

We can observe how Steve Job’s inventions have changed our view of technology. Oberlander and Jones argue the following in an FT article (2011) entitled “10 years of iPod”: “Since it came on the market 10 years ago, Apple’s iPod has turned the recording industry on its head and revolutionized the way consumers listen to music.”

Now we can give an iPad to our grandparents and they will love it, even if they were not missing such a device before. These grandparents might also be the customers of banks, have access to the latest innovations in technology, and learn how to access the latest news or knowledge via their iPad, provided they know exactly what they want to know.

Innovations either come along with changes in industries and the wider economy or constitute major changes themselves. The inventor of management, Drucker (1985), called innovation a diagnostic discipline, which systematically examines areas of change that offer opportunities. More specifically, Drucker sees seven sources of innovation. The first four sources can be found within an enterprise, an industry, or a service sector that is mostly visible to people within these areas. Despite being only symptoms, they are highly reliable indicators of changes that have already happened or can happen with little effort. These four sources are:

- The unexpected—an unexpected success, failure, or outside event;
- The incongruity—which is between reality as it is and reality as it is assumed to be or as it “ought to be”;
- Innovation based on process needs;
- Changes in industry structure or market structure that catch everyone unaware.

The remaining sources for innovative opportunities, according to Drucker, involve changes outside the enterprise or industry:

- Demographics (population changes);
- Changes in perception, mood, and meaning;
- New knowledge, both scientific and non-scientific.

All seven sources are listed in descending order of reliability and predictability. In contrast to popular belief, Drucker continues, new knowledge—especially new scientific knowledge—is the least reliable and least predictable source of innovation, despite its visibility, glamor, and importance. Analysis of the symptoms of underlying changes, on the other hand, like an unexpected success or failure, features relatively low risk and uncertainty. Innovations arising from such symptoms take relatively little time for result generation.

2.1 Creative Solutions

Over the past years we were introduced to many new creative solutions, like mobile banking or cloud computing. According to Franklin and Andrews (2012), cloud computing will enable people to access their data from everywhere, and social networks will become a part of everybody's life. Although there are many interesting predictions in their book, I liked the ones that I think are most suitable for the content of my book.

2.1.1 Future Internet

A couple of years ago there were companies that made money only via the traffic on their website. Today, as a source of making money, the value of website traffic only has diminished. These companies need to find new ways of keeping their business going. The internet will evolve to a stage where website traffic or the number of viewers alone won't be sufficient and thus requires added value in order to stand out.

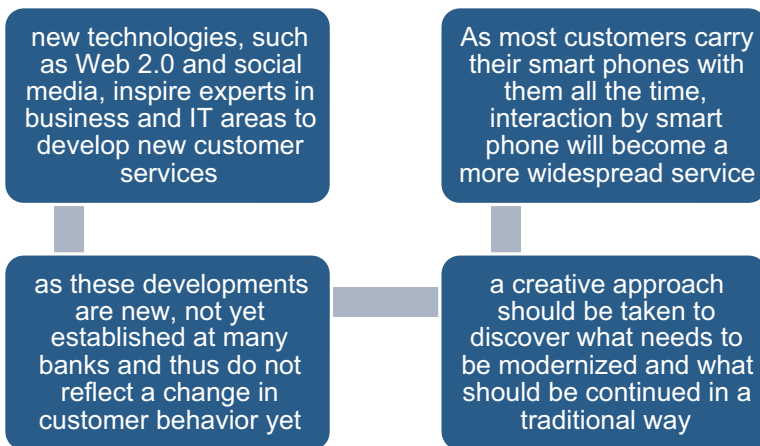
Individuals and companies will come up with new ideas for sharing information and creating virtual money, even on free platforms like YouTube, and the original idea of using the internet for free will change its direction, with less and less people sharing their services for free. It will become standard practice that participants in a particular market exchange knowledge and services among each other instead of giving it away for free.

It might also become standard market practice in the internet of the future to facilitate exchange with virtual money. The virtual money will only facilitate this kind of exchange in the virtual economy, but not in the traditional economy, to enable the exchange of knowledge. Virtual money for sharing our knowledge will also allow us in the future to pay for services from the likes of Google or Facebook. As with all developments in the internet in the past, it will happen fast, with more and more solutions around a particular idea coming to the market.

2.1.2 Creation of New Ideas

Many new solutions were implemented in banking in the wake of the financial crisis of 2008, which are largely related to processes, employees, and IT infrastructures. Each solution is supposed to meet new client needs, enhance competitiveness, increase profitability, and to serve customers better. Today, in a time of changing business models, banks are searching for ways to reduce costs, to increase productivity, and to leverage innovations in order to revive growth. New players in banking aim for creating a new customer experience, such as offering low-cost services for standard products, payment services by smart phone, and extended service hours. New stringent regulations ensure that customers' wealth is better protected than before the crisis.

2.1.3 Development of Technologies

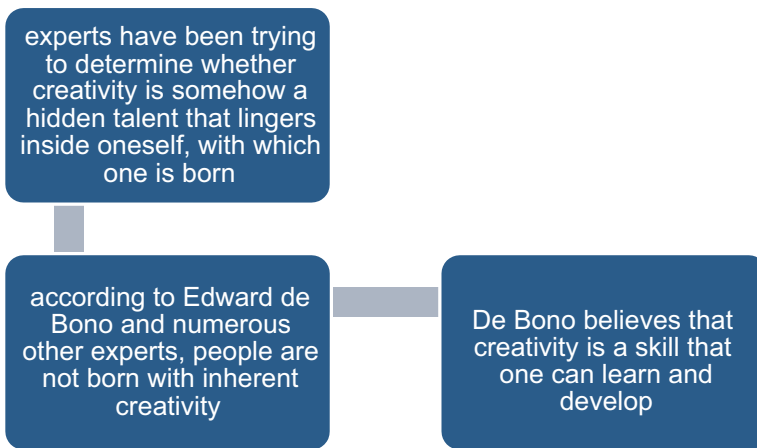


Developments of new technologies, such as Web 2.0 and social media, inspire experts in business and IT areas to develop new customer services and to ease the interaction between banks and customers. As these developments are new, not yet established at many banks, and thus do not reflect a change in customer behavior yet, a creative approach should be taken to discover what needs to be modernized and what should be continued in a traditional way.

New revolutionary bank business models have already been introduced to the market, where web 2.0 and social media have started to draw attention in the banking sector to new forms of interaction, which enable customers to share their experience and to use a smart phone for the dealings with their banks. As most customers carry their smart phones with them all the time, interaction by smart phone will become a more widespread service.

We also need to keep in mind that there will always be customers who prefer the traditional way of banking. I think that the market for this type of customers will not disappear anytime soon, at least not until they have no choice but to adapt to the changed circumstances. Until then there will always be a market for the traditional way of banking, even if the number of enthusiastic modern customers, who prefer to use their smart phones for banking, continues to increase.

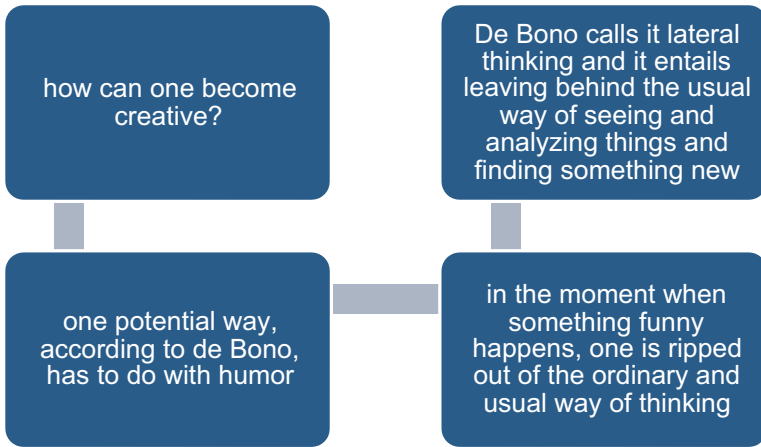
2.1.4 Creativity



Experts have been trying to determine whether creativity is somehow a hidden talent that lingers inside oneself, with which one is born. In all my research, I didn't come across a conclusion that says one has it or not. According to Edward de Bono and numerous other experts, people are not born with inherent creativity. De Bono believes that creativity is a skill that one can learn and develop.

