Digital Solutions and Trends

With this fifth chapter I want to introduce you some basic concepts of technologies and trends that might help you in the future (and form a crucial part of the innovative organization as depicted in Figure 5-1). Each of these influences the changes modern organizations go through and is often at the center of current innovation. I am quite sure that you are already aware about most of these; still I think it is crucial to give you an overview of these concepts, what they mean, and how they could change your life. I don’t expect any of you to be a technical professional, but even a basic understanding of some of these technologies can help you in future discussions with any IT department. They might also help you to consider what is feasible within your current company environment and where you still have work to be done.
Web and Mobile Applications

Perhaps the most well-known and best understood of digital solutions are web and mobile applications. Nowadays it is nearly impossible to not come into contact with any of these applications. When we look at the classic interpretation of a web application, we are dealing with a client-server program that the client runs in a web browser. Of course, there are also other possibilities out there such as decentralized application on top of blockchain networks (explained later).

The evolution in web applications over time has been significant. The websites from the 1990s were static pages, often accompanied with annoying music, and adapted mouse pointers and backgrounds that gave you the feeling you were tripping on LSD. It made every new visit to the Internet another exciting adventure. Over time this (thankfully) changed a lot, and nowadays we are working with responsive web design as web applications need to work not only on computer screens but also on smartphones and tablets. There are also the single-page applications that can mimic native (Android or iOS) mobile applications. With the advent of the smartphone, a whole new set of applications has seen the light of day. Mobile apps that can run on different platforms such as Android and iOS either as native apps (apps that were developed to run directly on a mobile device) or as responsive web apps. There are also the hybrid apps which embed mobile websites inside of the native app. Perhaps some of the words I have been using here seem strange to you, but the key message is this: modern life has us interacting daily with applications of many different forms. It is therefore also logical that in our
work environment we are also confronted with these applications. As time changes, these applications change as well so that we can improve customer experience but also can enhance the current way of working at the company.

Even though nearly every business out there has a website to promote its goods and services, these applications can prove to be the cornerstone for any type of automation and digitalization. When you work with digital applications, you can easily set up complete digital processes, where the outcomes are stored in a digital archive. You can also follow up on deadlines, end dates of contracts, and entire processes, communicate with customers, send out alerts in case of issues, and more. The first step in digitalization is the creation of digital processes. The problem for many organizations is that they often overestimate the effort they have to make to create new digital solutions. Linking web applications with mobile apps can streamline entire processes, improving not only the customer experience but also the operations, compliance, and reduced costs.

It shouldn’t surprise any of you that a lot of innovation and change nowadays is focused on the digital environment of the company. The better we have these systems under control, the more we can automate them, the more we can reduce risk, improve customer experience, and reduce human error (and cost).

