

Managing Digital Transformation

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Abstract: Recent studies indicate that over 80% of organizations have initiated their digital transformation journey, yet only approximately 25% perceive tangible benefits from these endeavors. Delving into the reasons behind these perceptions, it becomes evident that digital transformation lacks practical implementation. This research treats digital transformation as a project, adhering to project management principles. It delineates a pragmatic approach to digital transformation project management, highlighting key considerations at each stage. Furthermore, insights from an interview with Huawei Türkiye's R&D director, HR business partner leader, and payroll and personal affairs manager shed light on Software as a Service (SaaS) as a pivotal component of contemporary digitalization. SaaS is believed to expedite successful integration, positioning companies favorably against competitors in remarkably short durations.

Keywords: DIGITAL TRANSFORMATION, PROJECT MANAGEMENT, INDUSTRY 4.0

1. Introduction

With the latest trends in project management and project process management, especially in Intelligent Computing Technology (ICT)/Software areas like Agile and DevOps, management goes from vertical to horizontal structure rapidly. So, what to do in 2020s to survive as a leader or influencer in industry? And how to build a talented team that would work fully dedicated for getting success in organizational Digital Transformation (DT) projects? How an organization go from traditional to digital with quickly launched digitalization projects? How to make this transformation more effective, practical and smooth without losing vision to catch technology train that drive very rapidly in today's business environment.

Many firms stated that they have already started to work on digitalization, but outputs do not meet expectations with a high percentage. Business owners should accept digitalization as a vision of their organizations and hold it in another place from daily works or short/mid-term projects. This paper influenced from these two clichés, and outlined the important points that need to be observed in care while managing digitalization projects. Many Software/ICT projects driven by so called traditional firms today already for being digital. Research projects on SaaS products, mobile APPs, remote management and many similar projects are helping these firms in a pre-defined schedules with a small/mid-sized talented team effort.

Experts in this area explained some systems, applications or platforms to migrate into business to be successful like: IoT (Internet of Things), cyber security monitoring tools, digital marketing with immersive advertisement channels, artificial intelligence algorithms, robotics, and smart factory plants etc. How to implement or manage them is important after starting to take real actions on being digital. In the following parts, the latest Project Management Institute (PMI) structure with main things to take care for being successful in DT projects are presented with some hints on each step.

This study also includes an interview and is entirely research-based. It reexamines sources from a different perspective, incorporates past experiences and cases that require further examination, reinterprets research results, and provides rich references. The interview focuses on the term SaaS, which can perhaps be called the catalyst of digitalization for today, and which is thought to be able to put companies ahead of their competitors with successful integrations in a really short time.

2. Background

Digitalization projects require more than customary IT execution, have a high potential to trigger hierarchical change, and need a joined scene on innovation and business. Although very little research has been dedicated specifically to DT projects, related studies can teach us something about how these projects are managed. By uniting disengaged experiences, we expect to make a more comprehensive image of DT projects [1]. The project team structure can be based on a hierarchy system, a flat one or a matrix

system. These have different ways of organizing the relationship between the management team and employees. It is better to share the structure of the team regularly for new mates especially. Otherwise, employees will always have questions in their minds and regularly the project manager, director or other managers should struggle against these questions.

[2] define the five KSFs (key success factors) as follows: (1) Top management support is critical for defined responsibility and empowerment leadership. (2) More horizontal hierarchies and inter-functional collaborations are of great importance. (3) People management forms another component and is partially aligned with a digitally savvy culture and vision. (4) Use of data and digital technologies supports DT. (5) Customer-focused KPIs. All these factors are of vital importance for successfully digitalizing the structure.

[3] extends the concept of writing skills in the digital setting while emphasizing the importance of developing abilities such as adaptability and insight. She categorizes skills into tangible ones like learning, integrating, planning, and restructuring, which provide concrete, empirically proven strategies for navigating external environments and achieving advanced levels of digital transformation. To illustrate the continuous and nonlinear nature of the process, she uses the concept of change to more accurately reflect digital development. She identifies specific relationships between an organization's ability to leverage IT to support its key processes and the degree of digital transformation achieved.

In Business Horizons, [4] advise four levers to enable digital transformation by creating an innovative digital project team including diverse and targeted team composition, iterative goal setting, continuous learning, and talent management. They also outline some challenges with traditional IT team like project leadership associated with project management versus coaching and mentoring and adding tips to overcome these ones like train and mentor digital team members through leadership and onboarding programs to help shifters.

