Editor's Point of View…

Digital Transformation is the profound transformation of business and organizational activities, processes, competencies and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way, with present and future shifts in mind.

While Digital Transformation is predominantly used in a business context, it also impacts other organizations such as governments, public sector agencies and organizations which are involved in tackling societal challenges such as pollution and aging populations by leveraging one or more of these existing and emerging technologies.

Digital Transformation is a journey with multiple connected intermediary goals, in the end, striving towards continuous optimization across processes, divisions and the business ecosystem of a hyper-connected age where building the right bridges *(between front end and back office, data from 'things' and decisions, people, teams, technologies, various players in ecosystems etc.)* in function of that journey is key to succeed.

A Digital Transformation strategy aims to create the capabilities of fully leveraging the possibilities and opportunities of new technologies and their impact faster, better and in more innovative way in the future. A Digital Transformation journey needs a staged approach with a clear roadmap, involving a variety of stakeholders, beyond silos and internal/external limitations. This roadmap takes into account that end goals will continue to move as Digital Transformation de facto is an ongoing journey, as is change and digital innovation.

The movement towards the edges also reflects in technologies and the decentralization of work and business models.

From a technology perspective think about how data analysis is moving to the edge, the decentralization of information management, the shifts in security towards the endpoints, the impact of the Internet of Things and much more.

The Digital Transformation/Revolution, also known as the Third Industrial Revolution, is the shift from mechanical and analogue electronic technology to digital electronics which began anywhere from the late 1950s to the late 1970s with the adoption and proliferation of digital computers and digital record keeping that continues to the present day. Implicitly, the term also refers to the sweeping changes brought about by digital computing and communication technology during (and after) the latter half of the 20th century. Analogous to the Agricultural Revolution and Industrial Revolution, the Digital Revolution marked the beginning of the Information Age.

Regards,
Sohan Khemka

CONTENTS

DIGITAL TRANSFORMATION

UNDERSTANDING DIGITAL TRANSFORMATION:

The world is changing and going digital. This transformation has an impact on many of our daily actions communicating, staying informed, and making purchases as well as in companies that rely on new technology to reinvent their economic models.

Objective of Digital Transformation to make them more efficient, more collaborative and more fluid. In fact, DIGITAL TRANSFORMATION relies on two key factors:

ACCELERATION (including fluidity of exchanges and increased productivity) and WIDESPREAD ACCESSIBILITY OF TASKS (fewer silos, more collaboration).

In a company, this transformation takes various forms: a CRM to improve visibility of prospective clients and automate business processes for increased efficiency, an intranet to optimize collaborative work, a Cloud to store data online, SaaS models (with no need for on-site installation), etc.

These tools are a gold mine when it comes to staying competitive in a more and more competing world. However, to achieve maximum efficiency, it all comes down to one factor:

"DIGITALIZATION"
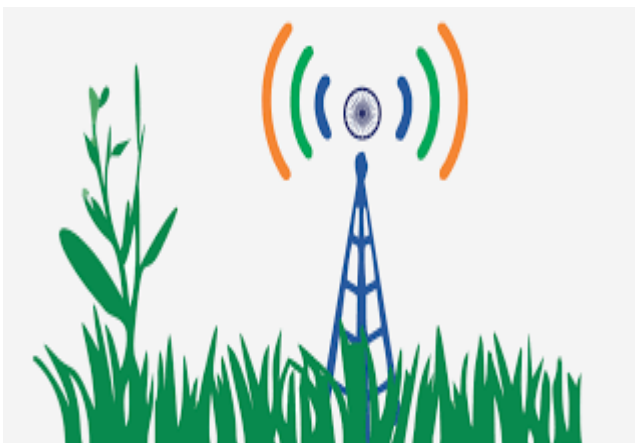
DIGITIZATION:

In political, business, trade, industry and media discourses, digitization is defined as "the *conversion* of analog information into digital form" (i.e. numeric, binary format). Digitizing is technically explained as the representation of signals, images, sounds and objects by generating a series of numbers, expressed as a discrete value.

The majority of sectors and industries in media, banking and finance, telecoms, medtech and health care have been strongly affected by this conversion of information.

DIGITALIZATION:

Unlike digitization, digitalization is the actual 'process' of the technologically-induced change within these industries. This process has enabled much of the phenomena today known as the Internet of Things, Industrial Internet, Industry 4.0, Big data, machine to machine communication, block chain, crypto currencies etc.

