

Digital Transformation eBook

Meeting Challenges Today

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IT executives can emerge victorious with digital transformation.

There's no denying it: the digital transformation revolution is upon us.

Organizations that don't embrace digital transformation will put their futures at risk. Nevertheless, many executives continue to ignore digital transformation signals and put off major change; the consequences are unpredictable.

It's clear that their competition is already embracing change, and in this competitive business climate, you can't afford to be left behind. There's no need to wait any longer. Digital transformation offers so many new opportunities for your company and it simplifies the act of transacting business.

So **how** can you and your business benefit?

1. What is Digital Transformation?

Digital transformation can be a difficult term to define. Simply put, digital transformation is a new way to share information with the aid of modern technology. It can mean a digital conversion, or it can represent the implementation of new types of information and communication. Whether that's new user interfaces, digitizing business processes, or simply using new technologies for internal operations, digital transformation can happen from the **top to the bottom** of an organization.

Without transferring business processes to the digital world, it will be hard for any company to survive in the modern business environment. Our dynamic digital age requires flexibility and adaptability. Companies are feeling **additional pressure** to deliver services to their customers with more efficiency and higher quality than ever before.

While most companies have had the luxury to choose between analog and digital workplace processes and procedures in the past, digital transformation seems to be the only way to go for businesses operating in the modern world. With traditional technology, meeting the growing expectations of customers is becoming increasingly difficult. Logistics, distribution, and complaint management are forcing digital transformation onto many companies every day. It's becoming very clear that digital transformation has arrived, and it **grows closer and closer** to us every day.

Effects of digital transformation

The impact of digital transformation can be felt in the following ways:

- Digital Strategy
- Business Model
- Digital Processes and Organization
- IT and Infrastructure
- Organizational Culture
- Leadership Roles
- Products and Services
- Digital Customer Experience

2. Opportunities for Digital Transformation

Digital Customer Experience

The notion that digital work in itself is sensitive to the needs of customers is untrue. Nevertheless, many companies behave as if the digitalization of customers is a separate entity and that it doesn't mean much. This is a fallacy that can become expensive for companies, over time. Global players such as Amazon and Apple have shown, over the years that digitization and customer proximity are not mutually exclusive, but are mutually dependent on one another. With the success of these global players, they are teaching us a subtle lesson; which is that digitization and customer proximity is mutually dependent.

Digital Strategy

Similar to what obtains with the digital customer experience; the same scenario plays out with regards to digital strategy. What we find is that when the original corporate strategy is not well adapted to the digital orientation already on ground, a seamless flow would be almost non-achievable. Therefore, digitization into already existing structures should be the goal. Truly, for there to be successful digitization, there has to be a synchronous interplay between business philosophy and digitization.

Products and Services

Service delivery is another very important concept. How “smart” are companies when it comes to their service delivery? In the aspect of digitalization, how much can we say that services are digitized?

A broad overview of digitized products and services helps us see that with digitalization, products and services are more efficiently delivered to the general public. This is not just about quality, but also about quantity, i.e. there are measurably higher sales.

The Business Model

For there to be the proper interpretation of a business model to a digital platform, there have to be adequate brainstorming sessions and well-laid out plans so that nothing is missed out. The pros and cons of mediums such as Pay-per-use models, predictive maintenance, or different forms of e- or mobile commerce ought to be considered before venturing into digitization. The integration of digital tools is essential not only for the daily work processes but must also be designed in such a way that it has a positive effect.

Digital Processes and Organization

Building on the aforementioned point, in the quest for digitization; it follows that there is a need for a formidable IT structure to be in place; inclusive of cloud technologies, proper interaction with social media and the internet. However important the need for internet structure to be in place, the need for documentation is just as important because new digital technologies are generating a noticeable increase in data stocks and this calls for more solid back up in the form of documentation. In keeping documents, the order is of utmost importance. All of the information gotten must be stored in ways that make them retrievable within seconds and such that they can be evaluated in the right order. This aids in the optimization of processes, also making it easier to decipher and resolve common errors. The truth about comprehensive documentation is that it is all-encompassing, taking into consideration both internal and external processes. In many industries, it is compulsory to have standards and guidelines which precisely define the documentation processes and without digital tools, it is fast becoming impossible to satisfy the ratifications of these guidelines.

IT Infrastructure

Building on the aforementioned point, in the quest for digitization it follows that there is need for formidable IT structure in place such as cloud technologies, social media and the internet. However important the need for internet structure in place, the need for documentation is just as important because new digital technologies are generating a noticeable increase in data stocks and therefore there is need for documentation and back up. In keeping documentation, order is important. All the information's must be stored in ways in which it must be retrievable in seconds and can be evaluated in order to optimize processes and also to make possible sources of error easy to decipher and resolve.

