

FACTORS TRIGGERING DIGITAL TRANSFORMATION JOURNEY IN ORGANIZATIONS

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ABSTRACT

Edwin Louis Cole once said, “Maturity comes not with age but with the acceptance of responsibility You can only become young once but immaturity can last a lifetime” and when it comes to an organization in today’s world, one cannot afford to not be immature. matured organization is the one, which has been stable and established for at least 5 year, has a clear sight of stable growth, a well-established set of product and loyal customers. Now when we talk of the 21st century, an organization apart from being matured also needs to be digital matured. Organizations now embark on the journey of digital transformation which helps them reach the other end of the Digital Maturity curve. Through this paper, authors have tried to bring forward the factors which trigger organizations to start their digital transformation journeys. Now these factors, external or internal have a huge impact for the leadership to approve the digital transformation initiative for their organization. Various companies are conducting multiple interventions to explore digital technologies to their benefit. Companies aim to go digital before their competitors do to gain a competitive advantage (Bharadwaj, A, 2000). Digital Transformation has always had a robust connection to the industry and is currently re-experiencing tremendous changes, as industry 4.0 represents the coming fourth industrial revolution. It emphasizes the end-to-end digitization of all physical assets and integration into digital ecosystems with value chain partners.

Keywords: Digital Transformation, Digitalization, Digital Culture, Digital Readiness.

INTRODUCTION

Digital Disruption has Changed the Mentality from “Survive And Thrive” To “Evolve Or Die”

Digital Disruption can be seen in any industry – retail, manufacturing, pharmaceutical, telecom and that too across the globe. What we need to ensure is how to grow with this disruption and improve our maturity levels along the way. Digital Transformation is the process which many organizations adopt to reach on the other end of digital maturity curve. This process involved undergoing a revolution to embed technology at the core of the organization. This would also involve integrating the operations and resources of an organization to the digital processes and the other way round. It essentially means putting technology at the center of operations.

But just “doing” digital things will not make an organization more digital. The maturity spectrum runs from Discovering Digital, undertaking Digital, Standing Digital to being Digital and this is all part of Digital Transformation.

Discovering Digital: This involves leveraging traditional technologies to automate existing capabilities and dabbling with digital. This does not involve any change to the organization

Undertaking Digital: This leverages digital technologies to extend capabilities, but still largely focused around same business, operating and customer models

Standing Digital: Business operating and customer models are optimized for digital and profoundly different from prior business, operating and customer needs

It is imperative to understand

1. How Digital you are today i.e. what is the level of digital maturity of your organization today to know where to begin
2. How digital you need to become i.e. planning where you need to get to in 6, 12, and 18 months
3. How do you get there i.e. Change happens more rapidly when you infuse digital traits into the existing legacy environment –your organizational digital readiness

LITERATURE REVIEW

Companies across the globe are conducting multiple interventions to explore digital technologies to make processes simple for business and these can be through social networks, mobile, artificial intelligence, machine learning (Fitzgerald, et al. 2013). This essentially cannot be done without transforming business operations and disrupting the processes in an organization (Matt, et al. 2015). Society globally is facing a radical change as digital technologies are getting matured penetration to all markets (Ebert, & Duarte, 2016). Globalization is also adding pressure to companies (Westerman, et al. 2011). Companies which are “born digital” seem to have grown more powerful than companies that are more traditional in their approach (Sebastian, et al. 2017). Even though the world has seen advancements in this area and the field related to this, digital Transformation for organization is taking longer and is more complex than it has been expected (Zinder & Yunatova, 2016). It has been challenging for companies to keep up with the new digital reality: case in point - bankruptcy of movie-rental Company Blockbuster being one of them (Hess, et al. 2016). Despite this, Digital technology needs to contribute by providing an economic impact for an organization and hence organization needs to be ready to invest in digital interruptions.

Below Table 1 illustrates typical definitions taken from various literatures.