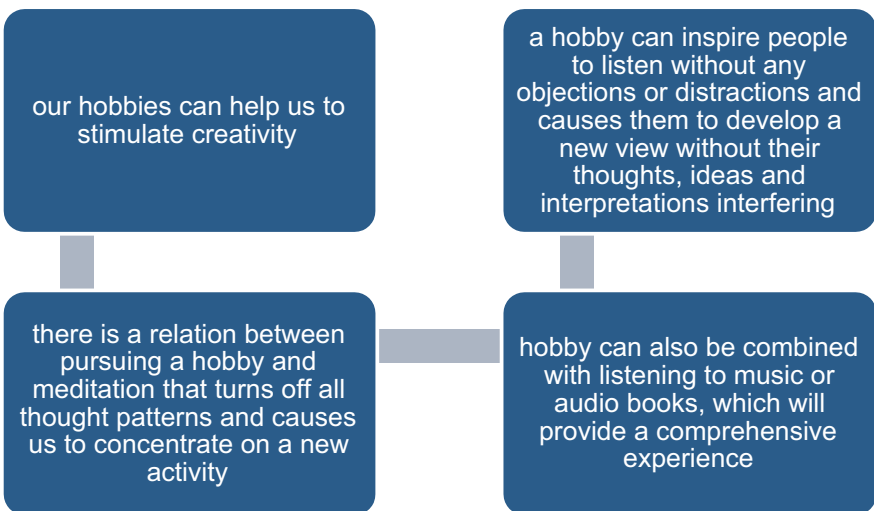
Charles Limb is a medical researcher who studies creativity by experimenting with what music does to our brain. Limb believes that our brain is able to learn creativity. In this chapter I want to describe different ways of becoming more creative that I have researched, understood, and tried out, and which can be beneficial for organizations in their attempts to become more innovative (Limb 2010).

2.1.4.1 Humor



How can one become creative? One potential way, according to de Bono, has to do with humor. In the moment when something funny happens, one is ripped out of the ordinary and usual way of thinking. This means that one way to become creative is to allow humor more often to be expressed in an organization, such as a funny presentation about finding a solution to a complex subject so that the audience remains engaged. De Bono calls it lateral thinking and it entails leaving behind the usual way of seeing and analyzing things and finding something new. We look at the same things, but with different eyes, thoughts, and feelings.

2.1.4.2 Hobbies



Our hobbies can help us to stimulate creativity, make us feel better, and relax. I think that there is a relation between pursuing a hobby and meditation that turns off all thought patterns and causes us to concentrate on a new activity. A hobby can also be combined with listening to music or audio books, which will provide a comprehensive experience.

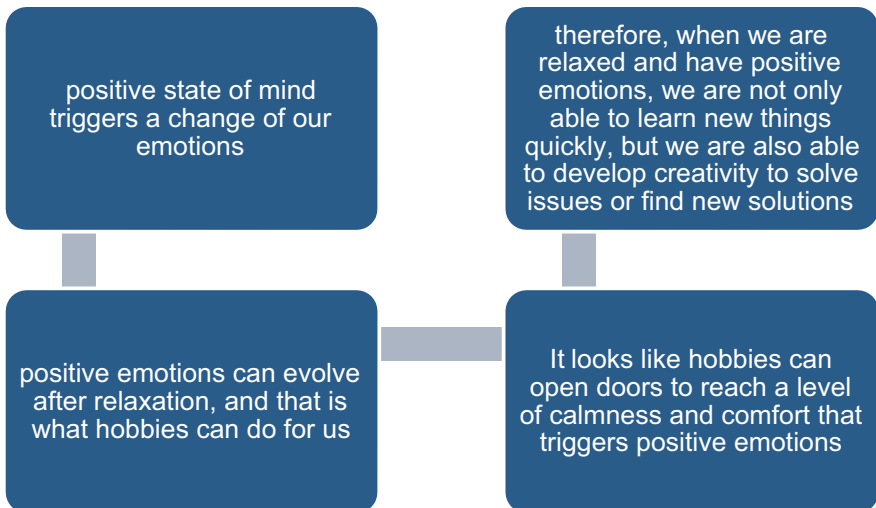
I have more patience for listening to a discussion or speech about a complex and potentially boring subject while painting than at any other time. A hobby can inspire people to listen without any objections or distractions and causes them to develop a new view without their thoughts, ideas, and interpretations interfering.

2.1.4.2.1 Listen and Comprehend Complex Topics

While we are busy with an activity related to a hobby that does not engage our brain, it looks like our brain becomes hungry, because it seems to empty itself of unnecessary thoughts, which enables us to listen and comprehend complex topics and to develop a better understanding.

This is also the case with meditation since it calms our thoughts. It is the exact opposite situation when one tries to read and understand a complex subject during a break in the middle of a busy day.

2.1.4.2.2 Emotions and Creativity



A positive state of mind triggers a change of our emotions. Positive emotions can evolve after relaxation, and that is what hobbies can do for us. It looks like hobbies can open doors to reach a level of calmness and comfort that triggers positive emotions. We can easily experiment and confirm by ourselves that our brain can memorize better when we are relaxed and calm. Therefore, if we combine a calm and relaxed moment with reading a book or listening to an audio book, we are better able to memorize the content of the book.

Therefore, when we are relaxed and have positive emotions, we are not only able to learn new things quickly, but we are also able to develop creativity to solve issues or find new solutions. A hobby makes us more productive and constructive in our thinking patterns, regardless of what hobby one has, be it building, collecting, painting or hiking, activities one enjoys to spend time on.

It does not really matter what we do as a hobby, what does matter is that we can become more creative when we feel comfortable and, at the same time, are busy doing something completely different. This might be a confirmation that working non-stop is not necessarily productive, especially if you have to find a solution to a complex IT problem.

2.1.4.2.3 Art and Other Hobbies

A break where we pursue our hobby makes us more creative while looking at an existing issue from another point of view, allowing us to come up with solutions that we were not aware of. In one of my previous projects we had a tabletop soccer game in the middle of the office of the IT department. I saw all of my colleagues playing from time to time, but could not understand their joy. In order to support the team dynamic like the others in the team did, I decided to join them and play it as well. Despite always losing, I enjoyed the game. My aim was to keep the game going as long as possible and to enjoy it. Issues that bothered me before the game were all of a sudden wiped of my memory; I could handle them more easily afterwards. It was further proof of the fact that we can become creative whenever we enjoy something. The result of a creative state of mind can be based on a combination of many factors. I was once told that listening to Bach is a kind of positive relaxation exercise, and that it is even more positive when we combine it with walking, driving, or traveling by train.

It is always a combination of several factors that produce a better result, such as the combination of physical movement and enjoyment that creates a higher awareness for an issue and adds more positive emotions to our mood.

2.1.4.3 Environment

Another way to stimulate creativity is by changing environments. During one of my assignments, when we had to deal with a difficult subject and were searching for a solution, our team occasionally met off-site for workshops in a completely different and relaxing environment. Such settings helped to become more open-minded when looking for new solutions. I think that leaving the usual environment and being dressed casually instead of formally will also help us to feel more comfortable. This change in our emotions will support us to think differently.

2.1.4.4 Bottom Line

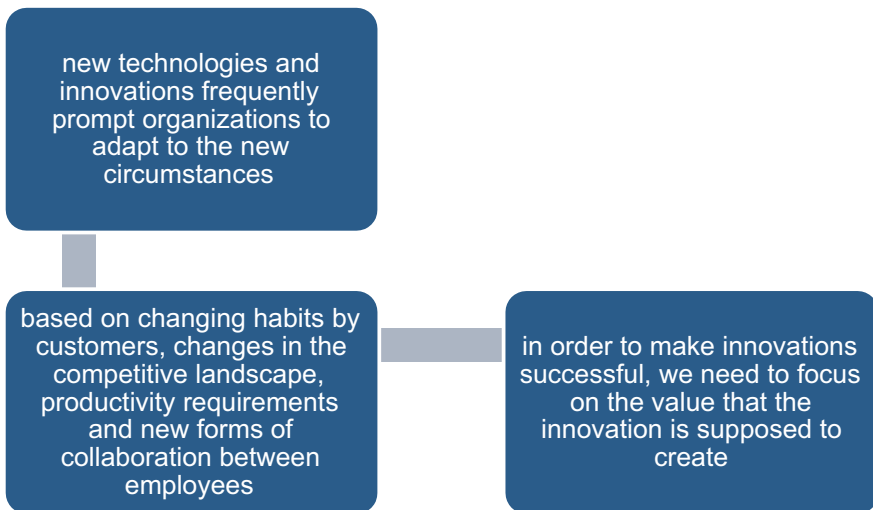
Bottom line is that by taking time to enjoy something and stopping old patterns of looking for a solution to a problem, we might be able to find the best possible solution by applying a creative state of mind. This takes us to a state of mind in which we can leave our old thinking patterns behind and establish a good foundation to think differently and to analyze an issue or situation from different angles.

De Bono said humor leads us to lateral thinking and makes us more creative. As explained before, it seems that everything that makes us feel good will not only give us the chance to become creative in our profession, but also in our private lives.

2.2 IT Innovations

Technological progress has brought the world the internet. For example, it enables experts from around the world to share their knowledge and ideas with each other and with the rest of the world, which can be enriching to a lot of people. There is a range of innovations around technology waiting to be implemented in many traditionally run banks, which will change the interactions between financial institutions and their employees and customers. There might be only little benefits during an early implementation compared to an implementation at a later stage. Some customers might appreciate that their banks carefully consider a change, while others appreciate a quick introduction, as they prefer to use the latest technology for the interactions with their bank. There is no right and wrong, as the perception of the situation is subjective.

