



DIGITAL TRANSFORMATION – SIMPLICITIES OF THE SIMPLE TASK



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Introduction and Objective

In the 10th column, published in June 2020 volume of this Journal, several emerging dimensions of digital transformation in the new world order post Covid-19 Pandemic have been dealt with. That volume has identified key functional areas of certain industry sectors for digital transformation, and correlated digital tools befitting transformation requirements of those functions. Implementation is, however, the critical task that also needs metamorphosis of various other facets of any organisation.

In a lay man's language digital transformation (DT) is

nothing but driving changes in business, operating and revenue models by leveraging digital competencies. The irony is that DT is generally a misunderstood or partly understood subject by stakeholders and employees across hierarchical levels of any entity. The point that is quite often not accepted with open mind is that integrating digital tools for DT and abandoning and / or modifying legacy policies, systems and processes are the first two critical steps for digital transformation.

Objective of this paper, therefore, is to revisit and bring out simplicities of the simple task of DT and bring out various actions needed for implementation with informed judgment without fear of unknown. It will also deal with the approach and steps which business managers need to follow with the open mind for creative destruction.

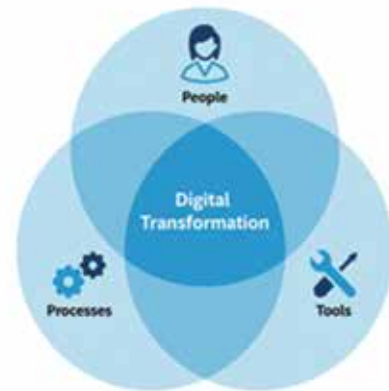
Digital Transformation Revisited

Jon Kabat-Zinn, a famous professor of medicine and propagator of mindfulness said, *"You can't control the waves, but you can learn to surf!"* This pearl of wisdom aptly describes the contemporary situation when Novel Corona Virus has caused waves and high tides of cruellest crisis in the history of mankind. The clarion call of present time is to first learn surfing for revival and survival, and then grow. One of the most critical tasks for saving the entity from drowning is implementation of DT befitting the emerging way of living and operating in the new world order. This is a journey and not a destination to be reached just for once.

4 Ds, 2 Ps and 1 T for DT

Any organisation can lay the foundation of digital transformation on 4Ds, viz., Discover, Design, Deliver and

De-risk as suggested by McKinsey¹; 2 Ps, i. e., People and Process and 1 T, i. e., Tools. Those can briefly be discussed in the following graphics:



Source: <https://which-50.com/four-ds-digital-transformation-according-mckinsey-company/> //

Source: Unknown

If the above graphics are to be understood in actionable terms the following measures can be listed for orchestrated planning and execution across hierarchical levels, length and breadth of the organisation:

- Integration of digital technologies with functional areas that will bring metamorphosis in the process of conducting business operations with the ultimate objective of improving stakeholders' relationship and experience management.
- Challenging the status quo of policies and standard operating practices for driving towards the inevitable metamorphosis.
- Training of existing human capital with different capabilities and redeployment for dealing with digital tools consciously being mindful of the requirement of cultural change and removing fear of unknown to embrace the new.
- Conducting experiments with digital technologies to assess suitability vis-à-vis the specificities of the needs of business and its stakeholders with the ultimate objective of incremental contributions for profit and profitability.
- Approaching the long-drawn task with a mindset of creative destruction of long-standing business policies and processes in favour of relatively new digitally driven practices that are still being defined, adopted, and stabilised.
- Providing the DT team, a free environment with committed assistance for innovative applications of various digital tools, if not 'innovating' new tools, and establishing collaboration with man and digitally operated machines, which are artificially intelligent.
- Ensuring data privacy, cyber security, and information safety as an integral part of the entity's policy and processes for risk-enabled performance management.
- Permitting implementation team to make mistakes and

not penalising them for the same. Instead incentivise every attempt irrespective of success or failure so that the environment is congenial for innovating and delivering the best.

- Unwavering commitment of funds and other resources, as well as extending help and support to the dedicated DT team by every single functional area of the organisation.

Therefore, digital transformation is an orchestrated combination of people, process and technology for discovering, designing, and delivering with risk enabled process management what the stakeholders want. Through deductive logic one can explore out of the above narratives five essential elements of digital transformation, viz., stakeholders' relationship and experience, operational agility, culture and leadership, workforce enablement and integration of digital technologies for revival and sustainable growth with prosperity. The author reiterates that DT should be considered as a journey and not a destination because it is a task in eternity.

