time lining up a shot, worrying about such things as lighting, background and the perfect facial expression. With digital photography we can simply take a series of photos and choose the ones we like best after. The benefit of this is that by having a lot of pictures we may find one that is better than what we had originally thought of. Lateral thinking is like digital photography, where a number of different ways to solve a problem are found and the best solution chosen later on (de Bono, 1969).

In an interview with The Guardian (Balakrishnan, 2007) de Bono notes that

"Creative thinking - in terms of idea creativity - is not a mystical talent. It is a skill that can be practised and nurtured. You can never tell how a policy has been reached just by looking at the end result. Some people who have achieved a huge amount do not come across as impressive when you speak to them … There isn't just one point; it takes time to learn. You don't have to be intelligent, but I think you have to be open to possibilities and willing to explore. The only stupid people are those who are arrogant and closed off."

Edward de Bono

Introduction to product development

In every company, there is a product offered in exchange for value. Whether this product be a good or a service, it is still the backbone of said company, and as such it is paramount that the product is kept optimised for whatever situation the company might find it in.

If, for example, a technology based company does not work to update their hardware as well as software they will quickly be rendered obsolete and go out of business. A famous example of this is the polaroid cameras. The popularity of these cameras dwindled drastically along with the introduction of digital cameras and phone cameras. The need for an immediate print was simply no longer present with the option to have all your images stored digitally and printable in numerous amounts was simple more desirable to the customers who could then easily delete a bad picture and reprint good ones.

New Product development

Introduction

New product development, or NPD for short, is a development model which strives to present the product development process in a simple and easily accessible manner. Below, in figure 1, is presented a view of the new product development cycle steps according to (Kotler & Keller, 2012).

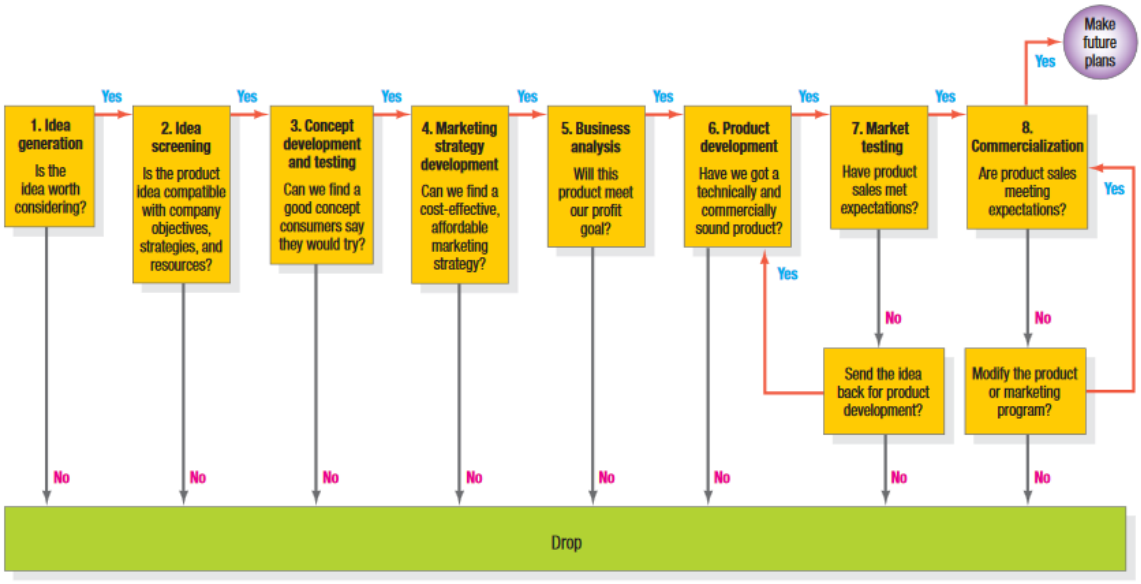

Figure 4 (Kotler & Keller, 2012)

New product development theory is one of the most commonly applied and readily available theories on the subject of product lifetime cycles, and a brief search on the web will reveal an ocean of articles, how-to-s and discussions of this particular theory.

Being such a commonly used model, there is a myriad of variations on the steps, their appliance and their purpose and it would be almost impossible to summarize them all. Therefore, in this introduction to the method, will be making use of the Kotler and Keller model presented in figure 1 as a main source on the definition of the model, which is an often-referenced model. Following, the steps of the NPD model will be briefly presented in order to ensure a precise description of the understanding and interpretation used throughout the project. However, in order to illustrate the sheer amount of variation on this model some figures from company webpages, and other sources will be presented as reflection material, to provide a better view of how new product development is seen in everyday use, rather than merely how it is described in a university textbook.

The NPD model presented by Kotler and Keller consists of eight steps which interchange with one another throughout the product development process:

1. Idea generation
2. Idea screening
3. Concept development and testing
4. Marketing strategy development
5. Business analysis
6. Product development
7. Market testing
8. Commercialisation

These eight steps feature heavily in many variations of the model and are presented in different forms, like a staircase model or a circle, to illustrate the cyclical nature of product lifetime and the need for continuous product development in a business.

Other variations with fewer steps exist as well, such as the ones presented in the following figures, which have been taken from the webpage of companies offering aid in product development for businesses.

Figure 5 (Inertia Product Development Company, n.d.)

As we can see from this model, there is only 5 steps presented in the product development process. The difference here lies in the use of the initial step, where this variant has opted to idea generation, screening and evaluation into one large first step. The steps are presented in a relatively simple manner, but also includes some illustration in order to draw the reader in and want to make use of the model. The accompanying text does not necessarily describe the use of the model in depth, due to the nature of the company being to aid a business in

the use of the model. They provide a brief description of how they go about the development phase, but otherwise the reader is left with much to be desired.

another variant of this model can be seen on a different company web page which holds its focus in Product Lifecycle Management.

Figure 6 (Living better media, n.d.)

Here, instead, we see six steps presented and a simpler exhibition of the model itself. The accompanying description of each step is easy to understand and aims to make people feel more accustomed to the model quickly in order to boost their confidence in the software offered by the company.

In common with all three variations is the fact that they are aiming to simplify an otherwise very complicated process, that is product development.

General use

The base idea of this model/theory is that there are certain steps required in order to create a new product. This theory then attempts to list these steps in the order which they should be performed to ensure the highest chance of success with the introduction. The following part will list the steps as presented by Kotler and Keller and briefly explain each of these steps along with their relative importance in the overall process.

Idea generation

The initial stage of the product development process is the idea generation phase. Here, a company attempts to find a new idea to introduce to the market, either as a variant of an existing product or to fill a demand gap in a new or existing market. There are a number of ways which one can employ to approach the idea generation phase, however. These variations, as they are presented in the marketing management book by Kotler and Keller and will be briefly overgone in the following chapter.

DIG – demand-first innovation and growth

This approach consists of three base sub steps which let a company view demand and opportunities in an un-biased perspective.

These steps are:

The demand landscape – maps consumer needs and wants

The opportunity space – attain market perspectives from different angles

The strategic blueprint – how can the product fit into lives as they exist now and how is it different from competitors' products.

This is a very methodological approach to the idea generation phase, which allows for a systematic approach and a more quantitative answer on a potential product.

Interacting with others

Another approach is to interact with others in order to attain varying perspectives on the same problem. There are also differing approaches within this method with which one can make use of interactions. The most obvious of these variations would be the idea to use either one's employees or ask customers.