Cloud

Second on the list of technical solutions is cloud technology. Most of you are already familiar with the term, I trust. The question is if you also really know what it means, and that is a completely different matter. If we take a very simple definition, cloud computing means storing and accessing data and programs over the Internet instead of your local computer. So the cloud depends on, and can even be seen as a metaphor for, the Internet. Without the Internet it would prove to be impossible to provide these cloud services as we know them today. The cloud offers all possible services with an entire range of possibilities. The cloud doesn’t only offer storage solutions but also computing power, infrastructure as a service, Platform as a service, software as a service, machine learning as a service, and even applications as a service. These include computing, virtual machines at the click of a mouse, applications that can be deployed within seconds, and more. You could say that you are using cloud when you have a home office network over which you connect to your solutions but that isn’t entirely correct. If we look at the definition of cloud computing in a narrow way, we can only say that we are making use of cloud solutions when we use the Internet to connect to these platforms. And if you are telling me now that you have never dealt with cloud solutions before, then think again. There is Microsoft OneDrive that can be used both privately and in a business context to store and share data. Other classic examples are Google Drive, Apple iCloud, and even Dropbox that keeps a synched copy of your data on the cloud.
The advent of cloud technology stands in stark contrast with the classic approach where organizations created their own data center(s) where they managed their own servers and infrastructure, where we run the applications and store the data of the company. What is the advantage of cloud computing over classic solutions? You can quickly deploy your applications over the Internet without you having to worry about the infrastructure itself. This can mean serious cost reduction compared to a situation where you are responsible for your own infrastructure. On top of the cost of the infrastructure itself, you have to pay facilities, air conditioning (datacenters get hot and servers like to be cold), electricity, fallback and security systems, employees, and so on. This can have a huge impact on companies as they stretch their resources to support these datacenters. When you take all of this into consideration, cloud might start to seem attractive, doesn’t it? Also the promises made by most cloud providers (over 99.99% uptime per year and several backups) ensure the security of your data and applications. A second advantage is that you can easily close or start up new environments and even have serverless infrastructure, meaning that your application dynamically adapts itself. When you have a lot of visitors on your website, it will not go down. No, it will receive more resources from the cloud provider, and when the number of visitors declines, the resources will decline as well. This way you have the best of both worlds: the costs remain as low as possible, while at the same time we are able to provide the best environment for our stakeholders. If there is only one visitor to your website, you will use minimum computing resources, but if all of a sudden a million people decide to visit your website, it will dynamically expand to allow all of these people to visit it without issue. This contrasts sharply with the classic case where too many visitors lead to server overload and your website becoming unreachable for any visitors. There are specialized services that provide data processing and machine learning capabilities that can speed up your data science projects.

There are several major public cloud providers such as AWS, Azure, Google Cloud, IBM Cloud, and Oracle Cloud. The term “public” cloud means that the cloud services are provided to a range of customers while the private cloud is linked to a specific organization. So you can also decide as an organization to set up your own cloud. If you are legally not allowed to make use of public cloud solutions, this could be a solution. The major public cloud providers also provide these private cloud services, but as an organization you can also start your own cloud environment. A third option is to make use of one of the many smaller players on the market. Next to public and private cloud, there are also the hybrid cloud solutions that make use of a combination of on-site, private, and public cloud solutions so that you as an organization can optimize your way of working and reduce costs. There are many providers out there that also offer services specified for each possible industry you might imagine. Also the legal industry has seen the rise of companies offering these services specifically toward legal professionals. This is not only to offer specific services but also to provide these services up to the legal requirements.
Sometimes it takes some time before companies dare to take the jump and actually go for cloud computing environments, but once they do, the flexibility of the system often allows them to implement new solutions and changes quickly, which in turn leads to a more dynamic environment. However, this doesn’t mean that all is well. Some companies like to forget that they still have responsibilities when making use of cloud computing such as security and data protections. Make sure that you always have the proper resources to manage these aspects when you venture into the world of cloud computing as well as the tech staff to support your applications.

**Blockchain and Smart Contracts**

Blockchain technology is one of those digital innovations that created a lot of noise in the last couple of years. There was a fast rise in the possible use cases of blockchain, and there were the massive investments in cryptocurrencies which eventually led to the crash of 2019. The impact of the cryptocurrency crash cannot be underestimated as many people lost faith in the possibilities of the technology. However, the crash had nothing to do with the technological capabilities of blockchain and more with the lack of regulation. So this doesn’t mean that the technology has been used to its fullest potential. Almost everyone knows what cryptocurrencies are and is aware that there have been a steep rise and a huge crash in the past. To this day the market is still very volatile as it is also rife with regulatory uncertainty and some people misunderstanding the technology itself.

So what is blockchain? The first implementation of blockchain technology was Bitcoin, which was invented in 2008. The inventor, to this day, remains unknown. All that we have is the name “Satoshi Nakamoto,” but the real person behind Bitcoin remains anonymous to this day. The technological innovation that he put forward allowed digital information to be distributed in such a way that it would not be copied but that each piece of data has only one owner. Opposed to classic solutions where you have a centralized server or third party that needs to check the validity of all transactions taking place, the blockchain network allows for information to be checked directly by all its participants.