2.2.1 Improvements in IT



New technologies and innovations frequently prompt organizations to adapt to the new circumstances, based on changing habits by customers, changes in the competitive landscape, productivity requirements and new forms of collaboration between employees. In order to make innovations successful, we need to focus on the value that the innovation is supposed to create. This should be measured from

the customer's or organizational point of view. Furthermore, process innovations, for instance, potentially bring along a change in the entire process landscape. Therefore, a sufficient risk assessment is a key factor to support the innovation process.

Although we have seen numerous innovations in banking technology over the recent years, there are further innovations on the horizon that will transform business models and customer relationships in the near future. Due to the fact that established banks have numerous legacy systems in place compared to more recently established banks, the implementation of new solutions will take a different level of effort, depending on the legacy inherent in the organizational structure of the bank. Another aspect related to the introduction of an innovation is to measure the security implications of this solution. In a large organization the security experts might be spread all over the world, and a committee in charge of approving a change might not be that easy to convince. There are potentially numerous checks and evaluations required in order to be able to measure the impact of the innovation.

2.2.2 Defining Controlling Mechanisms

Innovations can also prompt an organization to serve existing customers in a new way. It also means that new products can be invented to serve new or existing clients. The source of any innovation is creativity. A creative idea will arrive first and the innovation will then take place after the idea has been evaluated and accepted.

2.2.2.1 Simplification of Processes

If an IT company is able to simplify the process of implementation of a new technology for the banking sector, it will likely become a much sought-after IT provider. The implementation of a new solution is more challenging for an established bank than for a bank with a fairly short operating history, due to established banks having numerous, difficult to replace, systems and processes in place to deal with. Any new implementation should be aligned with existing solutions.

Banks with a short operating history have fewer concerns about security or risks regarding their infrastructure, as it is easier to establish an overview about their infrastructure and its underlying processes than in a large established bank.

2.2.2.2 Processes

The best way of controlling a complex IT solution and its underlying business processes is to set up a process to control it. The process can be created based on a number of simple solutions/processes and must always involve many experts from around the organization and encompass their knowledge. Going forward, the benefits of well-defined control processes in an organization and their impact on overall controlling will be highly regarded.

2.2.2.3 The Technology Landscape

New IT solutions for different areas of a financial institution have evolved quickly over the last two decades. Financial institutions have always invested in business ideas via technology in order to better serve their clients and to remain competitive in the market. If we look at the landscape of technology for the day-to-day business in a bank today, we will discover that many solutions that we take for granted, such as smartphones, laptops, video conferences, the Internet, email-based communication, and more were not commonplace for most of us not long ago.

2.2.3 Smarter with IT

About 20 years ago, banking started to become more sophisticated. Intelligent tools, such as search engines, started to be used more frequently in daily business in banking, but were not as important for our work as today, since there was only little information available in the internet. At its beginning, the internet was mainly used by IT specialists and less by ordinary people. The first reliable environment for banking data was a host with a very unfriendly user interface.

IT systems in the daily business of a bank were mainly used by a particular group of people, as not all employees needed to use a computer. I remember meeting a senior bank manager on the trading floor of a bank in 1996 and was surprised to hear that she refused to use a computer, as she did not need one.

In 1995 I was a member of one of the first social networks in Austria called “Magnet,” where only IT people chatted and exchanged IT-related issues and solutions with each other. This was a pure IT-related information exchange among members of the IT network. It felt like being part of a small community where it was easy to remain in touch with one another and to occasionally meet people to initiate professional relationships.

Since then, the ways in which we think about professional networking and about IT have changed. Today, many other solutions support us in our day-to-day professional and social lives. In order to remain in touch with colleagues, friends, and family members, we sometimes need to join several social networks, as there is not just one platform where everyone is a member of.

2.2.3.1 Hosts

After decades of revolutionary developments in technology, I wonder how hosts with unfriendly user interfaces could survive for such a long time, as they still exist and are important for all kinds of sensitive information in almost all large, established organizations.

2.2.3.2 IT Could Go Haywire

Most of the IT experts remember how scary the turn to the year 2000 was for many organizations. We were told that the IT experts in the past have developed technology in a way that only the last two digits of a year are considered and that IT could go haywire if the two digits suddenly became “00.” We performed every check and

considered new services to ensure that our banks' systems would work well after 2000. I am not aware of a single case of proof that all the fuss regarding the year 2000 was worth it. There is no doubt about the intelligence of IT specialists; maybe this is also additional proof of it. Does it also mean that Michio Kaku's (Kaku 2009) prediction about intelligent robots, which might see humans as their pets, is a nice fantasy and that in reality people who created them have also increased their intelligence to solve ever more complex problems?

2.2.4 Freedom of Developers in Banking

In fact, the freedom of developers can sometimes harm a business. During my work for a large organization, I was a member of a project where data was needed to be sent to a data warehouse. As the data were based on derivative transactions, we needed to ensure that the right information was stored in the right table of many databases of the data warehouse. Our project plan suddenly could not cope with the deliveries on time, as we discovered that the same information was called differently in different tables of the same data warehouse. There was no unique naming convention and even the new databases did not use unique naming. This meant that every change in this environment would need more effort and would cost more. Our project reported this issue, but I am not sure if unique naming was implemented or if the developers are still using their creativity to make it a bit more complicated than necessary.

2.2.5 IT Standards

We are now in a time where we use many IT standards in order to ease interaction within IT landscapes and to increase the quality of what we do. As IT becomes increasingly more sophisticated, there will be many questions around these IT standards in the future, and there will also be new proposals for a change from the existing standards to simpler solutions. The new IT standards will be based on new principles to serve more complex IT infrastructures of a future financial world. This IT standard will be based on common sense in a modern form of Artificial Intelligence (AI) and makes it easier for the banking industry to exchange pre-defined information automatically on similar levels of authority.

2.2.6 Artificial Intelligence

Going forward, different areas in organizations with common subjects like tax issues, will apply AI solutions with inherent common sense in order to exchange information between each other. Making technology understand common sense will be one of the innovative solutions of the future that will be used to cope with today's complexity and to reduce risks.

2.2.6.1 Tax Regulation

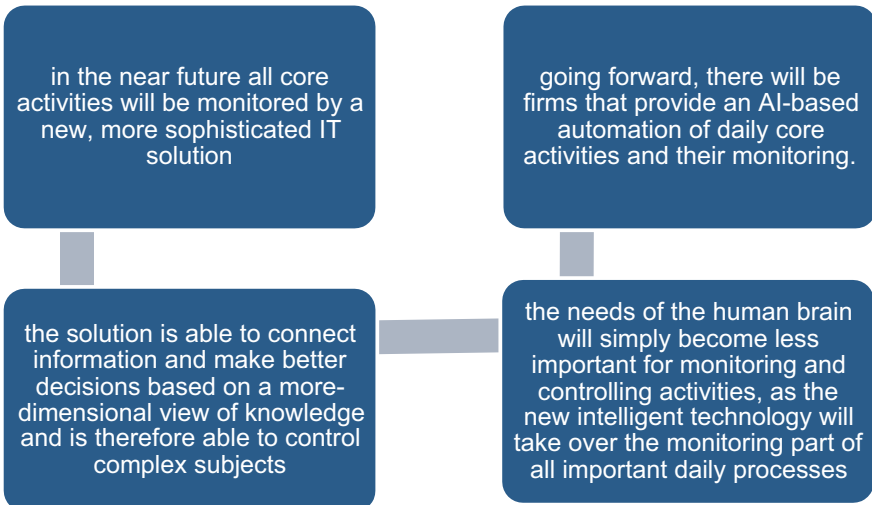
AI-inherent common sense applied to the internal handling of tax issues will make automated decisions based on available knowledge, such as a client's account type, domicile, citizenship, and allocation ratio on the one side, and about the exchange of information between relevant parties on the other side, possible. All information which has been exchanged in the process will be recorded.

2.2.6.2 Future Change Management

In the future, changes in IT will be performed in a more natural way by modern technologies, which will be able to understand common sense. New technologies will be able to simplify change with the creation of an overview of that change. The new technology will be able to communicate all the dependencies clearly and to produce documentation automatically of what will be changed and by when. It will even create educational videos and audio books for training sessions automatically, which can be run on the intranet of the organization at any time for training purposes. Upcoming new technologies will be able to use an updated best practice every time a change takes place.

The system will update best practice of the organization by enhancing it with new experience if necessary. This system might be called "AI Change Management" and is a new way of running a change. It will be very powerful and will even be able to assist anybody at any level during the entire change process. For instance, an intelligent change management system can coach a manager through the change and will support him in becoming an even more effective leader.

2.2.6.3 Future Controlling/Monitoring



In the near future all core activities will be monitored by a new, more sophisticated IT solution. The solution is able to connect information and make better

decisions based on a more-dimensional view of knowledge and is therefore able to control complex subjects. The needs of the human brain will simply become less important for monitoring and controlling activities, as the new intelligent technology will take over the monitoring part of all important daily processes. For instance, daily activities around the IT service life cycle will be monitored and managed by a new intelligent system, which will cover all steps, such as service design, service transition, and service operation almost effortlessly. Going forward, there will be many new procedures to monitor solutions based on the logic of AI.