Companies like Toyota report a yearly number of employee suggestions of around 2 million, equivalent of about 35 per employee, as well as an implication rate of these ideas of about 85% (Kotler & Keller, 2012). By making use of one's employees the company will thus gain a very substantial number of ideas essentially for free, and from people who have experience with your existing product, and may thus be aware of complications, opportunities for improvement or redevelopment solutions the employer could not think of themselves.

This is a method which does not necessarily require much information gathering, seeing as employees are readily available at the workplace year-round. It could be as simple as putting up a suggestion box, or have a specialised folder on a shared network. The dangers of this method are, of course how insecure the number of submitted ideas are. One cannot guarantee that there will be a continuous stream of ideas from employees and thus the suggestion box model may fizz out over time. Some avoidance can be made in the ways of requiring each employee to submit a predetermined number of ideas per set amount of time. However, this does run the risk of employees half-assing the job and not trying to come up with something usable, but merely come up with something.

Alternately it is possible to take the approach of customer interactions. Here it is possible to utilize an existing customer base to answer questionnaires and surveys, as well ask for more

general feedback, thus creating an approach that allows for different ideas to take place but also encompasses a high number of quantitative data for use. Furthermore, it is possible to reach potential customers as well through the use of advertising and social media, which seems particularly efficient in attaining people's opinions about a certain subject or product. To further entice responses certain coercion techniques can be employed. For example, in the case of Toyota, it would be possible to hold a survey on Facebook in public where customers vote for their favourite model of car. People tend to get competitive with one another on such things and a simple survey is sure to spark some debate as to why one model is preferable to another, thus leading to a gain of valuable market feedback which can then be redeveloped into new ideas that take the good things from each model and combine them into something more broadly oriented, or take negatives into account and attempt to eliminate these factors from upcoming products.

Lastly there is the option of going to scientists, specialists, technical companies etc. who may have the possibility of seeing your product in a new light and thus infer a new way of solving the market need you are currently solving, or find a new niche for your product that you may not have considered. It can be good to get the perspective of people who are well acquainted with product development, like the companies mentioned in the different variants of the product development model. They may interpret this differently from you and thus provide a new perspective, but they may also be able to suggest areas in which you have not considered some relevant details that could lead to additional gains or issues later on in the process.

The downside to this is that companies who specialise in new product development may not necessarily have you best interest at heart. They are essentially selling you a product themselves, and they will aim to make this product as attractive as possible, even if it is not particularly innovative. Furthermore, there is never a guarantee of a good result even if you use a consultant company or scientists.

Idea screening

Idea screening is essentially all about avoiding pushing through with a bad idea and to avoid dropping a good idea. In this phase, the ideas up for development are screened through a standard form as presented by (Toubia & Flores, 2007), where the following questions are answered:

- Does the product meet a need?
- Would it offer superior in-use value?

- Can it be distinctively advertised?
- Does the company have the necessary know-how and capital?
- Will the product deliver the expected sales volume, sales growth and profit?

This relatively short list allows for a go-through of ideas and quickly identifying whether an idea is at all possible. The being said, an idea does not necessarily fall into the bad category by having one or more of the questions answered by a no. If the idea holds potential the risk in other areas may be worth looking into further.

This can be done through an idea rating device as used by (Kotler & Keller, 2012)

Product success requirements	Relative weight (a)	Product score (b)	Product rating (c) = (a) x (b)
Unique or superior product	0.40	0.8	0.32
High performance-to-cost ratio	0.30	0.6	0.18
High marketing euro support	0.20	0.7	0.14
Lack of strong competition	0.10	0.5	0.05
Total	1.00		0.69

Table 2 (Kotler & Keller, 2012)

The rating scale for products are as follows:

Poor	.00-.30
Fair	.31-.60
Good	.61-.80

Table 3 (Kotler & Keller, 2012)

With the lowest acceptable score being .61.

this rating system however, is only meant to be used for evaluation purposes and should not be used as the basis on which one makes a decision. Furthermore, the score of a product should be recalculated throughout the process (Kotler & Keller, 2012).

However, it is important to note that after this stage, the cost of development will increase substantially from step to step.

Also, noteworthy, is that there are differing levels of failure to take into consideration.

- An absolute failure – the product loses money; it's sales do not cover variable cost
- A partial failure – the product loses money; it's sales cover variable costs and some fixed costs
- A relative failure – yields a lower sales return than the company estimate

Thus, we can see that a relative failure in an idea does not actually lose the company money, it simply does not live up to expectations. Such an idea could have been caught in the screening process and gone for further development before finally agreeing to further or drop the idea.

Concept development and testing

This step is essentially about refining an idea into something more tangible for the customers and for further market testing and development. There are a number of steps to take in order to conduct this properly.

Concept development

Concept development is the actions taken in order to turn an idea from something relative into something directly relatable for customers. The process of this development lies in the creation of various concepts for the same idea, the purpose of the idea, the target audience and the usage intent of the product.

Once the concepts have been developed, competitive products should be identified, both some that are for everyday use, some fancy and some quick options. After identifying the competition an estimate of where the new product should be placed in relation to others in terms of cost and usability (slow/quick, sturdy/light etc.).

Hereafter, it is a matter of identifying the closest competition and relating the new product to these in terms of pricing and stats. For example, if we want to make a lightweight hammer for girls to use, we need to compare our product to existing ones in terms of lightness and sturdiness in relation to price.

This data can be used to set a price for the product as well as deciding on which materials to use, and which market segment to go for. Where some may pay for an expensive material and have a hammer that lasts for 50 years, other may just want the cheapest lightest one, because all they really need is to put up the occasional picture once or twice a year.

Concept testing

After deciding on a concept, the next step is concept testing. Here the concept is tested on a market portion or in a simulation in order to provide some idea as the reception of the finished product.

According to Kotler and Keller there are six questions which should be asked in the testing phase in order to create an image of the finished product stats.

1. Communicability and believability – is the concept easily understood and are the benefits of it believable.
2. Need level – does the product fill a need?
3. Gap level – do other products currently fill the same need?
4. Customer-perceived value – is the benefit acceptable to customers, do they believe in it?
5. Purchase intention – would respondents buy the product? How likely?
6. User targets – who by, when and how often would the product be used?

Some of these questions are like the ones used in the previous step, for the very reason that with little tweaks being made to the product along the development process it is paramount that these things are continuously tested so that the data used for assessments is not related to a previous version of the product.

Conjoint analysis

This analysis method has become one of the most popular concept development and testing tools (Kotler & Keller, 2012). The purpose of this is to evaluate a set number of CPV (customer perceived value) attributes in order to find the most desirable combination of a product. For example, customers can be made to choose their favourite package design, brand, price and so on out of a number of offered variances. Then, rather than the producer having an unsightly amount of possibilities there will be a clear image of what the favourite options for each variable is, thus creating a direction in which to take the product development.

Of course, it is important to note that the most popular option combination is not always the more profitable, seeing as some customers may prefer a certain packaging option or design, but not in combination with one another.

Marketing strategy development

After a successful product testing phase, the next step to take is for a strategy pertaining to the created product. This strategy should be conducted three-fold. First, is a strategy which plans for the initial phase of the product introduction to the market. Here we find information such as, target market size, sales, market share, profit goals and so on, to the extent of which these will be sought in the first few years of the product life cycle.