A common misconception is that digitalization essentially means the usage of more IT, in order to enable and take advantage of digital technology and data.

DIGITAL TRANSFORMATION:

Finally, Digital Transformation is described as "the total and overall societal effect of digitalization". Digitization has enabled the process of digitalization, which resulted in stronger opportunities to transform and change existing business models, consumption patterns, socio-economic structures, legal and policy measures, organizational patterns, cultural barriers, etc.

Digitization (the conversion), digitalization (the process) and the Digital Transformation (the effect) therefore accelerate and illuminate the already existing and ongoing horizontal and global processes of change in society.

RISE IN DIGITAL TECHNOLOGY USE

In the late 1980s, less than 1% of the world's technologically stored information was in digital format, while it was 94% in 2007, with more than 99% by 2014.The year 2002 is estimated to be the year when human kind was able to store more information in digital, than in analog format (the "beginning of the digital age"). It is estimated that the world's capacity to store information has increased from 2.6 (optimally compressed) Exabyte's in 1986, to some 5,000 Exabyte in 2014 (5 zettabytes).

1990

Cell phone subscribers: 12.5 million (0.25% of world population in 1990)
Internet users: 2.8 million (0.05% of world population in 1990)

2002

Cell phone subscribers: 1.5 billion (19% of world population in 2002)
Internet users: 631 million (11% of world population in 2002)

2010

Cell phone subscribers: 4 billion (68% of world population in 2010)
 Internet users: 1.8 billion (26.6% of world population in 2010)

2016

Internet users: 3.9 billion (49.5% of world population in 2016) centers.

## DIGITALIZING DATA: A KEY STEP IN PLANNING YOUR DIGITAL TRANSFORMATION

Rome wasn't built in a day and neither will you achieve Digital Transformation   in just a few clicks: several steps have to be taken. The first one is **Digitizing Data**: an essential prerequisite whereby you digitalize all the elements that will

assist you in the transformation, including both incoming and outgoing flows.

Digitalization can be implemented in all corporate areas. It entails two steps:

1. Converting existing physical documents into a **digital format**
2. Directly creating **digital documents** and bypassing paper altogether

A 100**% Digital Management of data** equals greater processing efficiency and fewer risks for losses. It is also an opportunity to digitize established business processes and define the roles each one will play in a collaborative context– who will be in charge of digitization? Who will choose the most suitable software solution?
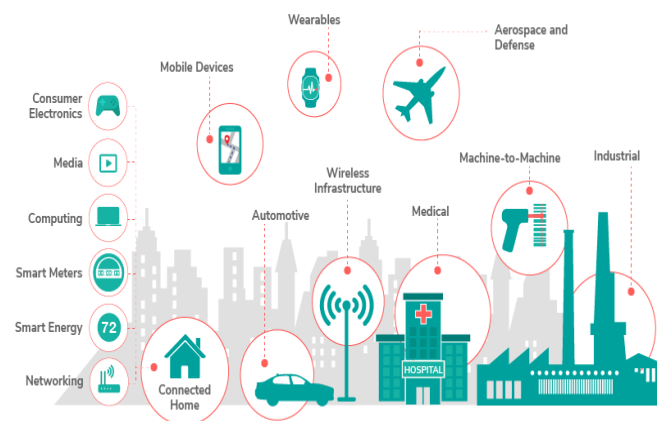

ADVANTAGES OF DIGITAL TRANSFORMATION

It's still early, but so far the evidence for companies leveraging digital technology is encouraging. After reorganizing operations and successfully changing company culture, here are the benefits your enterprise can expect:

- **Reduced costs:** Optimizing business technology and operations around digital technology means cost-per-transaction savings *and* increased sales.

- **Improved customer strategy:** New technologies create capabilities that can help a company acquire, retain, and assist

customers while simultaneously reducing marketing spends.

- **Consolidated Operations:** The introduction of cost-effective, customer-focused digital tasks streamlines business workflows and eliminates overhead associated with outdated solutions.

- **Analytics:** Digitalization gives companies the ability to combine data from all customer interactions and formerly unstructured sources into a useful, actionable format to optimize customer experiences and expenses.