Today, there are already a number of intelligent solutions available on the market, which enable the review of day-to-day processes so that hidden risks are avoided. Going forward, there will be firms that provide an AI-based automation of daily core activities and their monitoring. As technology continues to grow rapidly, there will be even more advanced IT solutions available for a wide range of applications. We will have institutions similar to our universities that measure the available IT solutions on the market in terms of the appropriateness for the world of finance and can then facilitate the selection of the best solutions.

They might be called “Software Measurement Institutions” and will also have the duty of providing the best knowledge for building an intelligent system. IT firms and individuals can obtain a certificate for having the right solution, based on the highest standards. These firms or individuals are authorized to receive a certificate for their solutions after passing a number of tests. As controlling and monitoring can be complex tasks with a high priority in banking, banks will entrust this kind of service only to those firms who are specialized in providing monitoring services for daily processes. These service companies will need to demonstrate that they already have satisfied clients, but they will also need a certificate from a future software measurement institute to confirm their expertise and that they are able to act practically.

In the aftermath of the financial crisis, controlling and compliance procedures in banking became more and more important. There is a huge desire to monitor every process and activity in order to discover issues, risks, or weaknesses as soon as they evolve.

2.2.7 Handling of a Project

I think that the task of managing a project requires a broad view and that the value of a successfully concluded project tends to be underestimated. During a project, project managers regularly discover that the project plan cannot be implemented as envisaged. This is the reason why a project manager must use the project plan as a road map, but needs to remain flexible and make compromises. The basic means for compromise and solution finding is creativity. It is difficult to compromise if a project manager is not able to understand the business implications as well as potential IT implications. In financial institutions we are used to being constructive or able to think out-side-of the box. Although I avoid using the word creativity in my projects, I use the term in this book, as it is more precise.

2.2.7.1 Initiation Phase and Emotions

We can define innovation processes as projects. The best way of running a project is to leave no room for interpretation. The entire preparation and initiation of a project is based on clear communication with all key experts related to the project. For project managers it causes frustration if they are responsible for the evaluation of a topic that will never leave the initiation phase. The best idea will suffer if the initiation phase is too long, if there are too many people involved and if the decision-making executives are missing. In case the efforts of the initiation phase are higher than in the actual implementation phase, the outcome of the project will not have the desired level of success. Such projects have an expensive initiation phase and will cause frustrations before they are even started.

2.2.7.1.1 Smooth Initiation Phase

I think that a project with a smooth initiation phase will have a good chance of being successful. We have to cope with increasing complexity in business and IT, which is the reason why in the future there will be a strong demand for a highly specialized expertise in a single subject, such as process management or management of the evaluation phase of a project. While a combined expertise from experts of different fields around one particular subject will be in high demand, these experts will still be specialized on particular solutions, such as process management. A large number of consulting firms offer a range of services and competences in different industries and are able to offer solutions to a range of different requests, but the future will require more narrow specializations as a core competence.

This is the reason why there will be companies in the future that exclusively offer the management of the initiation phase of a project. They will have intelligent systems and tools to support only this kind of project and, at the same time, are experts for running clear processes to cover all steps of the initiation phase.

2.2.7.1.2 Emotions



2. The Intense Landscape

There is no need to understand a particular subject during the initiation phase of the project, but it requires soft skills to deal with the emotions during the project and the involvement of the right group of people to discuss the facts and emotions related to a particular subject. In addition, agreements made during discussions need to be recorded and the relevant stakeholders need to be involved in order to communicate the agreements and to collect their objections.

The objections should be dealt with in the core group of the project. Following an agreement, the stakeholder group must be invited again in order to enable the core team to present the new agreement, collect any objections, and to get back to the stakeholder group after they have come up with new solutions. This process must be structured and repeated as often as necessary until a solution is found. Note that the core team of a project is always included in the conversation with the stakeholder group. Stakeholders and senior managers only provide information or ask questions, but do not try to find solutions to problems, as this is clearly the core team's responsibility. You have to understand that the key to success and the containment of emotions and conflicts is to assign clear responsibilities to each of your project team members and to focus on results during the entire project. As simple as it sounds, and though it is a guiding principle in all project-related internal guidelines, many project managers still fail to follow it. The initiation phase of a project becomes expensive and is sometimes never finished, because there is no clear separation based on the context and no clear responsibilities assigned in the core team of the project.

Example

One of my previous employers was a medium-sized bank which decided to change the trading system on the entire trading floor. We looked for a system that can cover front-to-end activities. We found several suitable solutions that covered trading, controlling, back office functions, accounting as well as risk management. Due to internal politics it was challenging to bring the evaluation phase to an end. Although the responsibilities of the involved project team members were clearly assigned, it was impossible to finish it, as internal politics stirred up emotions and conflicts which was damaging for the project. At the end, a senior manager came out on top and made the final selection for the bank, but as the decision was not taken by the group, he lost support and eventually left the bank after helping to finish the entire implementation properly. Even the newly appointed senior manager did not manage to get support for the implemented solution. The emotions and controversies involved made it difficult for the departments to start using the application properly, which made the usage of the application becoming a pain for the whole organization. The application is still in use at the bank and is now based on a solid understanding of the application. The application was able to increase the organization's productivity and to enhance its risk management, but the history made it difficult for the application to be fully accepted right from the beginning.

2.2.7.2 Bottom Line

I think that the most important aspect in any evaluation project is to carefully listen to the opinions of the project team members and to never allow any person or area

to dominate. It is important that the group takes joint decisions in order to provide for an eventual smooth implementation of the solution. The initiation phase is all about collecting ideas, facts, making decisions and includes the following steps:

- Definition of scope
- Organization of kick-off meeting
- Composition of a core team of the project, based on the needed expertise in the project
- Definition of a means of communication, confirmed by the core team members and stakeholders
- Stick to the agreed means of communication and use it to control your project as well as for reporting
- Hold each team member accountable and let them discuss their suggestions within a larger group, but make sure that they remain responsible for their assignments
- Following major agreements, organize a meeting with stakeholders to discuss the findings and agreements in a large group
- Always consider that your core team members come from different areas of the organization; listen to their ideas, concerns, objections, and emotions
- Ensure that all core team members are satisfied with the progress of their tasks and the agreed decisions before meeting with stakeholders and senior managers; this is the key to ensure progress in your evaluation project, as the project members will promote the solution in their areas afterwards

As a project manager, I have learned that a clear process helps to earn the trust of the experts and keeps emotions in check in order to avoid distractions of the team and wasting productive energy. If the collected ideas and facts and the decisions taken are not satisfactory to the stakeholders, new ideas and facts need to be collected and decisions made, based on these collected ideas and facts. They need to be presented to the stakeholders to ensure that no aspects have been missed. Processes around the initiation phase need to be kept simple and well established in the organization.

2.2.8 Procedures vs. Processes

In every project we come across procedures and practice related to the topic of the project. A procedure explains how a task is done in a particular area, while a process explains all the steps that need to be taken and who the involved experts are for these steps. In today's banking business, procedures and processes are critical for the productivity of the organization. They can be set up in a way so that the day-to-day business can be run smoothly and avoids hidden risks. Although procedures and processes play an important role in every aspect of the day-to-day business of banks, they tend to disappear from our minds once they have been defined and implemented.

Despite being considered an annoying topic at times, it is important to keep in mind that well designed processes and procedures prevent organizations from facing troubles, but at the same time they tend to not being always clearly understood. I think that in an organizational environment, processes and procedures need to be transparent and understandable for everybody, have to be documented clearly, and must be updated regularly. Documentation of processes and procedures in an organization should include graphics and be written in a clear and understandable language, with no room for mis-interpretation. It should also be kept as practical as possible, with no science behind it.

2.2.8.1 Processes in a Project

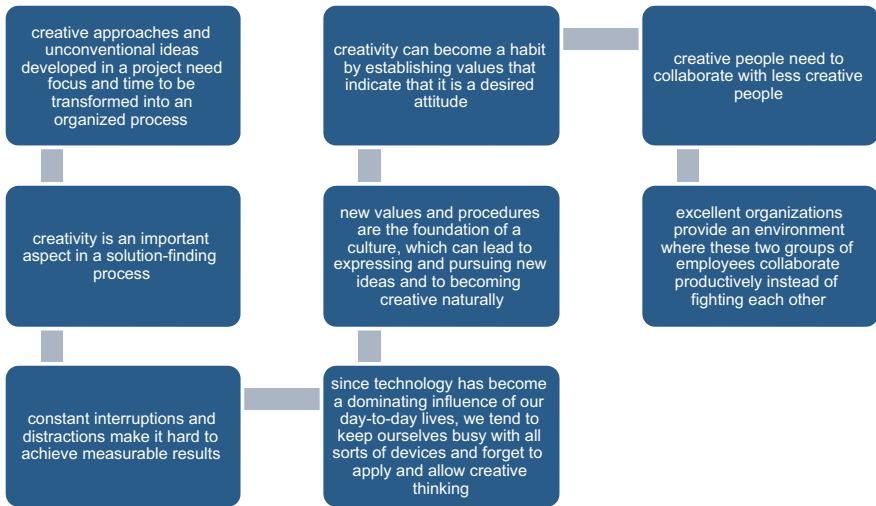
As mentioned, managing a project in a bank is based on pre-defined guidelines on reporting, documentation, communication, change management, etc. which must be followed by every member in a project. The guidelines should be seen as a tool to run a project efficiently, based on a pre-defined processes, with the responsibility for following the guidelines being with the project manager.