Second, we find the plan for the pricing, distribution strategy and marketing budget for the first year.

Third, we have the plan for the long-term distribution and long-term profit estimates of the product furthermore we have an estimate of the marketing mix strategy for the furthering of the product after the first few years.

Business analysis

After the management has performed the marketing and strategy development it will be necessary to decide whether a product has an attractiveness in a business sense which will make the company move forward with the idea.

From here we will see constant readjustments as the product develops and market information trickles in further along the process.

The business analysis holds two main points.

Estimating total sales

This estimate includes new sales, resales and replacement sales. The method employed varies depending on the nature of the product. There are once in a lifetime-products, such as engagement or wedding rings, rarely purchased products, like houses or cars, and there are frequently purchased products like clothes, food and other household items.

Depending on the type of product the sales curve looks quite different. Below will be presented three images from Kotler and Keller's book depicting the variation depending on product.

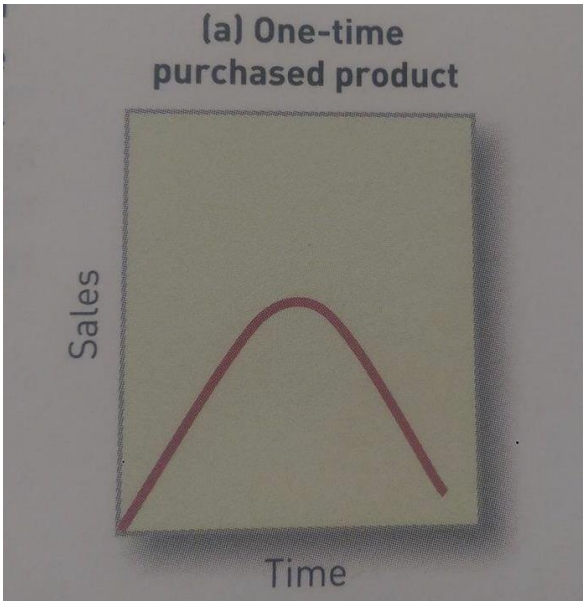

Figure 7 (Kotler & Keller, 2012)

Here we see the curve of a one-time purchase, which reaches the purchase point and then fades to zero, seeing as once the product is purchased there will be no repurchase or replacement purchase.

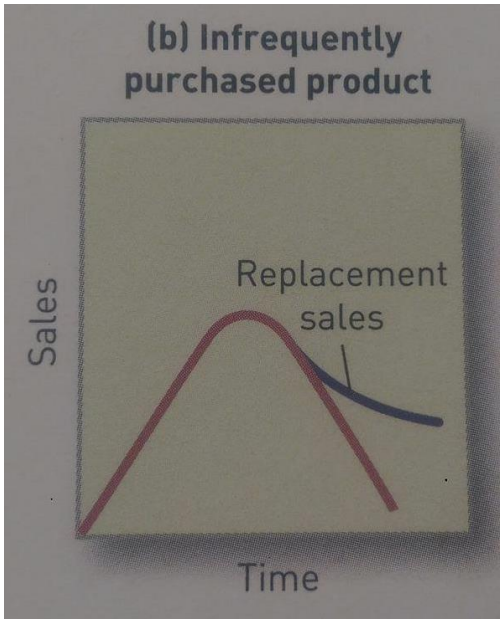

Figure 8 (Kotler & Keller, 2012)

This curve resembles the previous one, I the sense that it rises and falls rather suddenly. The difference here lies in the cyclical life of such products. These cycles can be defined by physical wear and tear or changes in fashion or technology which renders the previous model obsolete, as can be seen with some phones or media formats (like VHS tapes).

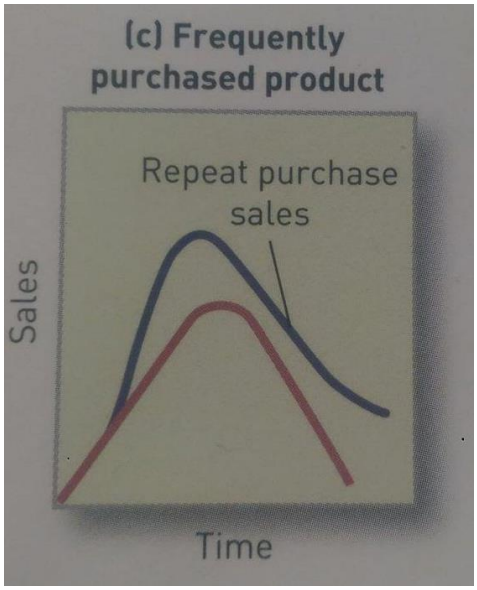

Figure 9 (Kotler & Keller, 2012)

This curve distinguishes itself from the other two with the repeat purchase sales coming in relatively fast and the slump being slightly less drastic on the repeat sales. These products are frequently repurchased and thus the numbers for these sales will end on a plateau so long as the product is satisfactory to the consumer.

The purpose of estimate sales is then to evaluate the number of initial sales as well as define the category in which the product lies and how many repeat purchases can be expected in a set time frame.

Estimating cost and profits

The second part to the business analysis is the estimation of cost and profits. Different methods can be employed to estimate these numbers, the simplest of which is the break-even analysis. This method requires a total cost of production, variable and fixed, and then uses this number to estimate the sales volume or years necessary to reach this number and thus break-even.

Another method would be a risk analysis. This method takes into account the worst and best-case scenarios along with the most likely one for each uncertain variable encountered in the total product cost (for example if one produces French fries risk analysis takes into account the possibility of both a terrible harvest and an abundant one). A computer is then used to simulate different outcomes and the likelihood of each one.

Product development

This phase of the product development process is where the actual prototype of the product is introduced. There are two distinct parts to this phase which will be briefly explained in the following part

Physical prototypes

Here is where the actual prototype is constructed. This must be done within the parameters previously set in step 1-4. This means that the product must take into account the variants acceptable to the appearance and function and it must be produced within budgeted costs.

Thanks to modern technology prototyping has become a lot more streamlined than it used to be. Rather than having to run trial and error with every prototype it is not possible to run computer simulations in order to predict the behaviour of materials and shapes.

However, the product must also take into account things such as customer reactions to certain shapes, sizes and colours. For example, in Denmark we see the colour white as something clean and pure, whereas in many Asian countries white is a funeral colour and should not be applied to other things.

Customer tests

Once a prototype is ready it must be tested on its intended customer base. This is done in two stages referred to as alpha and beta testing. Alpha testing is done primarily within a company in order to work out the more obvious kinks and issues of a product before it is sent out to the public.

Beta testing is then done when the product is ready for a mass scale testing. Beta-testing is a relatively well-known term in the world of video gaming where players receive early access to a game in exchange for helping make bug reports, general climate testing and provide feedback on the game mechanics. The value in beta testing lies in getting the product out to the masses, which not only allows for feedback but also helps in discovering potential production errors which occur infrequently so that they did not show in the smaller scale alpha tests.

Customers then rate the product. This can be done a number of ways depending on what the company prefers. Ranking systems are quite popular along with measuring methods such as paired-comparisons.

Market testing

After the initial beta testing has been completed to a satisfactory level the product is ready to be market tested in an actual setting. This step is not performed by all companies, but it has some merit to it nonetheless. There are differing approaches based on what type of product the company is offering.