Table 1 DEFINITION OF DIGITAL TRANSFORMATION		
Definition of Digital Transformation		
Interventions to explore digital technologies to their benefits. These can be social networks, mobile, artificial intelligence, machine learning	Fitzgerald, M., Kruschwitz, N., Bonnet, D., Welch, M.:	MIT Sloan Management Review, Research Report (2013)
Transforming business operations and disruption the processes in an organization	Matt, C., Hess, T., Benlian, A	Digital transformation strategies (2015)
Companies which are “born digital” (e.g., Amazon, Facebook and Google) have grown more powerful than companies that are more traditional in their approach	Sebastian, I., Ross, J., Beath, C., Mocker, M., Moloney, K., Fonstad, N	How Big Old Companies Navigate Digital Transformation. MIS Quarterly Executive (2017)

There are examples of organizations that have been unable to keep up with the new digital reality: bankruptcy of movie-rental Company Blockbuster being one of them	Hess, T., Matt, C., Benlian, A., Wiesböck, F.	Options for formulating a digital transformation strategy. <i>MIS Q. Executive</i> 15(2), 123–139 (2016)
Digital technology also needs to have an economic impact for an organization and hence organization needs to be ready to invest in digital interruptions	Carcary, M., Doherty, E., Conway, G.:	10th European Conference on Information Systems Management. Academic Conferences and publishing limited, pp. 20– 28 (2016))
Emphases on the end-to-end digitization of all physical assets and integration into digital ecosystems with value chain partners	Lee, M., Lee, Y., Chou, C	Essential implications of the digital transformation in industry 4.0. <i>J. Sci. Ind. Res.</i> 76, 465–467 (2017)
Apart from initiative digital transformation in an organization, another prominent change is to integrate digital into the cultural DNA of business models	Horlacher, A., Hess, T	In: System Sciences 49th Hawaii International Conference, pp. 5126–5135 (2016)
Digital transformation takes places in three key areas of the firm: customer experience, operational processes and business models, suggesting that the effects of digital transformation in business organizations are felt in these three key areas	Westerman et.al.	IT Leadership in Transition - The Impact of Digitalization on Finnish Organizations (2015)

Digital Transformation has always had a healthy connection to the industry and business of an organization and is currently re-experiencing huge changes in an organization, as the industry 4.0 represents the coming industrial revolution. It weighs on the completed digitization of all processes in an organization and also integration into digital ecosystems with partners (Lee, et al. 2017).

Insights from Existing Literature

Digital transformation may initiate conflict with respect to culture between younger and relatively inexperienced digital employees and older but more experienced pre-digitization employees (Kohli & Johnson, (2011). In addition to a cultural divide digitalization also leads to a gap in the growing skills in amongst the employees of an organization as in the above mentioned 2 categories of employees. Digital transformation is also impacting the day to day work environment in incumbent firms in terms of work structures: key lessons learned. *MIS Q Exec.* Digital transformation doesn't really challenge the technology being driven in an organization but also needs a deep cultural change. The employees, partners, all the stakeholders in an organization must be ready to adapt the journey with changes in their culture and in the way of working. Digital interconnectivity permits the appearance of flexible and networked cross-location teams across the entire geographical company map. The implementation of a digital workplace is highly important.

Digital transformation can never become successful with no data-sharing and data-driven corporate culture (Dremel et al. 2017). Data is a highly recognized much more as a valuable resource and an enabler in the digital transformation journey. This will require higher operational transparency in day to day work and a mindset amongst employees to share data when needed. The need is to change the informatic culture in employees to informational culture; In comparison to an informatic culture, an informational culture considers IT as a core element of

planned and tactical decisions. It also understands the financial and transformative potential of digital technologies. It is imperative to not allow 2 different cultures arising in the same organization i.e. a group of employees who have digital capabilities and the other group which is more inclined towards the traditional way of working with technology lagging behind.

Drivers of Digital Transformation Journey in organizations

Most organizations believe that digital transformation is often a business led decision and program and is usually sponsored by business and leadership. Drivers can be seen as external or internal triggers for why organizations engage in digital transformation. Organizations report a need to keep up with digital shifts occurring in the industry in which they operate. Digital transformation is found to often be triggered by changing customer behaviors and expectations (Haffke et al., 2017), digital shifts in the organization's industry, and changes in the competitive landscape (Berghaus and Back, 2017).