In practice, guidelines and methods should be designed in a way that leaves room for a practical approach. Studying the entire documentation of CMMI creates the impression that this documentation, due to its scope, could be the foundation for a university lecture, and that it is not very helpful for good practice. Going forward, financial institutions will need to keep documentation around guidelines and methods as practical as possible in order to provide simple access to essential information. The important information, for instance, around the topic of CMMI, could potentially be provided at the following three levels:

1. One page with high level information on CMMI
2. Two pages with explanations on the content of the high level information
3. Three pages with further details and links on where to find specific information

All detailed information is only available to those who are assigned to explore the subject without applying common sense and therefore they need to go through the entire CMMI documentation. CMMI is one of the best methods available on the subject of successful project management, but I think that, going forward, banks will implement this guideline in a more practical way.

2.2.8.2 Projects and Creativity



Creative approaches and unconventional ideas developed in a project need focus and time to be transformed into an organized process. In order to let creativity flourish, a project manager needs to provide a setting that allows reflection and intellectual engagement. Creativity is an important aspect in a solution-finding process. Constant interruptions and distractions make it hard to achieve measurable results. Since technology has become a dominating influence of our day-to-day lives, we tend to keep ourselves busy with all sorts of devices and forget to apply and allow creative thinking. It helps organizations in the context of innovations and in coming up with out-of-the-box solutions for competitive advantages.

New values and procedures are the foundation of a culture, which can lead to expressing and pursuing new ideas and to becoming creative naturally. Creativity can become a habit by establishing values that indicate that it is a desired attitude. For instance, if action orientation is more highly valued than endless discussions in meetings with no outcome or if meetings are conducted while standing as opposed to sitting, it is a reflection of the importance of professional meetings for managerial efficiency.

Creative people need to collaborate with less creative people. In many cases, less creative people tend to be the ones who are good at implementing things and who are usually happy if nothing changes. Projects need a good mix of doers and dreamers. Doers and dreamers in an organization need each other in order to realize the full potential of an organization. An organization with many doers and only a few dreamers will be able to create a highly productive environment, but it will more slowly adapt to change and potentially lose out against competition in its attempts to defend market share.

I think there are ways of finding the right balance between doers and dreamers in an organization, for instance, by only looking at their presentations. A doer argues based on facts only, while a creative mind wants to convince not only rationally, but also with emotion, which is why they tend to influence us more strongly, by aiming at our emotions. Excellent organizations provide an environment where these two groups of employees collaborate productively instead of fighting each other. They respect the different ways of thinking and collaborate to develop ideas in order to better serve their customers. The intention of senior management must be to create a culture of respect which allows both types of personalities to co-exist productively.

2.2.8.3 Gathering of Information

A quick way of gathering information is to approach people who are less concerned about their power, influence, or popularity, as these people will be most happy to share information. Less popular or less valued people can sometimes also play an important role for the information and knowledge transfer in an organization. An organization that has placed them strategically will not only ensure that an area is communicative internally, but it will also ensure that the lack of knowledge transfer will not cause any risks.

2.2.8.4 Solving Issues

An important rule for solving issues that I have experienced is to keep things fact-based and simple. Simple also means keeping them visual and keeping a sense of humor as a means to ensure that all parties are engaged in the entire problem solving process. Another important point in the process of solving issues is to always keep a top-down approach and never to blend a bottom-up with a top-down approach once you have started to solve an issue.

2.2.8.5 Speed of a Project

In order to keep all parties engaged, a project manager needs to keep an eye on speed so that everyone is aware of approaching deadlines and decisions to be made to keep the project on schedule. Running a project is like in an endurance activity—maintaining a good balance between burning calories and not losing breath.

It is also the speed of a project that contributes to a productive collaboration between all involved experts and helps to keep emotions and conflicts under control. The speed of a project is supposed to be such that the project plan is set up in a way that everybody is able to cope with it, with administrative procedures being kept low and performance in daily, weekly, or monthly sessions being kept high.

The project manager defines the balance between speed and quality of performance. I think that a project manager must be a bit of a doer as well as a dreamer and should create a culture of “why not” thinking. We live in a time where change

in organizations is constant and therefore organizations need to create a culture to act and adapt to change quickly.

2.2.8.6 Visibility and Transparency

A project manager must keep a focus on practicality, no matter if he plans, manages, or reports. He needs to use the customer's expectations as his road map and provide visibility and transparency to all involved experts and stakeholders. An effective project manager is able to ensure that his project is transparent to the entire organization. He uses the organization's best practice in a practical way, based on personal experience.

The meaning of best practice is to apply established ways of doing things in order to remain practical and avoid failure. Best practice has become knowledge, since it has enabled organizations to become more efficient in their attempts to introduce change and innovations. As every organization has its own definition of best practice, they have discovered where the best practice was applied, classified existing solutions, developed a body of knowledge and shared it with each area of the organization. The best managers are those who are able to identify best practice and take responsibility for its re-validation and enhancement when necessary. Outdated practice should be retired and new best practice be published. Best practice is the application of tools, methods, and processes that have been validated, like specific templates that a PMO of a project can adapt and re-use. One of the important tasks of a PMO is to audit whether the entire project applies best practice.

2.2.8.7 Complexity of Projects

Managing a project means, depending on its scope and complexity, considering rules and control mechanisms that project managers need to apply in order to be finished on time and within budget.

In one of my projects we once decided to use the Agile methodology instead of Waterfall in order to avoid being on the bank's big projects radar. Through this decision, we avoided the requirement of producing numerous documents and the need to involve many different areas and people, which would have slowed down the project significantly. Instead, the budget was split into small amounts (sprint), with each amount looking insignificant on the bank's project radar. Therefore we had a better control of what we did and could provide a higher quality by correcting the outcome of the latest sprint.

2.2.8.8 Intuitions and Emotions

A project is supposed to be managed based on facts only and is not set up to allow intuitions or emotions playing a role. The connection between intellect and emotions is largely ignored in the context of today's working life. Successful projects, however, encourage an interplay between intellect and emotions to

facilitate the best possible outcome. In the future, projects will remain method-based, but practicality will be seen as the guiding principle.

The latest insights into the connection between brain and emotions will influence what will emerge as new best practice in project management, with tools being available to leverage the effect of a combination of both aspects of a project. Newly advanced methods of managing a project will become more refined and sophisticated and incorporate intellect, creativity, and emotions, something which is not adequately considered today, but will be seen as an additional strength tomorrow.

2.2.8.9 Project Management Tools

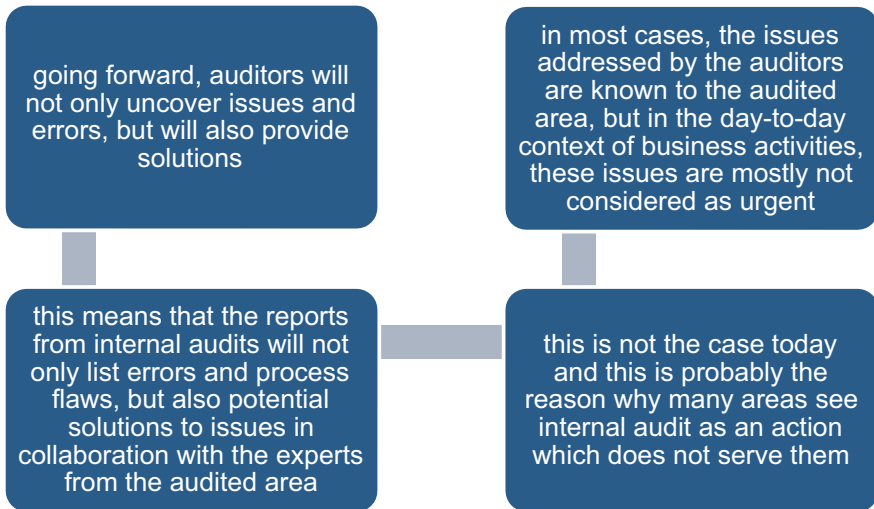
Instead of using several different systems and numerous process steps to manage a project, future project management practice will be based on a single piece of software, which provides the possibility to combine brain and emotions. In the near future the main objective will be to handle a project naturally and to avoid risks almost effortlessly. A future intelligent software will act as your PMO and will adjust all templates and daily processes to ease the administration of your project.

The software will send out reports, invitations to meetings, or advise what the solution to a particular issue is. In the end the software will ease the administration and will ensure that your project is following internal guidelines without noticing. There will be no need to take a decision on which method to apply or what the best means of communication should be. The software is able to make suggestions, like organizing conference calls for update meetings at a particular date and time. The software is able to make this decision, due to the information you have entered, like core team members' domiciles and locations. The underlying guideline of your project will be a method-based combination of brain and emotions as best practice.