Consumer goods market testing

Consumer goods testing is to test for the following variables: trial, first repeat, adoption and purchase frequency. These variables are measured in order to avoid a false positive in the sales rate. Hype is a powerful thing and a lot people will purchase a new product once simply to try it out, especially so if it is a new food or drink product. However, that does not mean everyone who tried the product will enjoy it and purchase it again.

Business-product market testing

Things like heavy machinery and factory equipment can also be issued a market testing. After an alpha and beta phase, a company may conduct a market testing by enquiring about the purchase intent and reactions to the product of customers after a trial period. In this type of market testing the beta test results will be even more important. Because there is a relatively low number of potential customers it is of vital importance to secure market share by listening closely to the feedback provided through the beta testing period.

Commercialisation

This is the final stage of new product development and it entails the full-scale launch of a product. Introducing a new product is expensive, and quite the investment to make, so in order to make the process as streamlines as possible these following variables should be taken into consideration.

When (timing)

Timing is everything is a very well-known proverb and this holds true in a business setting as well. A company, when introducing a new product to the market falls into one of three categories.

1. First entry

When entering a market with a new product that has no direct competitors a company may be enjoying what is known as first entry privileges. Included in these are the first mover advantages of securing key partners and deals with important distributors. Furthermore, there is the advantage of having customer loyalty by being the first with a certain product, people will think late comers are imitating.

The danger of this is if a product is rushed through the development phase in order to be secured as a first entry. There is also the risk of first entry in a market that turns out to be virtually non-existent, or quickly saturated or extinguished.

2. Parallel entry

Parallel entry is when a company introduces a product along with a competitor product of similar use. The advantage to this entry method is that a simultaneous release may generate more buzz than a singular release would and thus sales would be boosted for both companies.

The risk is then, of course, that people prefer the rival product or that a superior marketing campaign from the opposing company overshadows the other product.

3. Late entry

Late entry is when a product is introduced to a market which already holds a similar product. The advantage here is that a rival company will have been the one to pay for the first mover issues and potential faults in the product can be discovered before one launches into the market, thus making the product more desirable than the competitors.

The downside, is that the potential advantages of first mover entry and parallel entry are unattainable and you run the risk of having your product ignored due to a market saturation. Furthermore, there is also the risk of being accused of copying others.

Where (geographic strategy)

It is important to consider where the product is going to be launched. If we take our basis in an international company with affiliations in Asia, Europe and North America, there is a big difference in strategies which should be applied to introducing a product to a market. An extreme example could be a well-known advertisement from Japan made for Dole bananas. In the advertisement, a man with bananas coming out of his ears and nose flies around and shoot bananas through his nostril into a pile on a lady's lap, after which he flies away with a loud laugh (oneabjure, 2009). This commercial would never be shown in a Scandinavian country, where it may provoke boy-cuts rather than purchases.

Furthermore, it is important to decide whether the product will be made available throughout a country or merely released in a certain province or state. Take the USA, something that sells well in California may not sell at all in Texas or Alaska

The whom (target-market prospects)

It is, naturally, important to take into consideration the group one is marketing a product to. There are different demands from different demographic groups and it is impossible to aim at all groups simultaneously. Therefore, through the previously conducted market investigations the company should have identified the more likely group and aim their marketing at them.

How (introductory market strategy)

A strategy must be made for how the product should be introduced to the selected market. Herein lies the importance of ensuring that the marketing strategy is well funded. Introducing a new product tends to be more expensive than calculated initially so underfunding is one of the big risks of failure for otherwise well-developed products.

It is important for management to coordinate the launching activities necessary in a way so that simultaneously occurring events are kept well in check and not merely left to their own devices. A detailed schedule should be kept with estimates of the length of each activity as well as a planned completion time for the entire launch. Should this be neglected it will be difficult to know when enough is enough and thus to measure whether a product launch has been successful or not.

Relevance of the model

This model is one of the most prominent product development models and as such it holds a high relevance. Furthermore, it is a relatively simple tool, which is easy to understand even for people who do not necessarily have a background in business and as such a pre-existing understanding of the construct of business models.

However, herein lies also the danger of this model. By over simplifying the product development process it can be difficult to convey the amount of work each step will actually take. As can be seen in the brief description of each step in the model, there are several difficult things to consider and it may not always be clear how one should go about these things without having the help of a professional.

Culture

There are several definitions existing on what exactly culture is. The main categories of cultural theories are interpretive and functionalist. The difference in definition being that they interpret culture as being a dynamic social construct, emergent in interaction and as stable and inherited respectively. For the purposes of this thesis, the following definition by (Gullestrup, 2002):

"Culture is the philosophy of life, the values, norms and rules, and actual behaviour - as well as the material and immaterial products from these – which are taken over by man from the past generations, and which man wants to bring forward to the next generation - eventually in a different form – and which in one way or another separate individuals belonging to the culture from individuals belonging to other cultures"

From this quote, we can relay that culture is both what is inherited, what is learned and what is continuously experienced throughout one's life. Thus, the cultural view present is leaning more towards an interpretive culture rather than the more rigid functionalist.

On a grander and more general note, culture, then, is the accumulated knowledge and behavioural patterns exuded by and shared between a pre-defined group of people. An individual, however, can be a part of several groups of cultures, all with their distinct values and patterns (Gullestrup, 2002). For example, take a Danish citizen. This person may identify as being from Northern Jutland, from Denmark, from Scandinavia, from Europe and so on all at the same time. All these different cultures demand a differing set of behavioural patterns. Something acceptable for a Dane, may be offensive as a European, and as such we learn to adjust and modify our behaviour to fit in with the culture we are presently surrounded by.

The same can be said for organisations. According to interpretive cultural theorists, such as Osland and Bird, national cultures only partially contain organisational cultures within themselves. This means that an organisation existing in a certain nationality will draw parallels with that culture, but may present variations within itself that are not entirely within the cultural norm for said nation.

Hofstede's six cultural dimensions

In the following, a brief example will be presented on the national differences between companies in Denmark and Japan. These will be conducted through the use of Hofstede's cultural dimensions, despite the viewpoint of interpretive culture being in discord with Hofstede's functionalistic view. It is done however, in order to present a general tendency

within both national cultures as well as relaying where their core differences and similarities may lie.