However, a comprehensive documentation concerns not just the internal processes it captures the external processes as well. In many industries, standards and guidelines which precisely define the documentation processes is compulsory. Without digital tools these requirements cannot be fulfilled anymore.

Management Culture

The leadership of an organization matters a lot and it ultimately above all other factors, is the determinant factor in choosing the trajectory in which that organization moves. Digitization as important as it is can only happen if the management takes a decision towards implementing it.

To know the culture of an organization, look at the culture of management all the way down to the workforce culture. You'll find reflections of this culture in the attitudes of members of staff of the organization, and all of this is summed up as an external representation of the company. Embedded within the management culture is the “digital culture” of the company, which includes day-to-day digital possibilities within that organization.

However, errors cannot be said to be completely eradicated in digitization. Indeed, in any human endeavor regardless of how much experience has been garnered, errors may be committed occasionally. What matters is that when these errors occur, they are recognized as opportunities by which processes can be improved processes, with the able aid of troubleshooting. Also, steps must be taken to ensure prevention of similar occurrences in the future by extensive documentation.

A Forrester research study revealed the “key drivers of digital transformation are profitability, customer satisfaction, and increased speed-to-market.”

Source: [Accenture](#)

In line with the motto “We are looking for solutions, not culprits”; it is always better to deal constructively with errors and not make them into “sin-blocks”. Particular care should be taken in this area because when errors are labeled as “sin-blocks”, it stimulates guilt in employees, resulting in a drop in their levels of motivation and self-confidence. Who wants an employee who continually fidgets over tasks because of one or more mistakes in the past? This, however, is not an excuse for laxity at work, and shouldn't promote a culture where diligence and attention to detail in the discharge of duties by members of staff are foreign entities.

Mistakes are famed to be great teachers in the area of generating new, fresh and independent ideas; and shouldn't be taken overly serious within organizations that desire to thrive. Today, many companies not only rely on massive digitalization, but also on the innovations and the motivation of their employees. In a modern sub-culture, a high value is placed on the employees because it is now well-understood that human resource is the greatest resource any organization can have.

Economy

Digitization can only be considered a success if the steps taken are economically viable for the long term success of a company. Therefore, to be placed at the top of the agenda when awarding a digitization contract are the short, medium and long-term effects of digitization, as well as the rate at which economic improvements will be seen.

Much of the procedures involved with the digitization process are related to automation, both in the occupational and the private sphere. Digitization is here to stay, even if people try to evade it in the private sphere (no computer, no mobile phone, no social networks or search engines) and thus to a certain point; success is not possible in professional life without digitization.

Added value for the customer through suitable offers

First and foremost, it is necessary to make digitalization efforts to be in tune with the needs of the populace to which it is targeted. Indeed, digitization must be carried out with the aim of providing the customer with valuable and memorable experiences that will make them loyal to the organization. Be it the app for the butcher or the favorite restaurant, digitization must be directed towards people, possessing visible and practical benefits; it must as well be “achievable and experience-able”.

The app for the butcher (more about this some lines below) is a good example of the fact that many industries are still of the opinion that they have nothing to do with the “digital stuff”. Because digital work is commonly associated with IT companies; people like bus-drivers are likely to be of the opinion that only large conglomerates have to employ digital support. Indeed, how wrong it is, for there to be a mindset that only “global players” benefit from the digitization, when there is an urgent need for digitization in all locations, even in the most unimaginable of locations. It would have been unthinkable in the past that the meat processing sector would make use of digitization, but indeed, this is one industry that is gradually bowing to digitization, with the sector gradually embracing digital services in its service delivery. Nowadays, meat or sausage for the grill could be ordered for via a mobile app. At meat shows, the order is processed via apps and goods ordered by the customers are accepted. The offer goes beyond pure pre – orders, as it also entails the collection of the ordered goods outside of opening hours. This can be achieved, for example, via cooled compartments, from which the pre-ordered goods can be picked up at any time.

Easier management of complex processes

With new components being built to generate new data; existing processes being expanded, and partially re-created, it is no longer news that the IT landscape is one whose rate of growth is becoming larger than life. With these new developments, complex systems can only be managed properly with the usage of tools such as data lineage, data governance or process mining.

In this way, complex operations and processes become easier to administer and manage. Today, an extensive range of new equipment, such as wearables, beacons and more are gaining prominence and with the determination of dependencies and access security, Big Data is gaining prominence in the scheme of things. Examples include data lineage and data governance.

Benefits from the advantages of the cloud

It has become essential today, to work with the cloud, which plays an increasingly important role in today's digital climate. The end storage of data and processes in the cloud leads to new business models which have a significant influence on the daily practice. This results in more flexibility, the generation of win-win situations and the simplification of billing models, for example in the fields of rent and credits. Additional storage is free as a companion effect.

3. Who should worry about Digital Transformation?

To put it in one word... ALL of us.