By using a tool to support a project, the entire view of running your project will be changed and it will no longer require an explanation at every step of the way when instead a computer can follow the process and advise a project manager what to do next. Therefore reporting and documentation during a project can become automatic, with the project manager answering the system's questions and clarifying the common sense of the information so that it's entered into the system correctly.

Running a project with the support of such a system will make life easier, as it enables the project manager to remain focused on the critical aspects of the task and to spend less time on administration.

2.3 Internal Audit



Auditing is about analyzing, being able to collect information around the audited subject, and understanding its connections to other relevant subjects or areas. Going forward, auditors will not only uncover issues and errors, but will also provide solutions. This means that the reports from internal audits will not only list errors and process flaws, but also potential solutions to issues in collaboration with the experts from the audited area. This is not the case today and this is probably the reason why many areas see internal audit as an action which does not serve them.

In most cases, the issues addressed by the auditors are known to the audited area, but in the day-to-day context of business activities, these issues are mostly not considered as urgent. In the future audit needs to adopt its approach to generate a benefit for the audited area too. The most important task of an internal auditor is to be able to analyze the collected information, while the question part of an audit can be done by a junior auditor. By repeatedly asking “why?,” an auditor can collect large amounts of information which helps to understand the entire landscape around a subject. It enables the auditor to evaluate the facts and make assessments.

When I was working as an internal auditor, I was involved in a project that was searching for an early warning system using available technology. We were tasked to ask simple questions and to evaluate the collected facts about a particular subject. In contrast to Eliza which became famous decades ago for being a revolutionary IT solution, the operating system featured in the movie “HER” did not provide a revolutionary new insight into the latest AI technology.

2.3.1 Eliza as Internal Auditor

Can AI such as Eliza take over the activity of internal auditing? Humans can differentiate between a conversation with a human and a conversation with a robot. Furthermore, they are able to make jokes, write poetry, or recognize a lie by a person's voice or mimic. As mentioned, by asking the simplest questions, almost everybody can access information. How intelligent must AI become in order to be able to act as an internal auditing system, and what would be the role of humans in this process? I think that by even having simple artificial interaction software in place, the interview part, as well as the structuring of the collected information, can be taken over by a computer. The collected information can help clarify subjects and to draw conclusions about the problem.

Example

Here is an example of how a simple question can be asked to collect all needed information about a particular issue: The issue is that I get up early in the morning.

AI Why? **Answer:** Because I like the early morning energy and silence.

AI Why do you like silence? **Answer:** Because, if it's quiet, I get into a different state of mind with little effort.

AI Why do you need a different state of mind? **Answer:** Because in a different state of mind I can see ordinary things from a new perspective.

AI Why do you need a new perspective? **Answer:** Because different perspectives can reveal new solutions to problems.

AI Why? **Answer:** Because new solutions will give me the ability to better solve outstanding issues.

AI Why? **Answer:** Because by better solving my issues I have a better day.

AI Why do you have a better day? **Answer:** Because a good day starts with no issues.

AI Why? **Answer:** Because a good day should include fun.

AI Why do you need fun? **Answer:** Because with fun, life is much more enjoyable. . . .

In practice, questions can be chosen in a way that the person being interviewed does not discover that the questions are asked without the answers being listened to.

2.3.2 AI and Internal Audit

After the financial crisis, the area that would benefit the most from the introduction of AI into its processes is internal audit. This way, existing resources can be used in a more efficient way and it would be possible to audit more areas in shorter period of time. In the future, internal audit will use software like Eliza to interview experts from all areas almost monthly and will be able to collect information by setting up an early warning system for reporting by searching for critical words.

Areas with the most critical words will be audited with the most urgency. The interview can also include hidden checks to ensure that the person understands the answers being given and validates the truth. This will help to control more efficiently, without any additional resources. Furthermore, issues can be found more quickly, and potential losses can be detected much earlier before they cause damage to the organization.

2.4 Intelligent Solutions

Can AI cover more sophisticated tasks in the future? In terms of logical evaluations, the creation of a memory and the valuation of information, IT software beats human abilities. In the near future, computers will become a thousand times faster and will need less power than the IT solutions available today.

2.4.1 Daily Business and New Solutions

Today, financial institutions are able, for instance, to scan a cheque with a machine, with the machine being able to read the exact amount on the cheque. There is a lot of intelligent online support available for software applications, although the intelligence behind the support is not very sophisticated. These solutions are useful and can help saving time. In the near future more AI solutions will be used in banking which will be able to do all the things that humans are capable of, with less risks involved and with incredible accuracy.

The question regarding the development of AI today is whether it can have a consciousness or synthetic “emotions”? Can we go even further and develop AI with a sub-consciousness? Another key question is why would we want to build an IT solution that is similar to humans? I think in the future we will all come to the conclusion that there is no need to have an exact copy of humans. We should rather focus on avoiding it, because human feelings and the sub-consciousness tend to make things more complex and therefore allows hidden risks to evolve.

We already know how to develop AI that trains itself. In terms of controlling and auditing, this knowledge and the introduction of such systems can help to reduce risks and costs in organizations, but until today I did not come across a solution that is suitable for the banking business.

According to Markram (2009), it is important to have a human brain in a computer, as it helps science to experience and understand the brain’s ability for social interactions and complex cognitive functions.

An interesting process in the brain is decision making. Once we understand the human brain in all its facets, we could incorporate human emotions in a computer and make the computer having all kinds of emotions, such as love, fear, or excitement. It took a long time for scientists to develop AI that is able to understand emotions to some extent, but the question is what is the benefit of adding emotions to technology?

Example

An AI solution is introduced to employees in order that each employee can speak to it and verbally transfer its knowledge to the system. This knowledge will be available via intranet for all employees throughout the organization. In the near future such a solution will be capable of recording emotions and measuring them.

According to Edward De Bono, it is important to evaluate feelings in the same way we evaluate facts. Therefore, the emotions of the speaker must be recorded in a way that the correct application of knowledge is possible. In such a scenario, AI solutions will also support ethical behavior, and the smarter they become, the more controls an organization can implement in its business activities.

2.4.2 Organizational Networks

Each business area is connected to the rest of the organization, which means that an issue can sometimes affect several areas. This issue can not only harm an organization, but also its employees and clients. The conclusion here is that if a financial institution is able to implement AI in an area like internal audit, it will not only better control an organization, but it can also avoid risks which come along with innovative IT solutions. AI is currently either not embedded in day-to-day banking processes or it is minimized in its abilities.

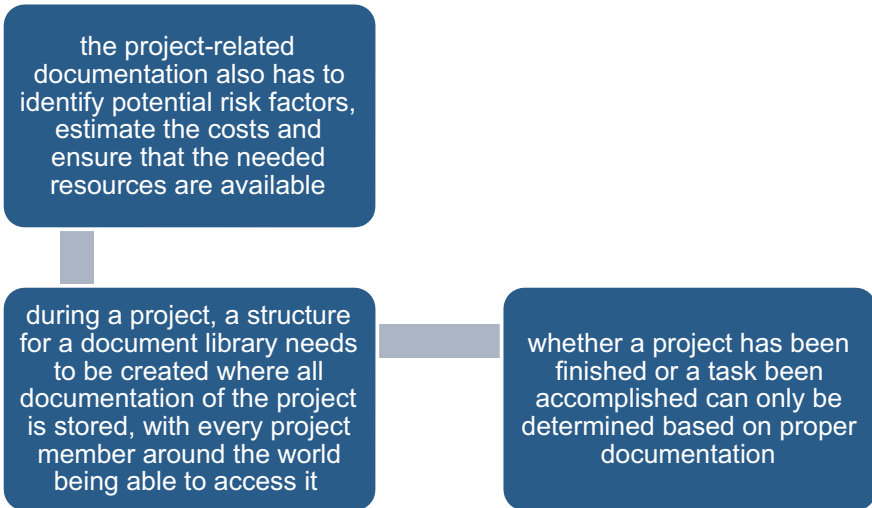
Example

Historical data about financial products are important to enable predictions about the future. If a product is new, it can be synthetically created based on pre-defined rules. The calculation of the overall risk, for instance, would not make a difference between real historical data and synthetic data; thus, decisions taken are less precise. In the future, intelligent solutions will enable the reader of the report to differentiate between real historical data and synthetic data, which will facilitate decision making.

2.5 Documentation

Documentation is key and is the foundation of any control mechanism in an organization. In a project, depending on the method applied, a document can be given many different names, related to user stories or requirements, user guides, compliance documentation, use cases, process flow diagrams or business requirement documents, change requests, etc. Records of meetings or emails, formal as well as informal, are also considered documentation in a project. Whether a project has been finished or a task been accomplished can only be determined based on proper documentation.