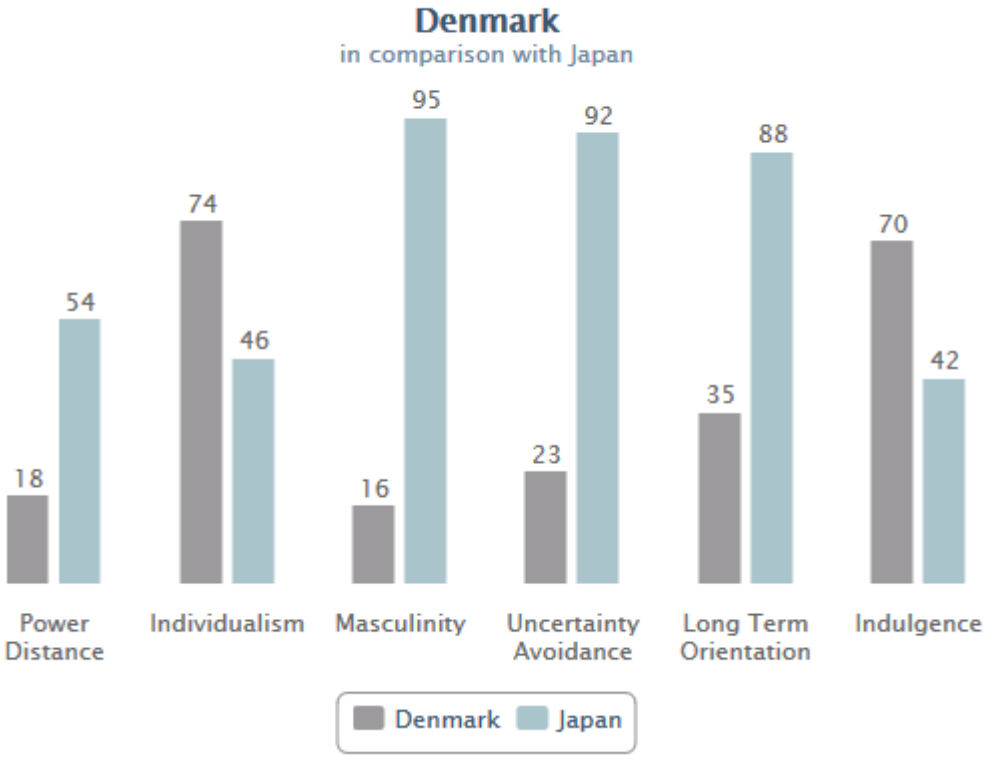

Table 4 (Hofstede, 2017)

Power distance

In terms of power distance the two countries do have a quite distinct difference in the level of hierarchical differences expected and accepted by the workers.

First, we see Denmark with a score of merely 18. This score is the lowest amongst the EU countries (Hofstede, 2017) and it indicates that we in Denmark have the highest level of employee autonomy. Here, we expect people to take initiative and be able to work as individuals rather than require constant supervision. Leadership is done through coaching and hands on management rather than delegation from a top office off site.

In opposition, we see that Japan scores a 54. The indication of this score is that despite Japan not being as rigid in its hierarchy as it could be, there is a distinct order to which business must adhere. Decisions must pass through each step of the hierarchy before the final decision can be made.

However, something the two countries have in common, is their meritocracy based culture. In both Denmark and Japan people are thought to be equal in base assumptions. Therefore, it is up to the individual to rise in ranks based on their own merits. Thus, a shared cultural aspect is the appreciation of individual merit.

Individualism

Individualism is measured by the tendency of a culture to expect people to care for themselves or to act based on group interests.

In Denmark, we are strongly individualistic. People are expected to care for themselves and only their immediate family. In terms of business, this means that Danes do not need a strong relationship prior to conducting new business with new partners. They are straight forward and perhaps at times quite blunt in their conduct.

In Japan, we see a lesser degree of individualism. Here the culture is somewhat ambiguous. The Japanese people are individualistic in comparison to other Asian countries, in the sense that they do not have as strong a family base. Family heirlooms, both in terms of businesses and property, are passed down from father to eldest son and other children are expected to find their own path. However, we also see a collectivist tendency in terms of organisational behaviour, where the Japanese people tend to hold a great deal of loyalty for their company.

Therefore, we can conclude that should a Danish and Japanese company attempt to do business it would be suggestible that focus on the side of the Danes be placed on the reasoning to specifically wanting to work with this company and not others.

Masculinity

The major differences between a high (masculine) score and a low (feminine) score is what motivates people. Masculine motivators lean towards being the best at what one does whereas feminine motivators lie with enjoying what you do.

This post is where the most defined difference between the two selected countries lies. Denmark, with a score of merely 16 lies in the very feminine end of this spectrum. To the Danes the most important thing is not to be the best at what one does, but to find a balance between work and private life. Workers tend to favour flexible hours and personal perks over monetary gain in business negotiations. Furthermore, managers in Danish companies will find more success by striving to attain a consensus when making decisions.

On the entirely opposite end of the scale we find japan with a score of 95. This country is very masculine, meaning that rewards and success is measured by being the best and creating a sense of achievement. Japanese are motivated by competing with the best and

beating them. They put more focus on their work and tend to have longer work hours than most others.

A way to find common ground between these extremes could be to introduce a sense of team for both parties and encourage longer work hours, but with added benefits. Here, is also another point where the creative platform could be used to add an additional sense of togetherness and open one's eyes to a polar opposite way of working.

Uncertainty avoidance

Uncertainty avoidance addresses how much stability people need in their lives. Whether they invite an uncertain future or make efforts to steer it into a set direction.

Here, Denmark, with a low score of 23, does not need a high level of stability in their everyday life. As a rule, we are quite accepting of things changing last minute and we are fine with unexpected thing popping up and are capable of dealing with them as they occur. Another way in which this shows itself, is that Danes are encouraged to be curious from a young age and seeking out alternate methods and different directions is often rewarded. This indifference towards uncertainty also means that it is perfectly acceptable for a worker to not know something and to stand by not knowing it. There is no shame in not knowing something, unless you hide it and it causes problems later on.

In japan, however, we have a high score of 92, meaning that they do not easily accept uncertainty into their everyday life. One reason that this is, is that japan is often hit by natural disasters and as such uncertainty means death. They have learned to prepare for most scenarios ahead of time and most of their lives are dictated by some form of routine or ritual. From an organisational point of view, this means that decisions are not made lightly and managers require detailed information and statistics before they will decide on anything.

Long term orientation

Addresses whether a culture is oriented towards the long term or more towards the past.

Denmark, in this instance, holds quite strictly to tradition. We do not worry overly much about what is going to happen later on and are more focused on finding what is right at the present moment. , it is not that we are per se stuck in the past, we merely value our traditions highly.

In japan however, there is a tendency to have a more fatalistic view of the world where a person sees themselves as merely a short period in a very long history. This leads to the adoption of the frame of mind that we should do what we can for the betterment of the future whilst we are here, and there is not much else we can do. In a company sense the Japanese tend to value a steady market share rise over quarterly profits. This can also be seen in the

fact that it can be difficult to enter a new partnership with a Japanese company, because they value safer investments with lower profits over high risk high pay investments.

Indulgence

The final dimension is indulgence. This addresses the level to which a culture allows themselves to indulge in impulses and desires.

In Denmark, we have a high indulgence score, which suggests that we tend to value our own enjoyment highly. A worker will not keep a job just to have a job, but will likely try something new if they get bored or dissatisfied. We value our leisure time and enjoyment as ways of improving our frame of mind to better ourselves in terms of our work as well. A well-rested mind is a well working mind, so to speak.

In something of an opposition, we have Japan, which is a more restrained culture. Here putting your own leisure ahead of the group is somewhat shameful and considered frivolous. People here are likely to put less focus on free time and more likely to feel more restricted by social norms.

Conclusion

As we can see there are quite a few differences between these two countries. This means, that if we are not mindful of one another, we may risk offending the other party. In order to avoid this, it is possible to make use of the creative platform to create a broader understanding as well as a common base from which to branch out cooperation.

New product development across cultures

In the following analysis, approaches to new product development in Japan and Denmark will be investigated and compared to one another. Through this an analysis a hypothetical cooperation will be presented along with suggestions for a way to introduce a creative process and make use of the creative platform to enhance cooperation value.

These two countries are selected specifically due to their differences in approaches. As can be seen by the cultural analysis previously conducted, the two countries have vastly different ways of dealing with things and thus a cooperation would, presumably, be rather difficult to conduct unless one has extensive knowledge on both cultures and their work approaches/ethics.