1. The directive from the group or global team who had already launched similar initiatives in other markets
2. The learnings and case studies from the competition in the same geography leading to exciting impact

For organizations with massive data volume across 150+ countries in segregated businesses and leveraged by 50K+ employees plus various customers. In order to obtain the most efficiencies when it comes to business process execution from ITO (Invoice to Order) to OTR (Order to Receive), it was critical to have standardized and transform DT (Digital Technology) across all the business units. Digital Transformation spanned across the following pillars and more Table 2.

1. Digital Workplace - Next generation end user experience solutions including end user assets, mobility penetration, leveraging virtual capabilities like VDI etc.
2. Centralized hosting - Transition to cloud AWS and Azure for the strategic business applications. Further leverage SaaS offering as first option
3. Application rationalization - Transforming the application footprint based on business capabilities
4. Collaboration - Leveraging the new technologies also accelerated by the need for remote work
5. Digital Thread - Consolidated data transfer across various applications so as to get the end to end visibility of data across the platforms for best business decision making
6. Cyber security - Critical from potential operational disruptions perspective as well as regulatory guidelines across all countries / regions
7. Acquisitions - Need for stronger Digital Technology foundation in order to absorb multiple acquisitions

Drivers of Digital Transformation	
Digital Technologies	Agarwal, et.al. (2010); Berman (2012); Bharadwaj, et.al. (2013); Bharosa, et.al. (2013); Janowski (2015); Kreutzer (2014); Luna-Reyes & Gil-Garcia (2014); Mithas, et.al. (2013); Lucas, et.al. (2013); Stieglitz & Brockmann (2012); Setia, et.al. (2013); Wang, et.al. (2016); Berman & Marshall (2014); Loebbecke & Picot (2015); Westerman et.al. (2011);
Digital Capabilities	Berman & Marshall (2014); Loebbecke & Picot (2015); Matt, et.al. (2015); Schuchmann & Seufert (2015); Tamm, et.al. (2015); Wang, et.al. (2016); Westerman et.al. (2011);
Strategies	Berman & Marshall (2014); Bharadwaj, et.al. (2013); Matt, et.al. (2015); Stieglitz & Brockmann (2012); Tamm, et.al. (2015); Mithas, et.al. (2013);
Business Models	Agarwal, et.al. (2010); Berman & Marshall (2014); Bharadwaj, et.al. (2013); Janowski

	(2015); Loebbecke & Picot (2015); Luna-Reyes & Gil-Garcia (2014); Matt, et.al. (2015); Mithas, et.al. (2013); Schuchmann & Seufert (2015); Tamm, et.al. (2015); Stieglitz & Brockmann (2012);
Value Chain	Agarwal, et.al. (2010); Berman & Marshall (2014); Bharosa, et.al. (2013); Janowski (2015); Stieglitz & Brockmann (2012); Tamm, et.al. (2015); Wang, et.al. (2016);

Factors Leading to Embarkment of Digital Transformation Journey for Organizations through Case Studies

Through research and studying the digital transformation case studies of various organizations, it was evident that factors leading to the initiation of digital transformation in organizations can be external or internal, largely depending on the project and the organization in scope. For telecom, financial organization, pharma etc a lot of initiatives are driven by government regulations whereas for retail, FMCG, competition has a huge role to play in triggering the digital transformation.

Role of Internal Factors in Triggering Digital Transformation in Organizations

For many organizations, the push to initiate the digital transformation journey is internal, coming from leadership, a new entrant to the team (either in leadership or a new team formation).

Companies like HUL, Deloitte also have an Innovation cell launched which does an holistic research on the latest digital trends in the market and how the competition or ancillary companies are leveraging from these initiatives. Getting right leaders on board is a must. HUL believes, getting right people is crucial across verticals (the process started in 2016) – when the organization onboarded leaders under Big Data, AI, ML. Unilever is always open to diversification, intelligent diversification is important.