3. Managing Digital Transformation

Digital transformation is the integration of new generation technologies into all business areas of a company, fundamentally changing the way business is done and transforming products into value-added products. It is also a cultural and structural change that requires organizations to constantly challenge traditional methods, engage in an experimental team, and be comfortable with flexibility.

In this paper, theoretical approaches and literature studies related to the general structure and analysis of digital transformation processes are presented in a systematic way. This structure has been established to be as similar as possible to the structure currently used by PMI in general. In accordance with the PM-BOK (Project Management Body of Knowledge) flow, it started with people and continued with the details of process and work environment. In addition, literature information is given in a way that allows the previous studies on the subject to be followed in the same flow. It

can be a supporting material for digital transformation projects, as well as the main sources used on project management.

4. People

In July 2012, the London Symphony Orchestra performed a composition entitled *Transits – Into an Abyss*. One reviewer called it “artistic and delightful”. The event marked as the first time that an elite orchestra had played music composed by a machine.

The above research is not an opinion, actually; it is from Martin Ford’s famous book - *The Rise of the Robots: Technology and the Threat of Mass Unemployment*. The book earned “Business Book of The Year” award given by a press and a research company. Then, why did Project Management Institute (PMI) place the title “People” in the first place of their new exam content outline? What are the things behind PMIs’ trust on humankind, especially in 2020s while human cannot decide about serious issues in their own – in other words, without getting help from analytics applications?

Aside from the fact that human beings pollute nature and cannot use the world’s resources in a sustainable way, even dragging it towards the end of its life; unfortunately, our lives are not easy at all. These days are not that easy, and when we think of natural disasters, wars and epidemics, we are trying to deal with all of them at the same time.

It is necessary to examine these problems not only with their material but also with their spiritual dimensions. Human beings are such an entity that they constantly multitask, not only when they are at work. For example, we often become what we want the other person to see, not the emotion we feel. We think that when we must decide about our own life, we must consider everything, and everyone involved in our life. Perhaps for all these reasons, we can say that every person is a leader, whether by birth or learning, but successful but mediocre.

4.1 Employer Branding

As it is understood from Human Resource Business Partner (HRBP) in corporate offices, “Employer Branding” is a bit virtual definition occurred from some of the governmental regulations related to management of Research and Development (R&D) Centers. But basically, struggles given by companies to hire more talented and developed candidates; in addition to using them for multi-tasking like both Software development and algorithm research.

Organizational mission, modern-day employees, business enterprise culture, and the possibility to boom your company gives great pleasure. Prospective applicants want to understand the core aspects of what it’s like to work at your company before they apply. The key to conveying this essential information is to build your employer brand.

The agency emblem is what allows potential task candidates purchase into what the business enterprise is all about—your culture, humans, and purpose. Your agency emblem efficiently highlights those characteristics that make your company a unique vicinity to paintings, placing you other than the crowd, humanizing the company, and in the end inspiring applicants to use to consideration.

4.2 Recruitment

Experts predict that by 2020, the global workforce population will predominantly include younger workers. Millennials will make up 35% of the global workforce and Generation Z will account for 24%.

To many recruiters, hiring millennials is still a big mystery. To attract and recruit this generation, the first thing should be understood is which industries they are moving to, which they are leaving from, and why? See Figure 1.

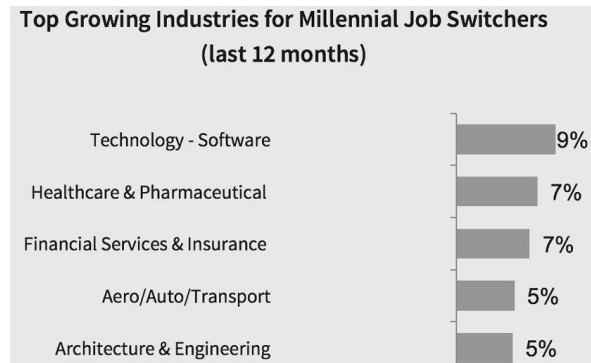


Fig. 1 The Top Industries Gaining Millennials According to LinkedIn (2017)

The research shows that “being visionary” (not only in words but also in practice) is the most attractive thing for employers when payroll regulations and salary are not much different from each other. So, what kind of digital innovation for recruitment period can show the organizations more visionary?

Publish the job opening on popular social and career applications or websites in addition to your company’s website. And better to allow people apply the job easily with their profile or early prepared resume instead of redirecting them to companies’ website career tab and asking many unnecessary questions which many of them already included in their resume or profile information. This will show that organizations are running regulations in a more practical way and allowing employees to accomplish real tasks without stressing out of limited time period because of time wasting procedures.