How does it work? High level, each participant that wants to enter the network directly requires a node (computer) that connects to other nodes. These all directly communicate with one another. In the case of a cryptocurrency, you could send some to another participant because you bought a specific product or service. This transaction is not only send to the receiver but also to all other participants so that they are aware what is happening. When enough transactions have occurred between all the participants, these transactions are “mined” in a block. All the nodes in the network start working on a cryptographic puzzle, and once one of the nodes finds the correct solution, this node receives a reward and the block is added.
to the other blocks that have been mined in the past (creating a chain of blocks, hence blockchain). If a participant tries to cheat, this will be noticed by the other participants, and as there is a reward for the miner, it is advantageous for all participants to call out the liar as this allows the honest participants another shot at the reward. This is how honesty is enforced throughout the network without having to make use of a third party.

Of course, this is only a very high-level explanation of how blockchain technology works, and there are numerous different implementations out there where the way of enforcing honesty through the network differs, the way transactions and blocks are added together, and so on. Some of the early issues with blockchain technology such as scalability, transparency, and network speed have been fixed in many different ways, and numerous networks have been created having their own take on how blockchain technology could work. However, it is important to understand the possible advantages and disadvantages of blockchain technology to know how it might revolutionize your current way of working.

The advantages are that you are not working with any centralized entity or third party. You have a distributed system where each partner can be given equal weight. Even though the most famous examples of blockchain networks are public platforms where everyone can join and take part, there are also possibilities for closed platforms where you can control the parties taking part. If competitors can be convinced to work together, you could set up a node with each legal professional and business clients so that you could easily communicate and offer combined services without actually combining your companies. This could not only help improve customer services but also reduce costs. A second advantage is the transparency, stability, and auditability of passed transactions that have been mined into blocks. This shows openly what has happened between several business partners and what transactions have taken place, and these cannot be reversed so security is enhanced as well. In case of possible fraud or noncompliance, the other partners on the network could flag it easily as nothing just remains hidden. A final great advantage is that it is a completely trustless system. You don’t have to completely trust your partner as you can easily audit anything that is happening over the network.

Clear disadvantages are that data can no longer be modified once stored in a block. So even though this is an advantage, from the second you need to make a change, you are blocked. Once the data is locked in, it is there to stay, or you have to create a hard fork in the network where the majority of the participants need to agree with the reversal. You can see that isn’t a situation where you generally would be looking for. Also the system of private keys which are used to sign transactions can lead to issues. Once you lose your private key, it is lost. You cannot simply try to recall it in any way. This means that this might not be the most efficient way of working and carries with it a
huge risk. Safely storing these keys is crucial, or you would lose access to your account and would have to create a new one. Other possible disadvantages are the possible inefficiency of blockchain networks depending on the consensus protocol they are using and the fact that each participant running a node most likely has to store the entire database of the blockchain network to ensure future auditability. In the beginning this might be limited, but over time this ledger grows, and as such the storage capacity you require increases as well.

This is still a very young technology, and even though already many use cases have seen the light of day, this doesn’t mean that we are there yet. For now, it remains something that is only open to those companies that dare to take a risk and jump into the unknown (even though we already know a lot), but I am certain that blockchain will become one of the standard technologies that companies will make use of in the near future.

Data Science

Data science has been growing exponentially over the last couple of years. Even though you cannot brand it as a new technology, it has made it to the main stage for many organizations and companies alike. The importance of data and how it can be used to improve the current way of working cannot be underestimated. The term data science is a very broad term to describe an entire set of scientific approaches to deal with both structured and unstructured data. The field has so much grown over the last couple of years that it has been split in several sub-disciplines.

When we look at the classic process within the company, the data analysts and data consultants enter the company where the consultant tries to determine where data can be found within the company and how it could best be used to provide extra information to the company as a whole. The data analyst works closely together with the consultant as the data analyst uses datasets to gather information and the needs of the company. They also investigate where the data flows throughout the company and how the data is changed and transformed. This often helps identify new data sources within the organization that remain hidden for upper management or the data department. Other roles are that of the data and application architects. The first helps create data solutions with the data engineer and the machine learning scientist. By combining their strengths, they are able to set up machine learning models in an application that can be deployed in such a way that it best suites the entire enterprise architecture.