2.5.1 Projects and Documentation

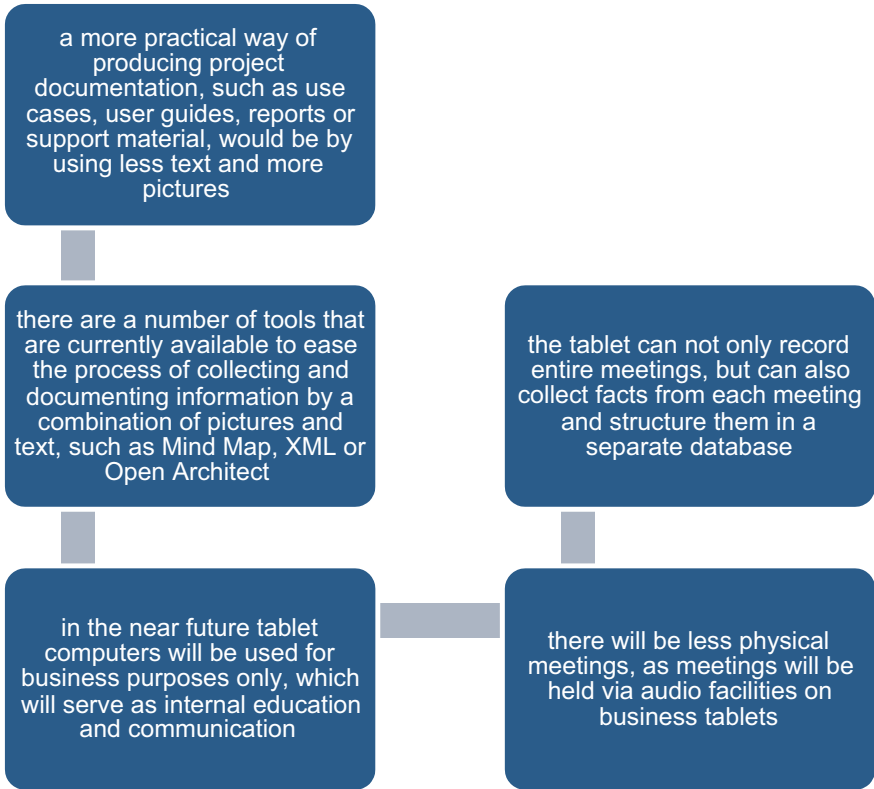


A project normally starts with a detailed, well documented business case, with a project charter following afterwards when the project team members are determined. A project plan as a crucial document encompasses purpose, scope, people involved, time of delivery, and potential risks. Only after production of all initial documentation is the project team able to start and close the initiation phase of the project.

The project plan is the main tool to manage a project and to support the monitoring and measurement of the project progress. The project plan and other project-related documentation provide overall documentation about the ways the project decisions were taken. The project plan, once developed and executed, is also the basis for change requests at the end. Careful planning helps to clearly analyze, specify, design, develop, test, and finally implement the result of the project. A well-conceived plan is crucial for finishing the project on time, within budget and for delivering all addressed requests with accuracy. Perfect project plan documentation will also provide a clear understanding of the scope, the list of activities within the scope and a clear time and action table for all involved project team members and their assignments. The project-related documentation also has to identify potential risk factors, estimate the costs, and ensure that the needed resources are available. Every major topic, such as development, quality, risk management, performance reporting, change management, and project roll-out should also be documented in a project plan.

During a project, a structure for a document library needs to be created where all documentation of the project is stored, with every project member around the world being able to access it. This has the benefit that the information can be shared quickly and audits performed by reviewing the documents if needed.

2.5.1.1 Practical Ways of Documenting



A more practical way of producing project documentation, such as use cases, user guides, reports, or support material, would be by using less text and more pictures. Based on the reason why the document is created, its scope or the group of users, the content of the documentation should only include the information in such detail that it serves the addressed stakeholders.

When creating a document, no matter how simple or complex it is, a list of tasks must be defined regarding the creation of such documentation, like what needs to be done, whose input is needed, by when we need to be finished, and who is going to sign it off as being approved.

This process is simple and should be documented more often than not, but in today's day-to-day business we are not aware that we should follow this process as our road map for documenting different topics.

Knowing the process will make sure that we follow every step and that the date of delivery and the involved people are already defined and considered in our work. The implementation of this process for the creation of documentation will ensure a basic quality that can be delivered almost effortlessly.

In a project, especially in terms of developing a solution, the documentation of what needs to be done is important to avoid a misunderstanding of the request. In this case, one person creates the documentation, such as a business analyst with available tools like Microsoft Word, XML, or Visio, another person reviews it, such as the person who has requested a solution, and a third person will obtain it, such as a designer or developer to realize the next steps. In most cases the project team has a prototype of each type of document that is needed. This can be used and maintained for any subject at any time. In the ideal case, the prototype is part of the best practice in the organization and is adjusted by an intelligent software when necessary.

There are a number of tools that are currently available to ease the process of collecting and documenting information by a combination of pictures and text, such as Mind Map, XML, or Open Architect. I use Open Architect for the creation of my documents, as I can create a blend of text and pictures in a structured way so that the creation of a document based on the created picture is easy to accomplish and to maintain afterwards.

In the near future tablet computers will be used for business purposes only, which will serve as internal education and communication. There will be less physical meetings, as meetings will be held via audio facilities on business tablets. The tablet can not only record entire meetings, but can also collect facts from each meeting and structure them in a separate database.

2.5.2 Documentation and Intranet

According to Stibel (2013), the principle that the sum is greater than its parts is not new. Wikipedia could not have been created by one person. There are 22 million articles in 285 languages as of 2012. In order to learn about breakpoints, we need to watch examples like ants and how they work together to accomplish an extraordinary task.

Today, there is no central structure that has been defined for the archiving of existing key documentation. Internal documentation is put together in a similar way like content on Wikipedia. The knowledge available on Wikipedia has been provided by many experts and is available for everybody. This is how the future will look like for the knowledge management systems of banks. It is much easier to mobilize experts from all areas to participate in the creation of a central knowledge management system, which will later be used by everybody. The knowledge is based on key subjects of the daily business in a bank, like the daily activities of employees in a particular department of a bank.

Going forward, all employees will be asked to document their daily processes and to upload it to the intranet so that everybody throughout the organization can see what the process around a particular role is and therefore what the tasks and duties are. Future requests can be addressed clearly, as one can start a search on the intranet to check, for instance, who communicates with external publishers in the

organization. This kind of information can be delivered because of the process documentation for each activity in the organization.

2.5.3 Documentation and Brain

At some point in the future, documentation will be structured according to the way our brains works, which means a move away from text-only documentation. According to Tony Buzan, our brain thinks in images and associations and is designed to follow emotions (Buzan and Buzan 1996).

This will also change the way how we document our problems and solutions in the future, as we will use more pictures in order to be able to easily remember them and learn. In today's business processes, we tend to avoid using too many colors in our presentations and documentation, as we are concerned of being taken less seriously. According to Tony Buzan, our brain likes colors that make it easier to structure information. I think that a mixture of text, color, and pictures will be the only way to document in the future, as we will use our brains in a more effective way by using colors and pictures to ease the process of reading and understanding.

2.6 Communication

According to Smith (2005), internal communication supports the communication between management and staff and includes employee communication, change management, management communication, etc. Today's experts on internal communication have the following backgrounds in order to be able to communicate a particular subject to the entire organization: senior experts (67 %), human resources (22 %), and marketing (10 %). They have to bring along certain skills, such as diplomacy and numeracy, with the culture of an organization defining internal communication. Going forward, internal communication will become shorter and more colorful, even including emotions such as funny cartoon figures. The more open-minded an organization is, the more color, cartoons, and even videos will be included in internal communication.

Sometimes we are swamped with emails from internal communication, consisting of long text, loaded with facts, that in most instances we just ignore it, due to the heavy workflow during the day. I think that internal communication in the future will be either much shorter than today and include bullet points and colors in order to highlight the content or it will be produced with colors, pictures, and potentially music and maybe cartoons in order to encourage employees to go through internal information during their lunch breaks or weekends. Why should we be afraid to receive less credit if we are able to provide our message in a more attractive way? In the end our aim should be to influence others to pay attention in our organization with the content of our communication and not to impress with writing skills that could win a prize in literature competitions. A boring document

or interview will not win-over employees to work extra hours in support for their managers to achieve the department's objectives.

Going forward it will be all about engaging employee's emotions, and in case an organization develops the culture to engage their employees' emotions with their internal communication, they will create a new organizational identity, which is shared by all employees and is an incredible powerful tool to increase competitiveness. In case an organization is able to make their employee's hearts to beat for the organization, it will certainly have a big influence on the performance of the organization and the satisfaction of employees for being able to work for this particular organization.

2.6.1 Communication and Project Management

Communication has many facets and depends on the context in which it is used. In case we would like to develop a supporting communication method for a project, we need more skills than only perfectly written emails. According to Dignen and McMaster (2013), excellent interpersonal skills not only require the understanding of cultures and the individuality of team members, but also an understanding of the business environment. A person with excellent interpersonal skills is good in building relationships and in purpose-based networking and is able to deal with difficult people, to manage conflicts, build trust, exert influence, exchange feedback, and feels comfortable to participate in virtual team group meetings.