Request to do online test or remote task from applicants. This action will leave “more selective company” effect to job seekers. And HR and technical reviewers will be saved from massy interview counts, so potential employees can enter more details in their low count interviews and select more suitable or talented new mates for the company.

Do more online interviews instead of face-to-face ones via a mature online interview or conversation tool. A job seeker might live far away from the office and even then, can apply for an open position that does not fit him/her entirely, however the company can post another job fitting this applicant wholly later. Applicant will absolutely encounter distance between the office and home for attending a second interview. Thus, to prevent this kind of issue like potential employees might be perfect fit for the company enabling online interview would provide time, reputation and attitude for the company.

4.3 Building and Leading a Team

First, it is better to recruit new colleges whose visions are highly matching with the organizational DT vision and strategy. Then, express the strategy, vision, structure etc. These things will affect the project in every step, or all stakeholders should be aware of the entire working period for the organization or project. Go from Human Resources to Human Resources Business Partner, and let the team give feedback to a friend not to a formal employee from another department. Having this approach would positively affect team-members’ motivation and project efficiency.

Another issue is that the company cannot transform by just the bottom line of triangle; there are also mid-level managers who have crucial roles in the project success. And for those individuals sharing the digitalization vision would never be enough, the company must get their opinions and create a partner vision for this long-term journey. Also planning new training about using digital assets in managing, encouraging them to give feedback about missing parts and continuous improvements.

4.4 Stakeholder Management

[5] defines stakeholders as any group or individual who can affect or is affected by the ecosystem’s services. Stakeholders are separated inside and in a roundabout way, yet additionally as indicated by their level of significance, and they are delegated such. Thus, it tends to be resolved which stakeholder should be spoken with first and the desperation of this.

[6] combine elements of previous researches to develop a multi-dimensional framework called the Triple Oscillation Model. As shown in Figure 2, it consists of stakeholder classes, functional roles and business ecosystem lifecycle.

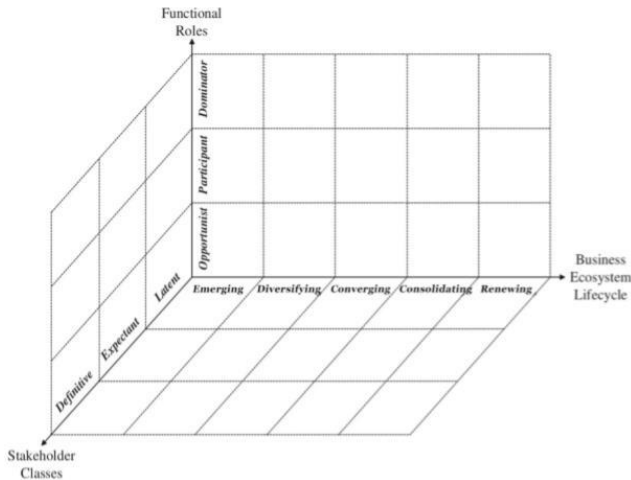


Fig. 2 Triple Oscillation Model [6]

Successfully managing stakeholders is related to communication with 50%, in main belief; after getting much training and research. See Figure 3.



Fig. 3 Stakeholder Prioritization

4.5 Continuous High-Performance Culture

There are two different terms that need to be cared about if a team or organization wants to catch a continuous high-performance culture while doing their daily/target works beside. One of them is project performance and the other one is employee performance as known. However, both have similar processes like evaluating the performance, tracking it continuously and of course steps need to be taken to improve performance.

5. Open A Place for A Tech Giant in Saas Business

Currently, cloud computing is significantly more stable and proven than it was a decade ago. As a result, numerous large and small companies have migrated even their most critical assets to the cloud. Moreover, it offers the most logical options that can be useful to catch up with your competitors in the way of digitalization. SaaS, on the other hand, is like giving automatic payment instructions for some of your tax debts or invoices while you are already there in a bank branch where you trust to keep your money, as well as buying insurance, taking a new investment step or changing your accountant's business with a set of products that this bank offers for you. Moreover, it is very easy to integrate and maintained largely by the cloud provider. Their convenience is not limited to this either, when you need any assistance with your own admin operations in the foreground, the cloud/product provider's advisor will probably be a click or a phone call away. Moreover, these services are now available not only to small entrepreneurs who might worry about future support, but also to established companies, which we can refer to as technology giants.