A few examples might help you here to better understand what the possible impact could be of data science and machine learning. While the link between data science and the legal industry as a whole might not immediately be clear, with the rise of machine learning and artificial intelligence solutions, this has
changed dramatically. As law firms deal with huge datasets such as mails, documents, legal contracts, archives, and time narratives, they prove to be prime targets for innovation. These can easily be automatically processed by using new sets of algorithms. Similarly, the tax and compliance industry can make use of these algorithms to improve their current way of working. Forecasting tax returns or tax payable and identifying outliers as possible cases of fraud are very common examples that could easily come into swing in any company willing to make a minimum investment. Finally, there is the risk industry. This is probably the environment where data science is already most accepted as an essential cornerstone of the way of working. With Monte Carlo simulation, risk modeling, and predictive forecasting of credit risk, you can easily see that quantitative work has always been a part of the risk department. Further developments in the field of ML and AI can only help to even better predict and prevent risk events in the future.

Artificial Intelligence

The term “artificial intelligence,” or “AI,” is one that is commonly used by many professionals and covers both machine learning and deep learning. The term AI covers any type of intelligence that we implement in a machine, and even the simplest types of decision making by making use of a simple set of rules fall eventually under the term AI.1 Machine learning takes it a little step further by making use of algorithms to parse data, learn from it, and eventually use this information to determine or predict something in the world. Many examples can be used here, but one of the common examples for beginners is that of the prediction of house prices based on a whole set of parameters such as number of rooms, number of windows, location, and so on.

Machine learning (sometimes also referred to as shallow learning) can be split up in three distinctive techniques where supervised learning is by far the most well-known. Here you provide the algorithm a set of input data where based on these features, the output is already known. The model can use these examples to train and learn how to treat similar cases. Unsupervised learning still uses the input data but doesn’t have any kind of output data based on these features. These techniques are used to discover similarities in the data which we can use for future learning. Finally, there is reinforcement learning where an agent has to take actions in a given environment. Based on these actions the agent receives a reward (or not) and a specific representation of the state. The model here learns how its actions over time lead to the highest possible reward. This group of algorithms and techniques is often used in the game industry to train computer models to take action against human players.

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1https://becominghuman.ai/ai-machine-learning-deep-learning-explained-in-5-minutes-b88b6ee65846
Deep learning algorithms are based on the human brain where the interconnected neurons of the brain are recreated (even though a bit simplified) in an artificial manner. The neural net consists of artificial neurons that make up layers which are interconnected with one another. These nets consist of several layers where we have three types: the input layer which has a number of neurons that corresponds with the number of input features and the output layer where the number of neurons corresponds with the number of output possibilities. In between, you can find the hidden layers where we perform calculations on the data. Standard practice is that there is a “feed-forward” technique where data moves from layer to layer until the very end. You might also run into terms such as “backpropagation” where information is also sent back through the neural net. Another common term you might hear is that of “weights” where each of the input features receives a weight which determines in a sense the importance of the feature to determine the eventual output. If the weight is below a certain threshold, the feature is no longer considered in the next layer, while if the weight is above the threshold value, the node will fire and sends the sum of the weighted inputs to the outgoing connections. Training here helps determine the weights for each of the layers.

All of these techniques have proven their worth in a myriad of different industries and will do so as well in the different professions and industries covered in this book. It is also good to know that many researchers are working in this field and as such bring forth new innovations and ways of using machine learning for the good of all.