Furthermore, Japan and Denmark have recently been conducting joint ventures in the field of green energy, which means the two countries are aware of one another in recent big business and as such could have opened up for more joint business ventures in the future.

This is to create an image of how a creative process might aid in understanding across cultures in a new product development scenario. The basis for the cultural assumptions will be the Hofstede cultural dimensions and general research collected on Danish and Japanese corporate culture, in terms of new product development, respectively.

New product development in Japan

New product development in japan takes on a different priority system then it does in Denmark. In Japan we see a major focus Base on information on product development methods in the two countries. According to an article by (Jacobs & Paul, 1998) japanese product development is dominated by a long planning process. Through this process everything is finally decided upon and while that leaves for fewer errors post launch, it also means that once something has been decided it will remain that way until the product is finished.

Also, common for Japanese companies is that they do not focus all their energy on one field, but rather have several development processes running simultaneously. This is in part due to the fiercely competitive nature of Japanese businesses, as is also reflected in their cultural analysis.

In terms of adding creativity to any part of the Japanese method for product development the most obvious choice would be to focus on the idea generation phase itself. Because Japanese companies are largely dictated by management and there is a high level difference between regular worker and their superiors, this can lead to a self restriction when

it comes to offering up new ideas for products. The regular worker is likely to limit himself when coming up with new ideas, so as to not ridicule himself nor draw any unwanted scorn from his superiors.

In the example from Toyota where they note that they receive 35 ideas per worker per year on average, and have a usage percentage of around 85, it would make sense for these ideas to be mainly minor alterations or suggestions for improvement on an existing product as opposed to actually introducing new ideas.

Another point to illustrate the strict lines of the Japanese companies, they have the shortest drop time for any product. If a newly introduced product does not meet expectations, it will be dropped after the first day of it entering the market (Jacobs & Paul, 1998). This puts additional pressure n the marketing aspect of new product development where it would perhaps be a good idea to add in a creative aspect in order to ensure that advertisement does not grow stale or repetitive (in spite of Japanese advertisements being quite eccentric by European standards).

However, it is important to note that there is a tradition for diverse teams in product development. This is done in order to ensure horizontal thinking and as such is already on the line to making good use of the creative platform.

All in all the Japanese approach to new product development is quite unique when compared to the danish approach. Some of the major points to note are the efficiency with which every process is handled, the multi-track processes, the decision making and the diverse teamwork.

New product development in Denmark

Because Denmark does not have a lot of competitive strength in most areas many believe that we can distinguish ourselves through a superior product development ability (Mandrup, 2011).

In denmark there has been a tendency to move production abroad to places with a cheaper work force or lower taxes. According to the article by (Mandrup, 2011) one risk of doing so is thast the production company will suggest new versions of the product and later on an entirely new product, thus leaving the danish department as nothing more than an administrative office.

By refocusing efforts it is possible for danish companies to become more adept in product development and innovation than before and through this we will be able to compete with other countries in spite of our lack of natural resources and cheap labour.

Another thing which speaks to the advantage of danish product development is the relatively high degree of independence our work market enjoys. By retaining individuality within one's workplace we also allow workers to make up their own mind about a task they are presented with. In Denmark it is not uncommon to give simple overall guidelines and leave details of task solution to the individual worker.

Furthermore, danes tend to be very accepting of new things being thrown their way and are quick to adapt to a new situation and environment. These workers are used to last minute changes and impulsive decisions, and are well equipped to deal with both (Mandrup, 2011). This leads us to an advantageous position when it comes to implementing new methods and thus it can be deduced that danes would be susceptible to use of the creative platform, so long as this is introduced in a logical manner.

The danish tendency to focus on the present can alos be an advantage in this particular sense. When conducting a creative process it is important ot have immediate task focus. However, one thing that would speak against the danes in the sense of task focus is that we enjoy our free-time and we prefer to not spend all of our time working.

In summation the danish approach to new product development is reminiscent of the creative platform in the sense that individuality allows for a rendition of original ideas and a mind focused on the present enables a great sense of task focus.

Joint product development

The following analysis draws on information from the Hofstede analysis of the two cultures, knowledge on their different product development styles and creativity and lateral thinking principles, in order to render an overview of areas in which the hypothetical international cooperation may be a good match and ones in which they may clash with one another.

First, there is the difference in discipline. Danish culture is somewhat lax in the disciplinary sense and the danes tend to be pretty laid back about their work, seeing it as a means to make ends meet. Japanese culture, on the other hand, is more disciplined both in personal lives and work lives. Japanese people are more likely to define themselves through their work and it is not uncommon to work through weekends and holidays. Thus, we see here an area in which these two opposing cultures may clash. The Japanese workers may feel some annoyance at the attitude the danes take towards their work, and vice versa. Here is one area in which a creative process can aid in creating an environment where the two can work together building on both their strengths.

By making use of a creative idea generation process we draw on the disciplinary strength of the Japanese culture through the task focus, continuous work process and straight to the point attitude, and the danish culture through their strentghs of fast adaptability in the work of idea generation and 3D cases.

By setting a combined team from the two cultures on a creative platform process, they will be forced to pay attention to what they are doing, focus on the task immediately ahead of them rather than other things, remove person focus so that workplace ranking differences can be obliterated and through a strictly planned out creative process there would be no room for big discussions on how to approach things.

The danger is, of course that these two cannot manage to put aside their differences and work properly together, but this is where the facilitator must take responsibility for the process and ensure that there is no time for bickering and no time for muttering in the corners.

Discussion

New product development and creativity

The new product development model provides a very good in-depth tool for businesses to make use of when attempting to introduce a new product into a market.

However, the focus of the model lies predominantly with what one does after an idea is obtained. This is, of course, very important and as mentioned previously marketing and launch timing can make or break a product's success. That being said, the most basic criteria for this model to aid in a successful new product launch should be to have a good product.

When we come up with ideas we tend to come up with things that are based on what we already know but with minor modifications, this leads to a lack of truly innovative ideas coming up. As an example, we can take a look at the Toyota case previously presented. Here we see that they receive a number of ideas equivalent to 35 per employee per year. However, we do not see anything about how many of these ideas are replications, how many are slight modifications of an existing product and how many are actually new ideas.

This is one of the areas in which the creative platform and lateral thinking can contribute in a major way.

One of the main weaknesses is the process with which the idea generation step is conducted. One of the points of this process is, that it encourages idea generation by the use of brainstorming or by simply enquiring for ideas with either customers, employees or business partners.

Brainstorming has become a popular tool for businesses to induce creativity. The problem is, that from a purely creative viewpoint, brainstorming is very inefficient unless one is performing this feat in a closely-knit group where judgement is not an issue (Byrge & Hansen, 2014).

The problem with brainstorming is not the method itself, but that it is employed as the solitary means of idea generation. Brainstorming tends to hold on to too much person-focus when compared to more creative approaches. Thus, if the people who are participating in the brainstorming session feel inferior to other participants, they are not likely to share ideas as freely.

However, because brainstorming has become something of an institution in itself, and the word a buzzword for "creativity", it is a difficult stereotype to breach and it may be included

merely as a way of being able to say it is employed as a work tool, rather than being used correctly.