Although the entire book is focused on communication between a native English speaker and a non-native speaker, I think that we could use some of the ideas in projects. In projects we mainly deal with people who are mostly fluent in their expertise. Implementing a clear communication between different areas of expertise is sometimes a challenge for a project manager. Project managers cannot expect that all project team members bring along strong interpersonal skills.

A project manager must be able to help team members understanding each other and to communicate in a productive way so that the best possible solution can be achieved with the project. A key factor of success for a project manager is to be pro-active, on top of all the interpersonal skills mentioned above. A project manager who is not pro-active or too afraid of potential, inconvenient interactions with other people will become a risk for his project. The project is all about interacting with other people, challenging the team with objections, remaining authentic, and being able to argue with the team and having lunch afterwards. In order for a project manager to be able to successfully manage a project with all needed skills, it requires a supportive principal.

The key to a successful project will always be excellent communication. Efficient communication must be planned, agreed with the project stakeholders and used during the entire project. Although internal guidelines can provide a road map for the best way to communicate in a project, the available road map should be adjusted for your project needs. The planning of the communication must explain what needs to be communicated to whom and in what ways. The aim is to avoid

using only one channel of communication, such as using only emails instead of communicating via phone or face-to-face.

A lot of projects either fail or will be cancelled after they have started because of poor communication or other reasons. The reasons can vary, but the way we communicate within a project can be a big support in avoiding failure or frustration. A communication plan is like holding a map which helps to avoid getting lost in the demands of the project.

2.6.1.1 Projects and Common Sense

Clear communication will support the stakeholders and project team members to be informed and focused on relevant topics, based on recently communicated information. Common sense is needed by every project manager in order to be able to make decisions, for instance, about which members of the project team need new information immediately, while others can wait until the next regular project meeting.

The entire communication must be done in a practical way, and common sense is useful to immediately do the right things. A mix-up will confuse the project members, for example by either involving too many people, with no decisions being made or work done or due to too many discussions and explanations or by not involving certain responsible people, which hinders the completion of their assignments.

As you see, communication can cause project failures and frustration, but can also make a project run smoothly and successfully.

Communication with stakeholders is mainly pre-defined or is done at an event where a decision must be made. In the process of communication we need to keep the professionalism in our job in mind, but we could occasionally allow ourselves to add humor in informal day-to-day communication with the core team of the project, so that the process of coping with issues can be eased.

2.6.1.2 Complicated Circumstances

I think that clear communication will even serve to deal with challenging circumstances and helps to maintain the cohesion of the project team. If an issue appears, the chance that the issue is tolerated is extremely high in case the issue was not communicated clearly. Communication is the foundation for good collaboration. Communication between the project manager and stakeholders must consider all possible facilities, such as formal meetings, informal conversations, online chats, email exchanges, phone conversations, workshops, etc. As we see, a crucial skill that a project manager should have is communication and linking that interaction with people.

A project manager who is open, communicative, and can convince people to work for the project because of their own interest is probably the most successful project manager.

2.6.1.3 Project Rules

The golden rule of communication for a project manager is to avoid sending too much information or to avoid providing all the details to every expert. Stakeholders,

management, and all other non-related experts and relevant core team members must receive different levels of information in order to make a decision or to complete their deliverables. As mentioned a project manager should have a common sense of who needs this information and at what level of detail the information is needed. The information that needs to be communicated are related to the news of projects and includes status reports, deployments dates, etc.

A useful approach is when a project manager defines the way of communication during a kick-off meeting and lets everyone agree. Once the means of communication for a project is approved and becomes part of your project's guidelines, there will be no confusion about the way the project communicates with all parties. As important as the subject of communication is, it is not always discussed with the project team members what the best way of communication is for this particular project in order to support it successfully.

Even if the communication is structured and defined, it is the project manager's responsibility to make sure that the communication agreement is followed. The project manager ensures that all details, progress, and outstanding decisions, etc. are documented and communicated.

Clear communication can keep stakeholders satisfied and by communicating with them regularly about budget restrictions and timeline updates they will support your project to an even greater extent than otherwise expected. It is insufficient to only communicate issues or when a project needs decisions as a project must continuously communicate with all involved parties to avoid misunderstandings, risks, or frustrations.

2.7 Education

According to Hobert (2013), a global IQ is based on communication, comprehension, compromise, compassion, and creativity and learning can increase our brain's cognitive functions.

Banks as well as other corporations are interested in new ideas and want to introduce new forms of education so that hidden risks are avoided effortlessly. The world has become more and more connected through technology and this has changed our knowledge about education. Today, we can access knowledge at any time through many available devices, such as smart phones or iPads. Because of easy access to knowledge, we can educate ourselves almost everywhere. No matter whether we are at work, at home, on holiday, in a restaurant, at the gym, or in the train, we can collect information about any subject that we have in mind. We can correct our knowledge and extend it and are therefore able to make better decisions. The question is what have big multinational organizations such as Google changed in terms of their education culture?

2.7.1 The Process of Education

In the day-to-day banking business the process of education has hardly been changed. The progress that the world made in education and access to knowledge through new technology has only just started to be considered in educational institutions like schools and universities or other organizations. Using new technologies is key for the future of the education system. Outdated educational practice like sitting in classrooms will disappear not only for internal or external education in organizations in the future, but also in schools and universities.

According to Sheryl Nussbaum-Beach, in the future teachers will not be replaced by technology but teachers who don't use technology will be replaced by teachers who do use it. One reason for using technology in the process of education is that we like engagement with the modern technology and already use it daily. In the preparation of this book, I mainly used new technologies and was able to listen to many interviews with the best experts of our time. Instead of only reading text in a book, by using technology, we learn to use a number of other senses, such as our audio and visual abilities.

2.8 Modern teamwork

Everyone who works in an organization probably knows that a team is able to achieve a level of performance that an individual is never able to achieve. This is the reason why teamwork in an organization is valued highly when it comes to tackling complex tasks. According to Tom Wujec (YouTube), there is a marshmallow challenge in every piece of teamwork. The marshmallow challenge will force a group to collaborate quickly. He experimented with the nature of collaboration and what a marshmallow challenge does is help to avoid hidden assumptions. The modern way of teamwork is doing it naturally and it is like we did it as kids. Nobody showed off at the age of four and everybody was naturally trying to make something work, even if it was a simple game like putting a puzzle together.

Team work will continue to remain important, but the tools will change in the future. We will use virtual facilities in order to socialize in the context of internal communication and for collaboration with people in the organization around the world. This means that organizations will remove the currently implemented island solutions of available tools for making a more efficient team work possible and to centralize a new facility for working in a team.

Here is some guidance for project managers in terms of establishing a well-functioning team work:

- Adjust internal guidelines in terms of meetings and communication in the way you think would serve your team the most
- Remain informal and always make it possible that experts from your project are in the spotlight with their strength

- Avoid micro-management, but have a clear grasp of ongoing activities and next deliverables
- Recognize that a project manager is not a line manager and has no power: in order to have the team's support and to achieve project success, you need to win your project team's trust by giving them clear responsibilities and by understanding their culture and by being authentic
- Listen carefully in a way that you also recognize the emotions in conversations with team members, as it will provide you with a clearer message without the need for interpretation
- Support your project's team members to become a star in the project, based on their expertise, which makes them feel being appreciated and willing to put in the extra effort when needed. Avoiding conflicts in your projects also means avoiding hidden risks.
- The guiding principle of a successful project team must be enjoying being a valuable expert among other valuable experts. Your role as a project manager is to make it possible by taking away any potential obstacles.

References

- Buzan T, Buzan B (1996) *The mind map book: how to use radiant thinking to maximize your brain's untapped potential*. Plume
- Dignen B, McMaster I (2013) *Communication for international business: the secrets of excellent interpersonal skills*. Collins, London
- Drucker PF (1985) *Innovation and entrepreneurship*. HarperCollins Publishers, Inc, New York
- Franklin D, Andrews J (2012) *Megachange: the world in 2050*. Profile Books, London
- Hobert CF (2013) *Raising global IQ: preparing our students for a shrinking planet*. Beacon Press, Boston
- Kaku M (2009) "The world in 2030: how science will affect computers, medicine, jobs, our lifestyles and the wealth of our nations" by Kaku on his speech at Queensborough Community College NY (on YouTube)
- Limb C (2010) Your brain on improve. TEDx Mid Atlantic, November 2010
- Markram H (2009) A brain in a supercomputer. TEDGlobal
- Oberlander M, Jones C (2011) 10 years of iPod. *Financial Times*, 3 November 2011
- Smith L (2005) *Effective internal communication*. Kogan Page, London
- Stibel J (2013) *Breakpoint. Why the web will implode, search will be obsolete, and everything else you need to know about technology is in your brain*. Palgrave Macmillan, New York



<http://www.springer.com/978-3-319-07553-2>

Banks of the Future

Putting a Puzzle Together Creatively

Thuiner, S.

2015, XXIII, 229 p. 139 illus., 4 illus. in color., Hardcover

ISBN: 978-3-319-07553-2