- **More Customer-Centric Focus:** Digital Transformation's main concern is using technology to enhance the customer experience. By shifting focus and paying more attention to what customers want, service is improved consistently across all touch points and channels.
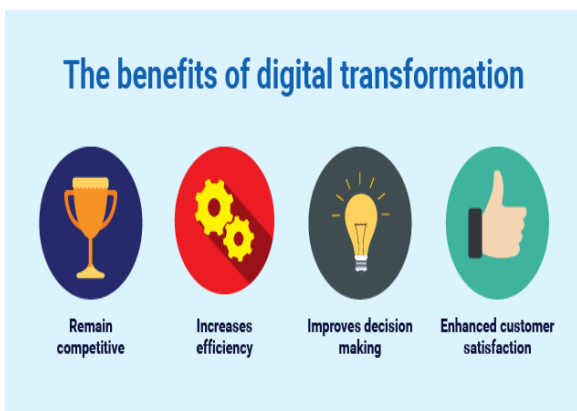
- **New products/services:** With this new, customer-centric focus, an enterprise is better equipped than ever before to adapt to its customers and the competitive industry landscape.

- **Accurate market segmentation:** New technology enables businesses to discover more adaptive and agile models based on customer parameters that were impossible to uncover and/or track in the past.

- **Improved silos:** Identifying silos that span multiple functions and processes becomes much easier, allowing an organization to increase its efficiency and impact.

- **Universal Customer Experience:** Connecting enterprise-wide systems and technologies simplifies and universalizes the customer experience, regardless of when, where, or how they choose to interact with a brand.

- **Increased agility and innovation:** By eliminating the dependence on slow legacy IT systems, transformed businesses make themselves more nimble and responsive to current market trends and demands.

MAKING DIGITAL TRANFORMATION A SUCCESS

While each organization leverages its technology differently, there are a few universal keys to making the most of Digital Transformation. Here are three things your company needs to focus on when making changes:

Connecting old and new technology: Digital innovation can only be as effective as the rest of your technology allows it to be, so understanding current workflows and how technology impacts them is critical. Review operating model differences and their speeds, agility, fluidity, and customer involvement ahead of time to prevent problems from occurring down the road. Don't let past technology investments or failures affect future adoption.

Establishing a new culture: Making sure your enterprise technology is ready for the digital age is great, but transformation falls flat if employees don't believe in it. A workforce needs appropriate training and continuous learning opportunities to cultivate the knowledge and skills necessary for maximizing Digital Transformation's impact. Start by making changes to critical processes that link legacy systems to new ones.

Fostering collaboration: During your transition, the coexistence of two different models has the potential to bog down operations and bring decision-making into question. These negatives only get worse without open lines of communication. Organizational leaders should communicate clear expectations regarding employee responsibility and accountability on a continuous basis to minimize disruptions.

As more and more companies transform themselves, the potential is exciting and the possibilities are largely untapped. Digital technology has the potential to revolutionize industries, so don't be afraid to think outside the box and try something new.

OPPORTUNITIES AND CHALLENGES

Digital Transformation   is a major challenge and opportunity. When planning for Digital Transformation, organizations must factor the cultural changes they'll confront as workers and organizational leaders adjust to adopting and relying on unfamiliar technologies. Digital Transformation has created unique marketplace challenges and opportunities, as organizations must contend with nimble competitors who take advantage of the low barrier to entry that technology provides. Additionally, due to the high importance given today to technology and the widespread use of it, the implications of digitization for revenues, profits and opportunities have a dramatic upside potential. We can understand Digital Transformation   through some real-world examples.

Digital Transformation   in hospitality management

It focuses on ambitious Digital Transformation, aiming to put the customer back at the center of its strategy and operations. We need to assess organizational structure to embrace Digital Transformation   and identify how data from online content and reviews might play a role in increasing booking. Latest advancement in this

respect are Online Travel Agencies, service aggregators like Expedia, Booking.com. of cloud computing. Some of them are discussed below:

Digital Transformation   in E-Commerce

Digital experience has become inevitable without e-commerce interaction. Big players like Amazon.com, Alibaba.com have already disrupted the shopping journey. But now we have more challenging tasks of avoiding sequence of events that lead to the security breaches like theft of debit and credit card numbers as well as the personal information of millions of customers. We need to improve over our infrastructure with minute details like safe transactional operations, improved customer satisfaction along with data security.