To break away from digitalization is not only extremely difficult but is foolhardy as well. With the digital information chain starting with developers and ending with the consumers, the process involves us all.

IT Managers

Here, it is important to avoid artificially generated competition. On one hand, architects have to provide infrastructures which are fresh, creative and sustainable while on the other hand, the creation of these infrastructures result in a shift of budget from one department to another. What this translates into is that without meaning to, IT managers are involved in competition that was begun when digitization began to be implemented. It is therefore important to be able to digitalize and manage the core processes in the company.

IT Administration

IT administrators were long considered "the ruler of data and systems". However, these times are over, as we are now in the era of cloud solutions. Now, the IT administrators are now saddled with new tasks. They have become security officers and cloud-enablers, people who have to master numerous challenges, juggling them simultaneously without room for failure.

Developers

Developers encounter rapid changes in the frameworks of the market. Today, the requirements are essentially from the Generation of “Digital Naive”, for which digitization is something that happens gradually, with knowledge base growing over time. User experience and end-consumer areas are the most important prerequisites for the entire IT business.

LOBs

In the course of digitization, the requirements can be rapidly implemented. The Line of Business Leader (LOB) performs the function of process manager or key users. Through design thinking and working with the IT department, the quality of the work is improved and the implementations are carried out promptly and reliably.

Management

Here IT obtains C-level clearance and can thus, innovate processes, influence and shape the way matters are conducted in the organization and to me, this is an invaluable advantage.

Only 44% of companies are “adequately prepared for projected disruption due to digital trends.”

Source: [The Insider](#)

4. What will be different in ten years?

Software

Nowadays, there is such an increase in the amount of available software, such that it has become like sand at the sea. This has led to the concept of software being considered indispensable and that the craze for software will only become heightened in the coming years.

Rent instead of buying

Buying was yesterday! Software is today much more rarely bought than in past times. Instead of it being bought, software is only used. Clouds and comparable solutions have become the smallest units that is paid for. For independent software producers, the model of purchase and maintenance is going to be rent and use agreements, a unique opportunity from the point of view of a satisfied customer relationship, because there are now a lot of educated customers, many of whom count it as nothing out of the ordinary to switch electricity providers on a yearly basis, so as to maximize their usage of discounted offers as well as to satisfy their demanding needs.

Role of the customer

The role of the customer has also changed from being a merely passive observer to someone who is a vital part of the core process of many companies. By digitizing, he is, on the one hand, able to take an active part in the business of the company, for example by evaluating products and services while on the other hand, companies also get to gather more information from their customers, a vital characteristic of the modern corporate culture.

IT

In addition to the new business segments just described, areas that have hitherto had little or nothing to do with the IT have begun to incorporate IT services to very high degrees. The services, which up to now have been made up of largely analogous work, are already overrun by IT today. As years run by, companies will increasingly recognize that IT ought to determine the primary business processes of their companies. IT ensures innovative core processes of the companies and thus is a guarantor of success on the market, a trend that will continue to soar.

Data protection in the age of innovation

Innovations and data protection both play major roles. However, they do not always seem to fit together, which is why there's some sort of unrelenting contest between the two. The next innovation step here means the next data gap there. Decisions are no longer met in glorious garages, to conquer the world afterwards. Rather, they are felt at the highest political level.

Big data

Data is the new oil! It is the new gold mine. Do this sound exaggerated? I know Maybe it becomes less exaggerated and clearer when the actions of today's global players are critically analyzed (and how much money they take on their own), in the provision of meaningful data. In the age of BIG DATA, numerous business areas will develop in the coming years, on the basis of sales, purchase, evaluation and targeted use of data. They are now more important than the products themselves, and numerous companies make more profits from the sale of data than from the sale of products.

Nevertheless, both are inextricably linked. More information also means having more knowledge about the needs and wishes of the customers, a knowledge which is actually worth more than gold, because anyone who disposes of such information will find it difficult to adapt to the market situation and almost impossible to generate products which are tailor-made for customers.

Labor market

The labor market, just like every aspect of human endeavor will also be affected by digitization; in fact, it is already being impacted by digitization. Today, thanks to the new infrastructure in place almost everywhere, digital day laborers are no longer the exception; they serve as a self-evident aspect of the modern realities of the labor market. What may sound like a gloomy picture has actually proven to be excellent opportunity. Regardless of whether these developments are well maintained or not, we are warming up to the reality that no one can escape them. For companies that are not willing or able to keep pace, its goodbye; they can simply pack up their things and ride into the sunset because soon enough, there wouldn't be any room left for them.