Another issue is the suggestion for the idea generation process which entails interaction with others. It is easy to collect data based on surveys and desired functions from customers and employees, but these ideas will undoubtedly take their precedence in the existing product. For example, if you ask someone to develop a new type of fork they will modify an existing fork, adding a calorie counter or a generator to herness the energy spent by moving the fork up and down, rather than invent an entirely new utensil like a magnetic field that holds your food, and slowly guides it into your mouth. While this is not exactly a utensil it covers the same need as a fork does and thus solves the problem anyway. Now this example may be a bit strange, but it is important to go with the flow and let a crazy idea run its course, because this may lead to a solution that is truly unique and may not otherwise have been considered. (de Bono, 1969) An example of this is the story of powerlines in Alaska.

During the winter, icicles would form on the powerlines causing them to break and power to be cut in remote regions of Alaska. A way to knock down the ice without risking someone getting electrocuted was necessary. During an idea generation phase the idea of having a bear shake the posts holding the powerlines came up. Now naturally we would think this is a stupid idea, but by letting this idea run its course, an actual solution came through.

First, they would need to find out how to get bears to shake the poles. Bears like meat, so if meat was to be tied to the poles the bears would want to shake them to get it down. Next problem is then to get the meat up there in some way. It was then suggested that a helicopter could lift the meat up onto the poles. Here is where the solution came to. Because someone happened to mention helicopters in the bear case, it was suggested that the whole bear part could be eliminated in favour of simply having the helicopter use the air pressure from its rotors to blow away the icicles. (Byrge & Hansen, 2014)

Thus, we see how a good solution can come from allowing oneself to play around with an unlikely solution. This is one of the major selling points in the creative platform and lateral thinking in general. Because here, we work with no assumptions and no judgement, it enables us to entertain unlikely scenarios with serious consideration that may lead to a solution. Furthermore, it forces us to break our thinking patterns in a way that allows us to make use of information that we may otherwise have considered irrelevant in this case.

A personal example of horizontal knowledge application is during a math lesson I had in the third grade. The math teacher asked if anyone knew what the number pi was. Now I did not have the information in a mathematical box in my brain, but I had read a comic book a while

back which had a character referred to by one of the main characters as Mr pi. When asked why he called him Mr pi, the character responded that it was because of his license plate which said 314, and that pi meaning 3.14 seemed the obvious thing to call him. Therefore, by hearing this word, my thinking went back to the comic book and I was able to answer the math question, despite them being in no way related to one another.

This is something children are very good at doing. If you ask them why they do something their reasoning may seem completely nonsensical, but more often than not it is simply that in their minds they have connected things in a horizontal way across the minds boxes in a way that we as adults cannot follow. This is a talent which tends to be stifled during the educational process, not only during elementary and high school, but also through our universities, by focusing on logical and mathematical thinking methods.

By specialising our knowledge into a vertical direction, we likely end up limiting our ability to apply knowledge which is not directly related to a subject matter.

Herein lies another risk of the trade in the new product development process. In order to assure the quality of an idea for a product, it is tempting to ask a number of experts about which direction should be taken, and have them come up with something. According to (de Bono, 1969) the more we learn about something, the more ingrained certain patterns of thinking become. This leads to an inability to think about problems directly related to our field of study in a vertical sense, because as soon as we find an adequate vertical solution, our memory ceases to look for alternatives. In other words, if the first idea is good enough we do not need to look for a better one.

This is where lateral thinking can help forcibly break these memory patterns by introducing disruptions to the natural thought flow or provide a changed viewpoint from which to see a problem.

An example from this can be taken from (de Bono, 1969). A man was changing his tire but dropped all the securing nuts down a sewage drain. The man, having no way to secure the tire, attempted to flag down a ride to the nearest repair shop. It then happened that a small boy passed by and asked what was the matter. The man told the boy about the lost securing nuts and that he needed to get to a repair shop. The boy suggested that the man merely took one nut from each of the other wheels and thus fasted the remaining wheel well enough to make it to a repair shop.

The point of this story is, that the boy and the man saw the problem from two different viewpoints. The man saw a tire which could no longer be fastened, whereas the boy saw

some missing securing nuts and realised that there were some to spare nearby (on the other wheels). The two were faced with the same problem, but because they took different standpoints, the problem turned from being hopeless into one with a simple solution.

This is also true when we feel like we are stuck in a rut in most any stage of the new product development process. Idea generation may be the easiest parallel to draw, but the creative platform and lateral thinking can be applied in any situation. Another step where creativity would be immediately useful is in the marketing of a new product. There is a myriad of marketing techniques and theories, but at times we see strategies which are so completely taken from a textbook that they appear utterly uninspired. In terms of convincing other of the merits of one's product, it is important to have enthusiasm shine through at every step. Here, by making use of lateral thinking, marketing can attempt to find a new approach to the marketing strategy of the product. For example if one would traditionally market a product to females, what would happen if it should be marketed towards males instead?

Like this, creativity and lateral thinking can be applied at any time, and with more practise it becomes easier and easier.

The danger of this is then that having a too lax approach to the creative process could mean a stagnation in progress.

Creativity, when used in a business setting, must be strictly structured and the process must be controlled by a facilitator. The creative process must be planned down to the last minute in order to free participants to work solely with their minds on the task ahead.

Corporations and creativity

When we look at an organization both in itself and with an international cooperation perspective, it is important to consider the culture of said organization. However, seeing as people can identify with several cultures at once (Gullestrup, 2002), it is at times easier said than done.

One argument that I would like to present, is that by implementing the creative platform in product development across corporations, or cultures if you will, it is possible to put aside ones predetermined role in a said culture.

As mentioned, culture is not only the way we act or react, but also the way we think and conduct ourselves in relation to others. Therefore, in a process where we need to put away our differences we will also be forced to temporarily escape from our pre-existing roles within a certain cultural setting. This can be not only difficult, but also quite stressful. If someone has ever requested that you "stop being so quiet" or "don't be so bossy" you will know just

how difficult this is. My argument, then, is that this is primarily difficult because no alternative behaviour is offered or instructed. Substitution is easier than elimination. For example, if you were to decide that you would quit smoking, it would be more difficult to do so cold turkey, than it would be to use one of the many existing aids for this express purpose, such as a patch or gum.

By making use of the creative platform, we ask people to give up their ingrained roles in the corporate setting, but we replace it with a role of a participant who will be instructed on how to act rather than leaving them to their own devices.

The creative platform offers a strict behavioural modification, in order to assure that there are no conflicts of patterns, and thus frees the mind to focus on the task ahead rather than using energy on actively restraining oneself from a specific action or inaction. By constricting the need for individual consideration of the process itself we create a setting where task focus can enter into play more easily.

Another point worth mentioning, is that the creative platform allows us to make mistakes without them having any consequences. We even make time to attempt to celebrate these mistakes in order to let go of the ingrained negativity we feel in our cores when we do something unsightly.

This could be particularly interesting in collaborations between companies based in vastly different cultures. As an example, take the previous case of a Danish and a Japanese company. They want to work together to create a new product, but they cannot agree on how to approach the process. In Japan, the hierarchy of a business is rigid and subordinates will not take individual action unless they have been instructed to. In Denmark, however, one may be chastised for not being self-reliant enough to undertake whatever job needs to be done at a given moment. on the other hand, our relationship with our immediate managers also tend to be laxer and we are not expected to follow orders without question. How, then, would a brainstorm, to take the classical NPD model approach to product development, be conducted between these parties?

A likely scenario is that we would see the Danish workers overtaking the brainstorm, eager to forward themselves and their own ideas, and Japanese workers more withdrawn and prone to following the suggestions of a someone higher up.

