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1. Digitalization Defined
Digitization and Digitalization have been defined in several different ways.

Digitalization is the use of digital technologies for transforming business models to improve efficiencies for better top and bottom lines in the process of creating a private ecosystem.

Digitalization journey is often envisioned as: How to get to know the customers better, improve your service levels and digitize the customer experience, it then extends to digitizing operations, products and Services. This creates a unique experience for all customer interactions in a controlled and predictable vendor environment.

This paper defines digitization as the process by which various analog elements into electronically readable formats in order to create a paperless environment in an organization.

2. Need for Digitalization
In the Digital Era, organizations, urgently need to do the following

• Change business models promptly to accommodate the changes ushered in by digitalization
• Manage large ecosystems that emerge due to Digitalization
• Enhance user experience
• Increase their services or products portfolio to cover a large user group quickly

The need for Digital business transformation is not a state of being, it is a journey and this journey is guided by three basic questions:

Why transform?
All businesses need to be digitally transformed due to the omnipresent web. The larger purpose is to utilize the ever increasing omniscient data which can be used to increase efficiencies, make operations agile and improve bottom lines. Needless to say, it’s also essential to stay competitive and relevant in the digital era.

What to transform?
Every organization would have some level of digitalization in place e.g a website or an ERP. To initiate a digital transformation journey, it is essential to know the current digitized state and the envisaged future state. An initial assessment of the current degree of digitization will help to perceive the level of digitization required in the future of a digitalized state. Over digitization should always be avoided to ensure any economic journey of digitalization.

Enterprises must have a clear reason to invest in digitalization. Bristlecone Diagnosis frameworks helps in gauging the degree of digitization in each function of the organization and hence decide the future levels that enable adequate transformation.

How to transform?
Digital transformation in any enterprise starts with the customer: How can we understand their customers better, improve their service levels and digitize the customer experience. It then extends to digitizing products & services followed by the organization’s operation.

Bristlecone transformation frameworks will help in understanding the journey for Digitalization Transformation.
3. Transformation in Action

The above mentioned Diagnosis and assessments suggest the level of transformation at the beginning of the Transformation Journey.

The journey starts with the Initiate phase of the IIDIO (Initiate : Ideate : Design : Implementation: Operate) framework, and it helps follow through the ideate stage.

A report from the above assessment shows the various functions in their digitized state and the gap in the degree of digitization required to meet the overall organization Digitalization goal.

The assessment usually covers People, Processes & Product or the 6 M’s of an Organization namely: Men, Machine, Materials, Methods, Market & Money.

This helps in the next stage - ideate which is about perceiving the end goal and the process to do so. In the Design phase subsequently - the function based automation and degree is created as a blue print. The design is then implemented function-wise and driven by an Organization Change Management initiative, championed by the senior leadership.

4. Transformation Framework

Digital transformation often begins with the ecosystem and essentially the customer. Better customer insights with improvement in service levels and digitizing the customer experience. Digitization is then extended to three additional areas - Operations, Products and services (see Figure 3).

The Digital Transformation Framework if introduced in a phased manner will play a crucial role in setting up the right organizational priorities and help in identifying the important focus areas through the above mentioned assessment process in Figure 2. During the execution of the Digital Transformation Framework, some project based temporary KPIs will be introduced for the relevant stakeholders. These will not and should not affect the organization KPI’s.
Digitizing the Customer Experience

Since Digitalization is the key to enhancing customer experience – the Framework starts with Digitizing Customer Experience.

Current Products and Services need to be assimilated with current customer experiences. Using CRM and similar technologies, today’s companies can identify historically purchased products, the competitive landscape and emotions affiliated to the products or services.

Social media trends help us to understand the buying behavior of the customer for instance, what additional products are bought by customers who have a similar buying history, what is the average purchase size etc. Tools like R-programming, help in customizing such activities. Tools for understanding web and social media presence for enhancing customer experience. This further supports carrying out targeted marketing campaigns to penetrate deeper in the customer ecosystem.

Digitizing Products & Services

Organizations today are now focusing on selling experience rather than just selling products. For example, when a customer walks into an online automotive showroom, he can chat with a sales representative and take the car for a virtual test drive. Upon deciding on the car he can use his mobile app to track its movement through the manufacturing lifecycle making him feel connected to the whole experience.

Sensors installed in the car kick starts the IoT elements once the customer owns the car, which raises an alarm to the customer and the car manufacturer when certain parts need servicing allowing the customer or manufacturer to take action before a problem occurs. This creates a seamless experience for the customer right from the time when he decides to buy a car to the time when he needs a service.

Digitizing Operations

To digitize their business operations organizations are now using SMAC technology stack aided by IoT. For instance, in-bound logistics can gain from big data analytics tremendously in the way they operate. They can operate more smoothly by tracking product movements through various IoT based sensors. For uniform business processing platforms cloud can be used and mobile platforms can be used to enable employees to perform their work anytime, anywhere and on any device.

Digitizing Organization

All the above followed by the automation of key backend functions-- using ERP systems encompassing, Finance, HR, SCM etc., Include this phase where the organization is functionally digitized. This provides enterprise related workflows and data, promptly, to aid decision support systems which help in making the organization more agile. This agility aids in changing business models and creating agile private ecosystems which enhance customer experience even further and hence impact the top and bottom lines favorably.
5. Enterprise Digitalization Roadmap

In the digital era, it will be more difficult to create value sequentially (for example through the supply chain) and it will be primarily created by sharing knowledge. This addresses new market needs that will replace the way existing products and services are delivered. This knowledge will be facilitated by rules that are established by the digital participants in the private ecosystem of an organization.