RPA and Intelligent Automation

The next technology we would like to shortly introduce is “RPA,” or “Robotic Process Automation.” With RPA tools one can easily automate standardized processes and a number of possible outcomes. All companies have to deal with a number of processes within operations that take a lot of time and manpower. However, these processes can easily be automated. This is where RPA comes in. This doesn’t take away the need for the human factor, as there is still a need for human interpretation. There are always cases that cannot be processed via automated means. The freed up time from the process automation allows for more time that can be invested in the investigation of the outlier cases. That same freed up time can also be used to work on the next level of analysis, customer relations, cost management, and so on.

RPA is often seen as a means to reduce the number of people working for the company, while it could better be seen as a way of diverting talent. Someone that has been working for 10 years on the same processes understands better than anyone else where you could find new points of improvement in the company. The next step in automation and a buzzword that is often thrown
around is that of “intelligent automation,” where RPA is combined with AI techniques such as computer vision to automate more processes than ever before.

There are many providers out there such as UiPath, Blue Prism, and Automation Anywhere with a lot of smaller players making up the market as well. Does this mean you immediately have to go all the way toward one of these solutions when you are considering an RPA project for your organization? The answer is no. These tools come with a set of capabilities that allow you to better manage automated processes, and certainly when you are considering bigger automation projects, this is the way to go. However, if you are focusing on a specific set of processes and your organization cannot or doesn’t want to carry the costs that come with one of these platforms, this doesn’t mean that this has to be the end. There are several open source tools out there that come at a minimum cost and sometimes even for free (such as roro or openRPA). Also scripting by making use of the Python programming language or command-line scripts can help you a long way in automation, combining techniques found in the realm of data science or even blockchain technology. Put on top of these solutions, a user interface with web or mobile app technology, and you have created an entire stack that can greatly improve the life of both clients and professionals.

Whatever the case, you should understand that the time you had to hire people to perform mundane tasks or had to do them yourself is now over. With the rise of automation and RPA in particular, we can now use software bots to automate tasks in the office and spend our valuable time only on those things that really bring value to the organization.

5G

You might have been introduced already to the news that a new generation mobile network is coming: 5G. Conspiracy theories all over the world have hit the news as well as people in panic have set fire to some of the phone masts in an attempt to stop the spread of the technology. People believe that 5G is responsible for the global pandemic or is used by Bill Gates and others to take control over the human population. Even though these theories are complete nonsense, it still has led to the panic of certain people and the effects are still taking place today. But what is it? Well, 5G is the next global wireless standard after all the previous G-networks (from 1G till 4G). It is used to connect virtually everyone and everything together including objects, devices, and machines. Some even say that data is the oil of the new world but

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2https://www.qualcomm.com/invention/5g/what-is-5g
3https://www.businessinsider.com/77-phone-masts-fire-coronavirus-5g-conspiracy-theory-2020-5?international=true&r=US&IR=T
5G is going to be the locomotive. It allows for ever faster mobile networks where the highest speeds will be between 10 and even 100 times faster than 4G (depending on the expert you speak to). It allows for a more reliable network so that even more data can be shared and more devices can be interlinked.

The user experience will be more uniform; availability will be more reliable and faster. Other (up-and-coming) technologies such as AI, IoT, and VR are going to gain from the advent of 5G as it will be ever easier to connect and share with one another. You can also imagine that cloud services will keep on continuously growing as companies will be better able to connect with one another without fail. This will also lead to more reliable infrastructure and in such a way push forward the development of smart cities with increased safety and security procedures in an automated manner.

With 5G we can usher in a new time with innovation and further digitalization and technological development. Even though you might not think that it will directly influence your profession, I am quite confident to tell you that you are wrong. The speed at which that things are changing and starting to get together with one another can be quite frightening, and this might also explain why some people have such an adverse reaction toward the deployment of 5G all over the world. Nevertheless, I would like to tell you that the advantages brought with this new network cannot be underestimated and we should be ready to make immediate use of them.