By implementing the creative platform, we never ask who is the boss and we do not credit ideas to individuals, thus eliminating the previous scenario. If a creative process can be successfully applied, the workers from both companies should, despite their cultural

differences, be allowed to voice their opinions through individual idea generation, another with pair based generation and finally be able to select ideas and work on them in smaller groups in order to later present something that may be feasible.

In terms of celebrating our mistakes, we also encourage people to speak their mind without the fear of being judged, something which, if done correctly, allows people to have more confidence in their more untraditional ideas and thus, through lateral thinking, allows the participants to work around existing mental barriers that tells us an idea is silly or stupid.

Buzzwords

The dangers of creativity as a buzzword or as something weird is something which should also be taken into consideration when discussing the usefulness of this.

As things are, there are times when certain words are made to suggest something specific. We create buzzwords to shortly sum up certain desirable qualities for our companies or products. Words, such as innovation, new thinking, revolutionary and creativity, are used in many settings to trigger certain associations in people's minds.

The danger of buzzwords is that they create what is known as semantic satiation, a phenomenon where a phrase, or word, is used to the point where it loses all meaning. Thus, if you use one of these words, it will convey little to no information about your skills, even if they are accurate descriptors.

(image source: https://www.123rf.com/clipart-vector/post_it_vector.html)

As an example, take the above stock image which can be used as an illustrational aid. Here, we see a classic example of how buzzwords can be used to entice people into wanting to know more about creativity, despite the image itself being largely useless as a source of information regarding what creativity really is or how one should go about using it. The words themselves may create associations, but they do not present any valid information.

As one of the more popular buzzwords currently used, rated number one most over-used buzzword on linked-in in 2011 (Vandewater, 2011) and number 9, after continuously being on the list, in 2017 (Gausepohl, 2017), creativity as a tool has become more difficult to discern properly.

Because there are so many definitions of creativity, and so many varying understandings of what a creative person is, it makes it practically impossible to convey what one is referring to when merely using the word itself. This also leaves room for negative stereotyping associated with these certain words.

For example, when we do not quite know how to react to something which is different from what you are used to, you may choose to label it as simply being too creative for you. Or one may use it to describe something they do not like visually, but still do not wish to offend the one presenting the offending item.

This is partially why it is so important to properly identify creativity in order to utilize it as a business tool.

As mentioned in the creativity chapter, in the sense of the creative platform being creative, it does not necessarily mean to create something beautiful, or to be a somewhat eccentric person. Creativity is the unlimited application of knowledge, and the ability to make use of this knowledge in a specified setting. This does not only refer to generating ideas or developing products. Arguably creativity can be applied in any situation. Another way to put it is that creativity is the ability to invite serendipity. By keeping an open mind and taking things one step at a time instead of spending the majority of our decision-making process by fretting over little details, a creative person may be more inclined to go by gut feeling. Of course, in a business setting this may not always be a desirable option and it is important to consider the potential ramifications of one's decisions.

Therefore, one should always consider when these steps may be appropriate, and when they won't. For example, when planning a market introduction, one should always consider possibilities and pros versus cons, but when seeking out new business partner or areas

there is nothing wrong with going with a gut feeling or simply choosing something that seems interesting. It is, after all, all about how one presents oneself in such a situation. If there is a company you would like to work with, the invitation of serendipity would suggest you simply try writing them an e-mail, or try calling for a brief introductory meeting. Then when you see what happens next you make the next decision from there.

This method is something that may be able to unite the work-front in terms of Danish and Japanese businesses as well. In japan we see a tendency to focus on the immediate detail rather than the next step. Because people tend to overwork themselves in Japan, it is not unheard of that employees are encouraged to simply focus on the task ahead of them and just go with it, rather than allowing them to worry too much about the next steps.

Here, we can easily introduce the creative platform step of one task one deadline. By adopting this work method, we allow all of our focus to go into the one task and thus, postpone any consideration for the next ones.

An example of this could be if one needs to get an interview with a certain person. The first step is then to get the person to agree to the interview itself. It is easy to get into concerns about what one is going to ask the subject, and where the interview will take place, even how one is going to go about writing the article itself after the interview. All these thoughts are merely disturbances until the subject has agreed. Then, by taking things one task at a time and the sole focus being getting the subject to agree to the interview, opportunities to solve problems along the way may present themselves. For example, the interviewee may suggest places, subject or themes themselves, suggestions which may not have come into consideration should the interviewer have planned everything ahead of time.

As things are, there are some definite difficulties with the concept of creativity being hard to pin down into a singular interpretation. However, by attempting and training oneself in lateral thinking, it is possible to arrive at ideas one could not have thought of in a logical, natural or mathematical sense of the word.

The biggest risk to using creativity actively is that one makes use of a process which is not clearly planned out. Should focus be lost for even a few minutes the whole process can be compromised. Creativity does not require anything special from participants other than an open mind and a willingness to put their phones, watches and computers away for a time, but it does require a lot of work and effort from the facilitator. Thus, the creative platform stands or falls with a well-planned process.

Conclusion

How can creativity be usefully ingrained into the new development process in international businesses?

In conclusion to this problem statement a few separate points will be made, after which a final conclusion will be drawn

Is creativity relevant in a business setting?

As mentioned in the discussion creativity has become something of a buzzword, and as such it has lost a lot of meaning due to verbal saturation. That being said, creativity as a tool is something to be honed and trained just as any other skill. The relevance lies primarily in the merit of lateral thinking. Through lateral thinking we allow ourselves to take a seemingly random train of thought and entertain it, thus allowing us to discover different solutions to arising problems than we would have been able to through the use of logical or mathematical thinking.

Furthermore, the use of the creative platform provides a simple, yet efficient tool for training lateral thinking, as well as the ability to allow oneself to not judge a thought process before it has reached its end. It allows participants to make mistakes and to learn from these mistakes without feeling judged by their peers.

In an international sense, the creative platform can be implemented throughout the new product development process. The simplest part in which to bring in the creative platform is the idea generation phase. Here, it can be used to enable different cultural representatives to more easily communicate with one another.

By making use of the creative platform, creativity can be easily and efficiently integrated into new product development. The upside of using the creative platform, is that it is a very strictly planned method. It requires a lot of thought and time from the facilitator, but in turn this process enables the participants to focus solely on idea generation. Through 3D-cases and 3D-activities participants will be given tools to train their creativity whilst also applying their training to the problem which they are currently working on. Thus, by implementing the creative platform, participants will not only be trained in creativity, but also be working on the problem at hand simultaneously.

This process can be used as a substitute for the ever-popular brainstorming, by reducing the perceived judgement and increasing the idea output. Furthermore, the process length can

span from a few hours to several days depending on the time available, and with training the process can be refined into being more and more efficient as the participants become more proficient in their lateral thinking.

Furthermore, creativity can be used as a method of breaking down barriers between people. By undergoing a creative platform process together people of different cultures will naturally feel more at ease with one another, leading to a greater sense of teamwork and a bettered relationship between the participants in spite of potential cultural oppositions.

Finally, creativity allows people to pursue their craziest ideas, and allows them to use intuition or random thoughts as legitimate tools to reaching a final goal.

Creativity is a great motivator because it makes people interested in what they are doing. Creativity gives hope that there can be a worthwhile idea. Creativity gives the possibility of some sort of achievement to everyone. Creativity makes life more fun and more interesting.

Edward de Bono

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