Function wise digitization will be required to be achieved as per the Enterprise Digitization framework below to achieve the necessary digitalization roadmap.

Bitcoin is an example of such an ecosystem. This means the supply and demand model begins to blur; the supply side or demand side of these ecosystems can be a single enterprise or a group of enterprises, and they can be supplying and demanding at the same time. The criterion for a digital ecosystem is to inculcate digitization for both supply-side and demand-side participants.
6. Right Digitalization

Consider what makes a good set of digital business by referring to Figure 6 and noting the following principles:

- Assessments give us insights to:
  - "How digital are we?"
  - "What business and financial benefits can we expect when we successfully attain our digitalization goals?"
- A “balance point” describes the reasons why an enterprise shouldn’t over digitalize
- Digital business KPIs do not replace project-level metrics for digital business initiatives and projects

<table>
<thead>
<tr>
<th>Customer Experience Services</th>
<th>Sales and Marketing</th>
<th>Operations</th>
<th>Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digitalizing Customer Interactions</td>
<td>Digitalizing Customer Service</td>
<td>Digitalizing Customer Marketing</td>
<td>Digitalizing Customer Supply Chain</td>
</tr>
<tr>
<td>20% - 25% higher 24/7 availability</td>
<td>20% - 25% lower cost of acquisition</td>
<td>2% - 3% higher revenue</td>
<td>1% - 2% higher revenue per employee</td>
</tr>
<tr>
<td>Balance Point: Customer Satisfaction</td>
<td>7% - 12% higher conversion</td>
<td>30% - 20% lower cost of sales</td>
<td>2% - 3% higher complete satisfaction</td>
</tr>
<tr>
<td>% of interactions that are digital</td>
<td>% of marketing spend that is digital</td>
<td>% of revenue through digital channels</td>
<td>% of departments using new digitalized workplace model</td>
</tr>
<tr>
<td>20%</td>
<td>15%</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Figure 6: Right Digitalization**

Data Source: Gartner (March 2016)

Right level of digitalization is determined with following attributes:

- Degree of digitalization of the organization
- Geography – Country / City
- People & Culture
- Long term vision for Digitalization

The assessment mentioned earlier provides a point of balance which helps in limiting the digitization of the core and tertiary functions.

This means that Digitization KPI sets, during the digitization of each function are temporary as compared to Digitalization KPI’s and the project level KPI’s.
7. Digitalization Journey

One of the keys in the Digitalization journey is to digitize the participatory functions of an organization as key stakeholders. Digitizing HR, Financial Management, Marketing, Sales, Procurement and other such functions provides examples of operational digitization in the overall digitalization strategy.

Different tools and platforms are used for each participatory function, depending on its degree of digitization. For example, Ariba could be a tool of choice for the Procurement, Sourcing and Spend functions of the organization to digitize the relevant areas. This in turn helps in receiving better insights into the category wise spending and the participation of external vendors. This tool, being on cloud, further helps in creating the vendor ecosystem, by on boarding the non-existing members on its own platform – thus creating a private digitalized ecosystem for the organization.

Similarly, create a harmonized data exchange post digitization to seamlessly provide details to multiple devices as required through the SMAC environment.

The possibility of information exchange and access through multiple devices creates an ecosystem of buyers and sellers which helps to change the business models quickly. The agile backend is now able to assess the internal and external need for this change rapidly.

8. Organization Change Management

As organizations seek to survive and thrive, they find it essential to evolve the organizational structure and best practices that are needed to remain relevant and competitive. As suggested above – each function needs to be digitized in order to prepare the organization in its Digitalization journey. The products and processes could get digitized as mentioned above – but People require to change themselves in order to adopt to these changes, to use the systems effectively and to participate in the newly created ecosystem. The figure below illustrates how an organization prepares itself for change management while embracing digitization.
9. Ecosystem for Global Dominance

Organizations go through the digitalization journey to create an ecosystem and provide a significant number of products and services which focus on the customer experience.

This in turn creates an agile backend and a robust ecosystem to change business models in quick succession as required by the customers and the environment, when supported by the private ecosystem of the organization. This results in improved toplines and bottom lines.

Enterprises like Walmart, Airbus have proved in the past that by creating an ecosystem and introducing their standards in the industry value chain they have become dominant forces in the future global markets.

Volume II – will cover the Technology trends, Commercial models & Talent for Digitization and Digitalization.

References

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About the author

Jasvir Singh Nagi
Jasvir leads the APAC region for Bristlecone. He is an IT industry veteran with over twenty years of experience in IT and ITES spanning across Energy & Utilities, Manufacturing, Retail, Telco, Maritime, Banking & Payment, Healthcare and Education verticals. His areas of expertise include Business building, Sales, Strategic Business planning, IT strategy Consulting, Operations management and the design & development of Turnkey solutions. He holds a degree in Electronics Engineering from the Pune University. He is an alumnus of IIM-C along with several major certifications in sales and leadership from the Indian School of Business (ISB).