5. What are the consequences for software development?

Almost failing

Really promising success will be attained within the next ten years if concepts that are quickly realizable are promptly placed on the market. When working on projects for weeks or months, the success pressure is correspondingly great. When a project designed “to go into the market” is conceived, immense work and money is invested into it but the business idea is likely to be terminated abruptly. Why? The answer is: Because it is likely to fail. However, when an early time limit is set, members of staff will have the courage to finish projects without having to lapse into a state of melancholy which is bound to happen when jobs drag on for too long. Work on the “minimum loveable product”, that is, a product which doesn't need much effort to be realized. In doing so, a positive effect is generated, even if it is a rather small target group.

On one hand, this translates into a reduction in the amount of time to be spent on development while on the other hand, products can also be quickly transferred to the market, and you no longer have to wait for long periods before receiving feedback from your In this way, users, customers or “the market” are themselves involved in projects, actively participating in it. Consider this for example, in the spring of 2017 the Federal Institute for Labor, in one of its first pilot projects after more than 5 years of development made an investment of 60 million Euros only to later find out that the requirements were not met. If the period of pilot testing had been shortened, this problem might have not occurred.

Database models are becoming more and more agile

Also, the database area is reached by the increasing strength of data models which are as much affected as other IT areas. There are so many SQL databases available, and this is a logical step in the face of the increasing amount of available data. This leads to even more flexibility; resulting in a re-modelling of the systems.

The software cycles are getting shorter and shorter

First of all, the time factor has to be mentioned. The reason for this is that the games played in the fast-paced professional playground are getting faster. The monthly maintenance of duties is a relic of the past times. Planning phases and projects also have to be implemented within a very short time. Anyone with a software framework that is not fast enough will be amazed to discover that although they were current at the onset of their work, they have become outdated when they finish the project.

John Marcante, CIO of Vanguard believes that digital transformation is a product of technology shifts: “Just look at the S&P 500. In 1958, U.S. corporations remained on that index for an average of 61 years, according to the American Enterprise Foundation. By 2011, it was 18 years. Today, companies are being replaced on the S&P approximately every two weeks. Technology has driven this shift, and companies that want to succeed must understand how to merge technology with strategy.”

Source: [The Enterprisers Project](#)

Challenge of migration

Migration is also affected. Each tool appears like a Green Field Approach; suggesting that it is not, or should, be a matter of contention. Instead, it is always on a “green meadow”.

Up-to-date tools and methods

Sounds funny, but this is the rather astonishing truth: more or less derogatory remarks like “That’s from 1800, shoot-me-dead” is now being replaced by speeches like: “That’s from 2016, it’s so old!” This shows how fast the developments are in today’s world. What at the beginning of the year was rated as highly advanced and up to date, is already six months later being labelled as “Old School “. This also applies, in particular, to tools that are launched on the market. They are – to express it in a bit exaggerated way– obsolete. This is a serious challenge.

Low code

The source code is basically a one-way code, and this is something which those who'd have to deal with it must truly understand. The source code is not based on the procedures for writing codes in software development with its own framework. There is also a current trend towards “low-code programming” in the rapid development of new requests with the aid of certain tools. In parallel, the architectural pattern of Micro Services means that components are encapsulated for specific tasks, and these new Micro Services can be utilized when there are new developments or inventions. According to the Motto: “Implement once – never discard.”

Wait vs. throw away

IT is subject to influence from other areas of conflict between companies which are in favor of disposing stuff and those who are in favor of the creating maintainable software landscapes. In recent years and decades, a recent trend which clearly favors throwing-away software is the one which is acceptable. What used to be repaired, patched, stuffed and screwed today are produced from the outset to be goods that will no longer function after a certain time.

Multi-vendor systems

As digitization affects many living and working areas, the entire IT landscape is increasingly changing. The number of IT components has grown and continues to grow. This is a technical challenge because there is a need for collaboration between different systems from different vendors, such that they do not hinder the general orchestration of components, but usefully complement one another. In this case, if there is no one who is in charge or who oversees this meeting of several vendors, it would be quite hard to monitor all the dependencies and collaborations.

6. Conclusion

Conclusively, just as it was earlier posited in the introduction, digitization is here and it is here to stay.

In order to cope with the complexities of the digital revolution and technological advancements, it is crucial that business embark upon a transition from analogue to digital processes sooner rather than later. The earlier we embrace digital transformation, the better it is for all companies operating around the world.

The digital world is ours, let's embrace it. We don't have much choice.

About PITSS

PITSS modernizes, customizes, migrates, and extends the life of valuable legacy systems. Using data, proprietary software, and deep-dive analysis, we reduce the cost and scope of your digital transformation effort by focusing on the highest ROI processes first. Then, we pave the complete road between you and your new horizons with confidence and expertise. Our full-stack team of experienced UI/UX designers, developers, engineers, technical leads and project managers can guide you through each step of a project. No one knows Oracle Forms like we do—we can take you from planning, to pilot, to the cloud and beyond.



*Meet our team to see how we can transform the systems
that matter most to your business.*

Contact us today.