One of them is Huawei. The company's R&D center in Türkiye has already started to offer a set of products in SaaS form to the end user in 2020. While some of them are software already owned by the company, some of them were written completely in line with today's needs. It has been tested by many beta users and internal units of the company before it is offered to the end user, and partnerships have been established with local cloud providers for regions that do not have access to Huawei Cloud. We made Interview about this hot topic including producer and customers. Interview is not just only covering company's SaaS products, it is also touching to digitalization, projects may be handled by practical tasks like SaaS product owning, and new business environment after pandemic. We did an interview with Huawei's R&D director and Human Resources Business Partner (HRBP) leader and also Payroll and Personal Affairs Manager of another company about SaaS adventure of High Technology Research and Development Center (HTRDC) China compliance with today's conditions and strategies.

When asked how innovation can help businesses support their business in today's volatile business environment to R&D director and he said:

DT is a hot topic! And innovation is critical for SMEs, but it is a real challenge for big companies. Huawei focuses on ICT as a specific area and provides some telecom solutions, smart devices, software, cloud and AI solutions to support businesses to facilitate innovation. For example, after 4G, many innovations have been made in video and mobile content. The world is changing, and innovation should be divided layer by layer. As Huawei, we are constructing highways; and the customers are building cars. Building which car depends on themselves, but we should support either Mercedes or any others.

Together with Huawei's R&D director, we explored the SaaS solutions offered by HTRDC and examined examples to understand how they support the new work-from-home (WFH) principles. Regarding the rest of conversation, it is understood that SaaS solutions provided by Huawei are not specialized for work from home principle. But somehow, they support people to be more convenient and flexible. For instance, an online coding platform provided by R&D center is also supporting all candidates to have an exam remotely. Previously, candidates were coming to the office to take the exam from PC or paper but now companies can use it for remote recruitment.

Online is important not just for WFH, but also for every condition. These online solutions were designed for virtualization in every step of life in the beginning; but after the pandemic, everybody understood that they are the best fits for current challenging environment.

Another example would be WeFocus. Managers or HRBP can come across employees every day in the old routine and make a judgment about their situation; if necessary, they could

communicate with them one-on-one and act. Thanks to the announcements, surveys and feedback they receive on WeFocus; this communication disconnection can be minimized. HTRDC was the first to use this product.

As we continued, we tried to examine the customer feedback and demands that guide the SaaS strategies of both the director and the R&D center as a leader in the sector. SaaS production or development is a really challenging process, because there are a lot of people working in this field. Even some individual ventures are the competitors, and as a team you must make a difference to show yourself in front of customers.

Huawei prefers to take more challenging tasks like putting AI algorithms into each product. And try these solutions at first internally to get feedback from different people or departments to outline pain points and improvement areas. So, initial borders of the SaaS products were formed. They collected feedback from customers and beta users to redefine categories and borders.

When trying to learn the SaaS strategies of the R&D center of the pandemic impact on social or business life, through examples or sensations, R&D director replied as follows and detailed his personal expectations for the days ahead:

Huawei was lucky about pandemic effect on SaaS, of course it supports ideas to benefit from SaaS solutions. It should be unfortunately stated that the pandemic had very serious negative effects for other sectors. But people also learned a lesson from this and the online transition in every area was accelerated. In addition to the working principles, this change includes the way business, education and even healthcare are made.

Pandemic situations changed many minds belonging to businesspeople, and companies started to hire more software engineers to adopt virtual operations into their businesses. So, there is a huge demand for recruiting tech people. Thanks to being a technology company, Huawei have already enough resources and more than enough knowledge on the software domain. In China, all the top universities started to record each course; and anyone from public can watch any course.

When we asked what the future plans of their organizations regarding the SaaS product range and sales strategies are, what factors will be encountered while shaping these strategies:

They said: We had chosen to build small teams first, then grow with the customer engagement and feedback. Now, there is a unified sales team working closely with the SaaS teams, different from the rep-office marketing department. Probably, this team will be larger in parallel to SaaS technical group.

Finally, he was asked whether he is an enthusiast who believes digitalization is a vision, or one of the practical leaders who believe in embarking on new digital transformation projects to catch the train. He said: Digitalization is the future. Digitalization or virtualization was one of the topics in Chinese universities at a time between 2001 and 2005. But, not seen so real or closer enough to that day's business or social life from the student's side. To put it into a company's vision, those years were suitable; however, it is a need now and professionals should start to adapt it into their business as soon as possible.

Not just changing minds or business, cultures should evolve together with virtualization. If someone is talking about technology, he/she should have hands on it. Being practical is already today's philosophy. No one can deal with technology without getting their hands dirty.