Data and DT

Antonio Grasso, the founder of Digital Business Innovation Srl. was asked an interesting question and that was, "What is that one no one talks about in digital transformation but is very important." The reply was equally fascinating. He said, "Well in my opinion many people create a buzz around it and the most of them think about the Digital Transformation as something you can achieve or generate in a business environment. That's wrong. Digital Transformation is a consequence of two phenomena. Digitization and Digitalization, both enabled by the Digital Diffusion" (Source – Twitter)

This diffusion of digitization and digitalization is at the core of the tasks in this era of DT. Making meaning out of data and drawing inferences for strategic planning and deciding tactics for execution are the two critical drivers for attaining competitive advantages. An attempt has been made to simplify this mission in the following lines that defines a series of

simple tasks:

- **Innovation:** Come out from the aura of this buzz word. Conduct exploratory analysis for identifying hitherto unattended / unresolved problems and latent demands of society from the perspective of the business domain and beyond. Apply ground-breaking thoughts to determine cost-effective ways for meeting those demands and solving problems with a win-win approach for both customers and the business entity. This may cause disruptions to existing players.
- **Digitization:** Convert all analogue data, generated by operating machinery and legacy systems, devices, physical documents, etc. into digital data and records. Take steps to ensure that all data to be used in the process of business transformation are relevant, generated from first-hand sources and trustworthy.
- **Digitalization:** Use digital technologies befitting the needs for changing business, operating and revenue models with the objective to generate more turnover and achieving maximisation of value creation as well as minimisation of value destruction. For example, brick and mortar business models is added with and / or replaced by virtual marketplace for eCommerce.
- **Digital Transformation:** Embark upon the journey with strategically planned tasks for managing changes and applying digital technology to stay ahead of competition with an agile mindset. Take all possible measures for training / upskilling of workforce and inculcating digital agility.

It is evident from the above that two major tasks for digital transformation are Digitization and Digitalization as opined by Antonio Grasso. A simple example for this can be drawn from manufacturing industries. Lots of analogue data are generated in industrial units by various counters, flow meters, etc. to count / measure throughputs, output generations, and consumption of utilities like steam, power, chilled water, etc. Voluminous data are also generated in physical records maintained by workmen / supervisors including for maintenance of machines, consumption of spare parts and deployment of technicians. However, such data are not digitised with the help of IoTs and APIs, and stored for conducting analytical studies that may provide meaningful help in planning, monitoring, controlling, deriving trends and patterns, etc., and drawing inferences by cross functional data analyses. All these when done can help in making strategic decisions and execution thereof which may in turn help in maximisation of value generation and minimisation of value creation.

Pillars of Digital Transformation

Study of several papers of research scholars and digital scientists reveal the following five internal and four external pillars of digital transformation:

Internal Pillars

The five internal pillars can be explained in the form of tasks for leadership team on which the edifice of digitally transformed business can be built:

1. Define the *Why* of DT - Have business strategies

beyond technology, bearing in mind that technology will serve only as an enabler. Identifying the problems and imperatives of business in contemporary business ecosystem, what actions are to be initiated to stay ahead of competition, generating higher value additions, and dos and don'ts for change management are more important tasks. Selection of the digital technology that will best suit to implement those strategic initiatives is relatively an easier task and for that professional services for digital scientist can be availed of.

2. Create a dedicated DT Strategy Team - Allow them to make mistakes. This point has been elaborated in a previous segment of this article
3. Focus on SR&XM - Take into consideration relationship and experience management of all stakeholders. Overemphasizing customers' relationship and experience management, leaving all other stakeholders away from business strategies, may drive the business into lopsided areas for digital transformation.
4. Be in PDP Loop - The first 'P' is physical spaces for operations. Gather all available data from physical spaces where operations are conducted, e. g., markets for inputs and output products, manufacturing, service delivery and logistics operations, financial markets, human capital management, etc. The next 'D' stands for digital. Gather all data and securely store in digital form for analytical studies using tools like AI and ML. Objective would be to make cognitive meaning out of data and drawing inferences for formulation of business strategies and tactics for implementation of the same. The second 'P' is again physical. It indicates that the strategies and tactics decided at step 'D' are to be taken to those named physical operating areas for implementation and thus close the loop. This process should be repeated with evolution and emergence of newer business ecosystem
5. Digital Journey - Take DT as a journey without any distraction. At best there can be milestones for monitoring and controlling implementation. DT should not be also considered as a tool for beautification of business and brand building. Beautification and Destination oriented thoughts on DT will make the first pillar, i.e., 'Why of DT' weak. The weakest pillar will determine the combined strength and efficacy of the edifice of digital transformation.