Open Source

Another example of something that is often little understood is that of “open source.” Some just see it as free software that they can use as they wish (wrong), and others just consider it bad software (wrong) because why would something that seems to be free be better than something you have to pay for? Well, let me try to explain to you in a couple of lines what it is all about. The world of open source software has been growing ever more. When you want to check out an open source project, you will see that the code is open for review and you can check every step that has been made in the development of the project. That is one of the main advantages. Open source projects attract developers and experts from all over the world that often work for free or a limited fee and as such are able to use that expertise to create a better and more secure solution. Compared to proprietary solutions, where the source code remains hidden from the world, the company needs to hire and pay developers to create the application. See the point already? Much more people are able to work on an application when it is open source and this at only a fraction of the cost. This makes such applications also more secure as more people review and check the software. Many major organizations have contributed to open source projects (such as Facebook,
IBM, Microsoft, and Google), but also regular people such as you and me have
started their own open source projects that have become incredibly successful.
The reasons why even big tech dares to open source their technology are
numerous: they can (in part) determine the direction of new developments,
while a large group of outside developers work on the project, improvements
are made by outside contributors, and continuous innovation is ensured as
people spend their free time on this technology.

A second important thing to note is that open source software is often free
or comes at a very limited price, but there is one very important consideration
one has to make: the license. All open source software comes with a license.
If you make use of the application or software, you have to adhere to the rules
of the license, and a particularly popular form of license is called “copy-left.”
What does this mean? That any changes you make or extra development you
do must also become open source under the same license. So there is
nowhere to hide; you have to adhere to the rules. In some cases you are even
forbidden to sell the new software you developed based on the open source
software. Of course, there are also many other licenses which allow you to
do what you want with it. And if you combine several pieces of open source
software to create something new, you should also consider that sometimes
the licenses of these several pieces can simply not be combined. You should
understand that open source isn’t always free and that in some cases you have
to pay a certain fee. Open source doesn’t equal free. In many cases there are
also “ranges” where you can pay extra to receive support when making use
of the open source software.

Whatever the case, the use of open source has become much more mainstream
nowadays, and more and more organizations have understood that this is the
way business will be done in the coming years and decades. Open source
allows you to share knowledge but at the same time collect it as well and as
such use it to your advantage and society as a whole. It is exactly because of
this that small startups have been able to use the power and knowledge of
much larger organizations to actually continue development and create a
business of their own.

IPv6

You might have heard of IP or you haven’t, but changes are coming. What is
it? IP, or the Internet Protocol, allows for each device that gets access to the
Internet to have a unique address all over the world. This allows for the
identification of your device and the proper communication of your devices
with others. For decades we have been using version 4 (IPv4), but since the
end of the 1990s version 6 has been waiting to come into play. It doesn’t

https://www.transip.nl/blog/ipv4-vs-ipv6/
sound very new if it has already been waiting since the 1990s to be adopted, but this has several reasons, and an important one is that version 4 and version 6 of the protocols aren’t compatible with one another. So why the hell would you develop a new version of the protocol? Well, there are simply too many devices for version 4.

As time has passed, more and more people have gained access to the Internet and obtained more and different devices which they use to connect to the Internet. We are running out of addresses, and if we simply say “you can no longer connect to the Internet, we are out of addresses,” who the hell would believe you? Many companies have a “stock” of IPv4 addresses for when we have finally ran out of the protocol. Where there are only 4.3 billion addresses of IPv4, we have 340 sextillion (39 zeros) addresses of IPv6, so quite some load to use.

This still means that there are often many devices and routers out there that still need to be updated so that they can be properly used with this new address. However, if you want to be prepared for the future, you better make sure that you are ready to use it as well.