Only mobile phone is enough for Chinese to survive in daily life. All the verticals have some different background and have some differences while adopting technology. Anyway, all of them should work on it combining both technical and operational units.

Then similar questions were asked to Payroll and Personal Affairs Manager of a company using SaaS products of Huawei. Due

to today's conditions, she believed that they are in a process where organizations have started to carry out all processes in the digital environment. That's why using products that support processes like WeFocus helps their business a lot and speeds up the work, as well as providing support and solutions to known problems. These solutions help them to understand the problems of employees more quickly and clearly, making them happier and increasing loyalty. Using SaaS solutions has been developed in a more optional and facilitating way, such as getting data in a more understandable and clear way, allowing problems to be resolved faster.

They aim for maximum digitalization. And she is expressing that they have changed working style in respect to customers new way of working in pandemic days. As she, they had to deal with remote working negative effects and understand best practices about WFH. With SaaS products it would be better to digitalize in a short time and start to use its benefits as soon as possible.

Customer and employee needs had been their important inputs to go digital with SaaS solutions. The company is lucky to be informed about SaaS solutions of Huawei, like WeFocus.

As a HRBP working for a fast-paced company like Huawei, she believed that they must deal with multiple operational tasks daily, and again managers must double check each of the processes in order to ensure zero-mistake implementations are made. Innovative solutions can help HR to automate each step in daily routine and ensure high quality output within a limited time and effort. She expressed that they can easily track and assess employees and even candidates in current abnormal situations via their valuable feedback. They can address the shortcomings and provide solutions with efficient results, thanks to SaaS applications that allow organizations to digitalize in a short time with the quick projects managed in a practical manner.

6. Conclusion

This study tried to evaluate digital transformation as a project by adhering to the principles of project management. The study is endeavoring to explain how a practical digital transformation project management can be implemented by stating which points should be given extra attention. Many technology producers have separated their corporate sales channels today, unlike the traditional structure. Through these channels, solutions such as SaaS, Cloud Services, IoT, and Cyber Security are offered to companies that manufacture end-user products or provide user services.

As a summary of the academic interviews, the participants generally gave fresh parallel answers. It is believed that a practical transformation with the help of quick and easy solutions such as SaaS benefit companies in this way. In this context, a study to be conducted with academicians and consultants can eliminate the deficiencies of the topics covered and the support given to the organizations with this study, if any, by revealing the points that should not be ignored in the theoretical principles.

Although a very specific field has been chosen as the subject, a study has been made in the right field thanks to the literature review and the difficulties encountered in the next stages. Because although there are many resources under the titles such as digital transformation, industry 4.0, project management; the number of resources that offer them by blending them with each other is few. It has been tried to benefit greatly from several events analysis that have already been made for other purposes for most of the inferences made. Considering this point of view, researchers can conduct more case analysis directly about this study.

During such a study, it can be mentioned about the failures experienced while trying to realize the digital transformation through projects. In fact, it is obvious that such a study will not only support our study, but also have the characteristics of several lessons that should be considered for those who are interested in this study.

In addition to all this, subsequent researchers can also work on the digitization of project management. In this study, this subject has been partially addressed, and it has not been focused on. Where deemed necessary, it is sufficient to refer to the printed examples and some recommendations are given. In addition to the research to be done, it is also possible to create a project related to this subject. It can be a new generation project management tool or a specific application targeting digitalization projects.

7. References

1. Barthel, P., & Hess, T. (2019, July). Are digital transformation projects special?. In PACIS (p. 30).
2. Kurmann, P., & Arpe, B. (2019). Managing Digital Transformation-How organizations turn digital transformation into business practices. Master's Thesis, Lund University Department of Business Administration.
3. Danailova, D. (2017). Digital Transformation A Study on the Role of IT Capability and Executive Sponsorship in Achieving Digital Maturity, Master Thesis , Amsterdam Business School, University of Amsterdam .
4. Guinan, P. J., Parise, S., & Langowitz, N. (2019). Creating an innovative digital project team: Levers to enable digital transformation. *Business Horizons*, 62(6), 717-727.
5. Hein, L., Van Koppen, K., De Groot, R. S., & Van Ierland, E. C. (2006). Spatial scales, stakeholders and the valuation of ecosystem services. *Ecological economics*, 57(2), 209-228.
6. Lu, C., Rong, K., You, J., & Shi, Y. (2014). Business ecosystem and stakeholders' role transformation: Evidence from Chinese emerging electric vehicle industry. *Expert Systems with applications*, 41(10), 4579-4595.