For another major food company, things started seeing a change when the vendors the company was dealing with provided feedback against the systems and processes the organization was using. Need for user guides, multiple follow ups, inefficient systems, huge waiting time, operational efficiency were the key challenges faced by the partners and the key stakeholders of the organization.

For another key media player, the initiation of Digital transformation was provoked internally when the leadership felt the need to drive sales efficiencies in the organization. It was driven by internal leadership when a key leadership member joined the organization from an external organization and changed the legacy. The project was outsourced, but lot of heavy lifting was done internally.

For yet another company – Wagh Bakri, the requirement was to increase overall revenue and in digital world become Starbucks of tea. The client wanted to expand tea lounges and use backend of tea business to support a new vertical. The company wanted to reduce cost, have the ability to turn around things faster and also provide enriched customer experience.

Role of Government Regulation in Triggering Digital Transformation in Organizations

Governments and regulators play a major role in inspiring digital innovation and in incentivising the growth of these technologies for the benefit of organization. They can cater to the public and consumer interests and limit any possible unintended negative consequences of these developments by providing general rules that reflect societal values and preferences. Often,

however, regulatory frameworks lack the agility to accommodate the increasing pace of technological developments. For Google Pay, Digital transaction is a way of ensuring that money is visible through-out the chain in the value chain, therefore helping the government in keeping track of the way money is moving and hence extracting taxes and duties at various steps. It also adds a lot of convenience for users in terms of

- 1) not having to carry physical cash/card which can become hassle
- 2) Being able to tender cash in exact amount without having to bother about hassles of change
- 3) Also there is no transaction fee which means essentially consumer gets all conveniences of digital payment at no additional cost.

Government body NPCI (National Payment council of India) was pushing in this direction and it was evident that the push was here to stay and hence Google had the backing.

Oil and Gas is a highly regulated industry and in most instances more regulated than the Life Sciences / Healthcare. Considering the push to zero carbon footprint in the Energy sector along with regional requirements have both a direct and in-direct impact on Digital Transformation -

- Eliminate direct carbon emissions related to Digital - Application hosting plays a big role with direct impact on carbon. GE O&G / Baker Hughes focus on eliminating self hosted environments and leveraging the likes of AWS / Azure helps with that objective. The regulatory push accelerates the execution on such projects
- Acquisitions / Divestitures - It has become more critical in the business to review the implications of buying a company which adds complexity to the Digital environment. Digital has recently got a strong voice in decision making since the cost / complexity to Digitally transform the acquisition outplays the business benefits in select occasions

Role of Covid-19 in Triggering Digital Transformation in Organizations

Google Pay the project was launched pre Covid, but during pandemic the organization realized that digital and contactless payments gathered a lot of momentum because of the way the consumer behavior was changing. People wanted to avoid physical contact at any point. Exchange of currency notes through hands was also something consumers wanted to avoid. To get the transaction done with no touch and through mobiles was preference. This was also well taken by the merchants. It made a lot of sense for Google to get into this space of digital payments and also get a sense of how the consumers pay (which mode was being used as a preferred MOP)

Covid 19 had a huge role to play in many organizations across globe and industry. Although the pandemic has had a negative impact on many businesses, it has also uncovered new opportunities for entrepreneurship. It has boosted digital entrepreneurship, for instance, reflecting changing consumer behaviour during and in the aftermath of the pandemic. For retail specific organizations, Covid 19 gave way to many digital transformation initiatives which include:

1. Video calling in stores – when the customers are not able to reach you, you reach the customers and this was possible by installing video calling mechanism in stores where customers could directly connect with the store staff
2. Placing orders on Whatsapp – Many a times there was a resistance from the customers to get up and visit the store outlet, though the online site was very much there, but for better customer delight, instant and convenient connect through whatsapp always helped
3. Click and Collect – this was another functionality which had been of great help during Covid 19 when customers could place orders online and visit the store next day to collect the order without having to stand in the queue

Even internal to organization, Covid definitely accelerated a lot of the Digital Transformation journey. A few key one to highlight in particular -