**Trends**

On top of several of the technological trends, there are also some other trends in society and business as a whole we need to take into account. These trends have a significant impact on how decision makers and stakeholders alike look at how the future organization should look like. In the next couple of pages we will go into a little more detail in what trends can be identified and how they might influence the decision making process at your organization as well. It is important to make a clear distinction between what you could call a temporary “fad” and what is a trend. The first one often comes up quickly, and a lot of companies that want to be seen ahead of the curve jump on it. They quickly implement it to demonstrate how modern and innovative they are. However, in the long run these often die out as quickly as they appeared. People start to realize that they bought a cat in a box and have to deal with the loss. A trend is much more sustainable and has both in the short term and in the long term a positive effect on the organization. It is important that you are able to make a distinction between the two. Trends try to solve problems many companies have been dealing with and as such are able to prove their value and convince more organizations to take over the same strategies.
Sustainability

A first important trend that has influenced every aspect of our society is that of sustainability. Climate change and the impact of modern society on nature are very generally accepted and can be seen everywhere around us. As society becomes more aware of its impact, many people have tried to change their behavior so that they might have a better impact on their environment. In the same way we have seen many organizations change the way they are doing things as well. Depending on the industry, there will always be an impact on the environment that can simply not be denied. But by allowing innovation to change the approach of the company as a whole can have a very positive impact on all stakeholders and the perception of the organization. One such example is Coca-Cola Company. Everyone is well-known with their product, and whether you like Cola or not, they have become a very important part of Western commercial culture. However, at the same time we cannot deny when we are facing polluted environments, we almost always see their packaging as well. Not very great marketing is it? Well, they have now an entire strategy to make their global packaging 100% recyclable by 2025.\(^5\) They even plan to collect and recycle every bottle or can for every one they sell by 2030. Whether you like the company or not, you have to admit these are pretty impressive goals. To achieve them, they have started to change the very plastic they are using in their packaging, and this in itself brings an entire new innovation strategy. It is only one of the many examples out there and shows how trends have a positive impact on how companies are trying to reinvent themselves.

Technology

Even though we already went into some detail to the extent what technology trends are actually affecting many organizations as we know it, the concept of using technology itself in every aspect of the organization is a trend in itself as well. Whatever you might be doing as a job, in some way you have been affected by technology and you can be sure as hell that the future brings even more change forward. It has almost become a natural thing to what extent we can digitize the current way of working and how we might actually automate certain aspects which were once performed manually. We always need to be on the lookout that the changes we are implementing are actually an improvement and aren’t in themselves carrying a risk of process degradation. Where once process improvement was the very basis of implementing something new, nowadays we sometimes fall victim to the immediate

\(^5\)https://www.coca-colacompany.com/sustainable-business/packaging-sustainability
implementation of a new solution where we only look at the effects afterward. This can leave stakeholders with a very bad feeling as they didn’t receive the results they were expecting and the solution implemented isn’t a solution at all for the problems they are currently facing in their processes.

Nevertheless, overall technology and digitalization has been a positive trend for most organizations as it allows stakeholders to focus on the more complex problems and customers and suppliers alike to have a better experience when they are dealing with our organization. As everything becomes more focused on the experience people have, technology has provided the tools necessary to improve upon the situation of all involved stakeholders. So we shouldn’t be surprised as stakeholders look at the technological landscape for a solution. On top of that, open source has been another major trend within this field that has opened up the possibilities even more.

Positive Psychology Trend

The positive psychology trend is one that has been around for a while but only shortly has begun with reaching real importance. For those of you that haven’t heard about it, the entire branch of positive psychology focuses on the character strengths and behaviors that allow individuals to build a life of meaning and purpose beyond just existing and surviving. As people are searching for meaning and want to create a meaningful life, their goals in work have changed as well. Research has eventually led to three main pillars of positive psychology: positive experiences, positive individual traits, and positive institutions. It is a combination of understanding the individual and offering each and every stakeholder those tools to create a life that has meaning for them. It was a common appearance in the past that people started working at a company and didn’t leave that job for the rest of their lives or only on a few very extreme occasions. Nowadays, this has completely changed as people look for a job where they can also, in part, give extra meaning to their own lives and have a sense that they are working toward something more. Only by offering people such meaning and by giving them projects where they have the sense that they can change and improve the lives of others can you hope to keep people for a longer term within your company.

Nowadays, it is also closely related to that other trend that is also known as the “purpose-driven” organization.