Digital Transformation   in banking

It focuses on Digital Transformation   of banking sector in seeking regional growth amidst a new digital era. Banks have already invested heavily in technology and infrastructure, which bring dramatic changes and rewired this sector for digital innovation. From online banking (bank in your pocket), to ATM availability at every nook and corner has enriched the user experience. Major forces of the Digital Transformation strategy involve the overhaul of organization, the rapid enhancements of highly scalable digital platforms, and the leverage on technology to sculpt the customer experience, and the internal

evolution and external partnering in seeking new digital innovation.

Digital Transformation in training

With the increase of online learning tools and facilities organizations and individuals are looking for more flexible ways per personal development. Using video driven lectures, online learning communities and learning management systems allows creating new business models which disrupt the traditional lecture driven training sessions.

Digital Transformation in Healthcare

It concentrates on the application of IT-reliant services for facilitating the management and delivery of health services. It involves storage and exchange of clinical data (e.g. electronic medical records, electronic health records), inter-professional communication (e.g. secure e-mail and direct messaging), computer-based support (e.g. clinical decision support systems, computerized physician order entry), patient-provider interaction and service delivery (e.g. patient referral and handover systems), and education. Most studies implicitly report on cases from primary care (e.g. family doctors, medical specialists), secondary care (e.g. hospitals, clinics), or medical research facilities. However, Digital Transformation in healthcare also takes place in areas other than clinics and research facilities, like

for example community-based health promotion and outpatient care services.

> "The biggest part of *digital transformation* is *changing* the way we *think*."
>
> Simeon Preston

Due to technological advances, the business world keeps changing rapidly. As a result, customers themselves have changed significantly as well.

In fact, these days the customer journey is dictated by today's **digital consumers.** These new customers are tech-savvy and expect to receive efficient and seamless customer service within seconds.

And they are the main reason why Digital Transformation is so important for businesses.

Digital Transformation is about **making things simple, enjoyable, and engaging for the customer at each touch point.**

For instance, let's say, your customer needs to open a bank account. Without having a digitalized customer journey, what they can do is to visit the nearest bank branch and spend several hours there waiting, filling out papers and then waiting again...

But, why would you make your customers spend their valuable time filling out papers when you can digitize the whole process? In fact, by digitizing your customer journey, you can reduce the time needed to open an account from several hours to 15 minutes. Yes, really.

As for embracing Digital Transformation, it's worth mentioning Africa where the banking sector is fully digitalized and mobile banking allows customers to send, receive and store money with a single click using their mobile phones.

How Can You Drive Digital Transformation?

Driving Digital Transformation in a company is not easy. Line of business leaders is looking to transform their business processes and achieve tangible business outcomes. However, to do this, they need help from IT leaders who can provide them with technology solutions to achieve these outcomes. So, line of business and IT leaders has to work in collaboration to create the environment and resources for digital business.

Gone are the days where business leaders and IT leaders had relatively non-overlapping focus areas. The leaders from both areas are jointly responsible for customer success. To succeed, they need to jointly focus on the following areas:

People, Process, and Culture
Empower people with the right digital skills, updated processes, and an adaptive culture toward, transforming their business.

Reimagined Value
Tie digital investments to value realized.

Data and Analytics
Expand cross-organization and customer visibility, both historical and in real time.

Security
Securely connect every transaction, communication, and endpoint across the value chain.

Orchestration
Grow/shrink processes and operations on demand.

Technology and Data Architecture
Use an integrated technology platform covering all technology needs.

The world is changing fast. The choices you make now will decide whether you're setting the pace in your industry or playing catch-up. There's never been a better time to transform your business. No matter where you are in your Digital Transformation, CR2 Technologies Ltd. can help you build a smarter, faster, and more competitive business. CR2 is your foundation for Digital Transformation, with a comprehensive set of products, solutions, and services for providing connectivity, security, automation, and analytics across your entire value-chain.

Digital Transformation is having huge effects in every industry. Boards of every company are concerned about the impact of digitization on their ability to ensure the company's business relevance and continuity. Forward-looking leaders understand the seismic shift that's happening as their industries and competitors embrace Digital Transformation. They're worried about its potential impact to:

• Disrupt their company's business model, making it unviable or irrelevant

• Force them into a mode of "thrive, survive, or go extinct"

• Give their competition the ability to continuously innovate and respond to market changes more quickly than their own company

• Enable competitors to grab market share and sustained competitive differentiation

These leaders are right to be concerned Because Digital Transformations translate to real-world business results.

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