- Employee experience with Digital Workplace Transformation - As all other industries, remote collaboration became the key in GE O&G / Baker Hughes. The project to consolidate to one chat / voice / data sharing platform immediately took the priority and had to be delivered in less than a month. This helped improve employee experience and productivity where business decisions could be made remote across geographies
- Remote access - With IT assets supply chain issues, and hiring was still at the usual pace, the dependency on remote applications like Citrix / VDI increased and it helped define standards and transform to a more mature next generation technology which is also a preference from Cyber perspective
- Automation - Leveraging RPA where there was reliance on employees / contractors to perform actions

For the linear TV business (TV channels) , undertaking Digital Transformation during Covid 19 was inevitable. Media industry had the most profound impact from Digitalization. During Covid, People were at home, media consumption also went up. To mobilize all this, it required lot of operations, to speed up the process, linear TV undertook complete transformation.

Role of Competition in Triggering Digital Transformation in Organizations

It is very essential to be on top of what competition is doing and gain and learn from the successes and failures of the implementation of such initiatives from competition. Competition has a huge role to play when one is embarking on this journey since you also always want to be ahead in the game and also keep oneself up to date with respect to the trends in the market in the same or parallel industry. The idea behind a digital transformation is to incorporate technology into every facet of a business, creating sophisticated operations that deliver more value to customers and improve a company's bottom line.

For organizations like Dyson, HP where the core fight is on the market share and the competition is too strong, it is very crucial to know what trends are being followed by Competition.

For Organization like GE when they embarked on the journey of Digital Transformation, key competition were already on the path of 'One ERP' which automatically provides centralized data visibility, leans the business processes, eases the management of cyber security and gives a strong foundation to consume additional acquisitions. Other companies in the Technology sector had started leveraging next generation offerings to improve employees productivity which like other companies in the Energy sector. Hence it was crucial for GE to fast pace their journey.

Wagh Bakri, though mentioned above had a huge trigger from internal leadership, another reason which helped them speed up the process was presence of competition in this space. There are more digitally native companies – ChaiPoint, Chaayos, which were disrupting the space and the company wanted to be able to match them.

CONCLUSION

An underlying assumption of the following description of the external drivers of digital transformation is that firms tend to adapt along transformational initiatives during times of conservation steadiness but may periodically carry out more radical organizational change during

times of high environmental velocity of change (Gersick 1991; Romanelli and Tushman 1994; Tushman and Anderson 1986; Tushman and Romaneli 1985). This may not be the only present perspective on organizational transformation and change (Van de Ven and Poole 1995), it is nevertheless a recognized and extensively adopted perspective in the existing literature.

What follows from this viewpoint is that the digital transformation at firms will be to a great degree activated and driven by factors that occur in the firm's direct environment. We discuss some of these external factors in the following paragraphs.

Three major factors driving the need for digital transformation.

- The change in the consumer behavior (during Covid – 19) and expectations from government regulations are changing and improving. The rise technologies leading to the adoption of electronic commerce. This may include internet, online payments, mobile usage etc.
- The ubiquity of data and arrival of emerging technologies which include machine learning, artificial intelligence, blockchain, internet-of-things (IoT), have exceptional impact on the growth of business goals (Chen et al., 2012, Iansiti and Lakhani, 2014, Ng and Wakenshaw, 2017) which persuade the leadership to embark on this journey of digital transformation. Not all of the technologies mentioned above are as impactful as expected, the extensive emergence of them though signifies the requirement for organizations to proceed with digital transformation of their business.
- Lastly, most crucial external factor driving the need for digital transformation in an organization is the digital transformation and adoption of the competitors. Know how of what the competitors are doing and the latest digital initiatives being implemented in their organization and to keep up with the pace, an organization needs to evaluate the impact of implementing and adopting a digital initiative relevant to their organization and industry.

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Received: Jan-24-2025, Manuscript No. AMSJ-25-15656; **Editor assigned:** 25-Jan-2025, PreQC No. AMSJ-24-15656(PQ); **Reviewed:** 18-Feb-2025, QC No. AMSJ-24-15656; **Revised:** 28-Feb-2025, Manuscript No. AMSJ-24-15656(R); **Published:** 28-Feb-2025