6https://www.psychologytoday.com/intl/basics/positive-psychology
Purpose-Driven Organization

The purpose-driven organization is another one of those terms you start to hear more and more. Here not only the individual but the organization as a whole stands for and takes action on something bigger than their products and services alone. Even though it might seem counterintuitive to some, it might help companies to remain competitive in the fast-changing landscape they are currently dealing with. According to a study of PwC, almost 80% of business leaders believe that this purpose-driven approach to doing business is central to success. However, it cannot be denied that people don’t have an idea what their company stands for or what its purpose might be except for making a profit. This is because becoming a purpose-driven organization is more than only words plastered across a wall. It has to drive the very decision making process of an organization, and by doing so both internal and external stakeholders alike gain a deeper understanding of what their organization stands for and what they are working toward. By making these bold decisions, they drive their employees to work toward these goals as well to serve society, and this in turn helps harness the power of purpose to further innovate and change.

Homeworking

With the pandemic that struck the world and the quarantine measures that followed all over the world, a new and important trend finally was able to break through: working from home. Even though there was already a tendency in certain industries to let employees work a couple of days work from home a day, now companies simply didn’t have a choice. It was either working from home or completely shut down. Even though for some it has been a bumpy road where people really had to learn how to work together in this new format and how they could properly communicate with one another, it has shown that this really is a possibility. Where companies in the past were struggling to provide people with the proper placing and employees had to check in and were practically monitored, this new way of working comes with an entire set of advantages for the enterprise. No longer you need to provide seating for every employee as people can work from home on different days, you can reduce the costs of transportation and the time lost when public transport is delayed or when people are stuck in their cars when traffic is slummed. At the same time you can provide for a better work-life balance, and when done the right way, you will eventually have happier employees.

7https://www.salesforce.org/what-does-a-purpose-driven-company-look-like/
8https://www.pwc.com/us/en/about-us/corporate-responsibility/assets/pwc-putting-purpose-to-work-purpose-survey-report.pdf
Diversity and Equality

It might seem strange to offer diversity and equality up as a trend, but it certainly deserves a place here. Within the modern organization, diversity and equality should be promoted and supported in any way we can. When we are able to do this, it serves as an example for society as a whole. However, it comes with a whole range of advantages for the company as well. The more diverse the stakeholders and employees within a company environment are, the more people are confronted with their own prejudices and as such see them disproved. This in turn can lead to employees becoming more creative and more insightful, and when we consider creativity and ideation sessions, we receive different perspectives on the same issue. Different perspectives on existing and new problems and questions can greatly impact the way we approach questions. Of course, these different perspectives benefit the organization way beyond the scope of innovation.

It also enriches our own experiences and helps to slowly transform the society we function in. As you could see this as part of the corporate responsibility we have in society, we can also boost equality. This can be done by offering everyone equal pay for equal work, equal opportunities for everyone, and so on. Therefore, diversity and equality are crucial motors behind change and innovation.

Empowerment

By offering people opportunities to grow, to learn, and to show their talents, this eventually leads to empowerment. By empowerment, our employees are able to give back to society and take an active part in society. As a company we can give people the tools to do exactly that and have a positive impact on our environment. However, it also means that we allow all of our employees to discover their talents and foster them within our organization. This might take them into a different direction than we originally intended but might still affect the company in a positive manner.

Again, this might not be exactly a “trend” as the other ones we identified in this chapter, but it can be an important focus for the company which in turn leads to creativity, innovation, change, and better solutions.

Community

Finally, there is community and the impact we have on the people that live in the environment of our organization. How do we have a positive impact and help the community we are operating in? We need to do more than just a positive marketing campaign or one day in the year of helping out for a couple of hours, we should consider how we can help our community develop and
change for the better. We function as an example both for the people and stakeholders that depend on us as well as on all other people that are impacted by us. Consider the massive investments made by major organizations in education, international exchange programs, and sustainability efforts.

Perhaps you might only be working in a small company, but every move we make has an impact on the environment we are operating in. However small, you should never underestimate what you are capable of doing for a community as a company.