Four External Pillars

The four external pillars for DT are essentially the stakeholders of business as ideated by Tek Siong² (July 2019). Not many narratives are needed to appreciate the importance of these pillars keeping in mind that they are the sources from which data will be available and generated.

1. Partners in business ecosystem, i. e., customers, vendors, service providers, bankers, financial institutions and so on,
2. Employees and their experience from external environment,
3. IoTs and APIs used for connecting with external devices and systems, including those of the stakeholders, and

4. Stakeholders experience and feedback which are also to be gathered and stored in digital form for analyses and drawing inferences.

Layers of Digital Transformation

For simplifying the task of DT it is essential to understand and appreciate the layers of DT. The following seven layers have conceptually been borrowed from Lauren Cahn (June 2019)³. A few of these may sound to be a bit of repetition of some of the earlier points, albeit stated with different narratives for understanding from diverse contextual aspects of DT:

1. Data aggregation - Aggregation of business relevant data from reliable sources, including conversion of analogue data to digital form and store for easy retrieval.
2. Data management - Categorising and organising the digitised data and making it ready for application of further processes.
3. Workflow automation - Application of algorithms and utilising the data for the business process to be envisioned.
4. Process component - Application of algorithms and start utilising the data for the business process.
5. Platform interface integration - Integrating the digital system with the core systems for smoother operations.
6. End to end processing - Conducting end to end processing and ensure error free transformation.
7. Front end software - Integrating with the front end of stakeholders' devices so that she / he can get seamless services in a technologically collaborated mode.

These seven points are to be revisited every time there is a change in business ecosystem, if not at least annually coinciding with the timing for formulating every annual business plan for the organisation.

In this journey of DT with data one must be inquisitive about and careful in understanding and managing various fountains of data which is also called the Meta Data. In the following section let this be understood with clarity.

Meta Data Management

A simple definition of meta data drawn from Wikipedia is "Metadata is «data that provides information about other data». In other words, it is "data about data." Many distinct types of metadata exist, including descriptive metadata, structural metadata, administrative metadata, reference metadata and statistical metadata." It is said in lighter vein that in any organisation many types of expenses walk on two legs. In other words, expenses are incurred for and by employees, e. g., salaries and wages, travelling expenses, welfare expenses, etc. Therefore, creation and maintenance of meta data for employees at different hierarchical levels is important.

Mariann McDonagh, (July 2019)⁴ suggested the following steps for meta data management:

- Discover - Discover, detect, and probe metadata from different operating processes and sources of meta data storage.

- Harvest - Mechanize the process of metadata collection from various isolated systems for data management and logically gather and store at a single source.
- Structure and deploy sources - Link metadata of physical elements and from physically maintained data sources to specific data models, operating terminologies, definitions, and reusable design standards.
- Analyse - Understand and appreciate what characteristic features the data has, how any data is related to the models for business, operations and revenue, and how purposefully those could be used for cross functional analysis that may help informed judgement while taking decisions without fear of unknown.
- Map data flows - Identify where to integrate data and track how it moves and transforms.
- Framework for Data Governance – Articulate Policies, Standards and SOPs for data management at the organisation level and ensure with insightful oversight that those are followed in real life practices.
- Socialize – Share data with external stakeholders and people in general, as well as provide access rights for employees and business associates to data sources on a need to know and need to use basis.

Conclusion

Digital transformation is a silent revolution with inherent need for cultural change internally within the organisation. It is a journey in search of the unknown excellence. Efforts have been made in the above discourse to simplify various facets of the journey with DT and tasks that are to be performed to make DT to happen with total success. Prima facie a few terminologies and narratives may appear to be a little technical or unknown. These could not be explained due to shortage of space. If the reader familiarises with those by knowledge mining from cyberspace, gathering take home points from this paper will become that much easy. The author would urge upon the readers to also read his previous columns in this Journal to know about what all are happening in the world of digital transformation in this Industry 4.0 which has now been disrupted by Covid-19 Pandemic. MA

Webliography

Only webliographical references have been quoted below for economy of words and space.

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