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The Truth About Digital Economies and Transformation

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Abstract

We are living in an age of digital revolution, where technology-driven change, new innovation, and increase adoption of digital disruption are happening every day. Most companies started their digital journey years ago and initially offer limited product and services via the web and later via multi-channel. The advent of social media platform, the proliferation of mobile device, and availability of cloud native services has impacted the way business operate and force the organization to think and prepare for the digital change.

Digital disruption is one of the main drivers of change, reshaping customer expectations, making products, services and prices easier to compare, and opening up the market to a new breed of data-rich entrants and startups.

This paper examines the digital economies and transformation concept, pre-requisites, approach and impact on key industries and provides guidance and insight into how organization can successfully transform their business digitally and becomes a true Digital Enterprise.

Executive Summary

Industry Analysts Prediction:

- ▲ Personalized experiences are no longer just a nice-to-have (Forrester)
- ▲ Digital technology platforms are the future (Gartner IT Technology Trends, 2017)
- ▲ CIOs expect digital revenues to grow from 16% to 37% (Gartner CIO Agenda, 2017)

Digital revolution is a game changer. It forces the organization to re-strategize how to communicate with their clients, vendors and partners, reposition the business and how to manage their operations. The advent of new digital technologies has resulted in new innovations and changing entire industries.

Customers are expecting greater responsiveness from the businesses because consumers are using digital tools and with easy access to information and communication capabilities they expect the companies to keep up. Increasing adoption of digital disruption, new types of competitors and solutions arising in this space, it's inevitable for the organization and people to embrace the digital revolution.

Today, the need for speed dominates the digital economy. Digital consumers are impatient. They want what they want, and they want it now. To address this digital change the companies are embarking on digital transformation journey that is built around the customer experience and expectation.

Top trends driving the digital transformation
1. Mobility
2. Demand for apps
3. Demand for self-service

"87% of IT decision Makers see enterprise mobility as critical to their company's profitability."

(Source: Appian 2016 technology Outlook survey)

It is becoming clear that no organization or people will be exempt from this revolution. Leaders understand the importance of digital economies and transformation. They know that those who embrace change will be the ones that survive. The fact is, very few businesses feel they are prepared for the digital changes that are coming.

Most organizations have adopted the following key digital transformation strategies to achieve their digital goals and vision:

1. Creating seamless interactions through web, social, mobile and anywhere, based on customer expectation and experience.

2. Digitization of the back office process and adding mobility functionality

3. Digitization of channels, processes, organization, people and products with OMNI – channel integration

Understanding the Digital terms

Even though there are myriad definitions of digital terms, which cause confusion, misunderstanding and disruption, here follows the most common business perspective definitions. Each organisation may have their own definition what these digital terms means to their business.

▲ **Digital:**

Digital describes electronic technology that generates, stores, and processes data in terms of two states: positive and non-positive. Positive is expressed or represented by the number 1 and non-positive by the number 0 [1]

▲ **Digital Strategy:**

A *digital strategy*, sometimes called a digital media strategy, is a plan for maximizing the business benefits of data assets and technology-focused initiatives. A successful digital strategy requires a cross-functional team with executive leadership, marketing and information technology (IT) members. [2]

▲ **Digital Transformation:**

Digital transformation is the profound and accelerating transformation of business activities, processes, competencies and models to fully leverage the changes and opportunities of digital technologies and their impact across society in a strategic and prioritized way.[2]

▲ **Digital Business:**

Digital business is the creation of new business designs by blurring the digital and physical worlds. ... Digital business promises to usher in an unprecedented convergence of people, business, and things that disrupts existing business models". Linking IT forces* with the Internet of Things (IoT) [4]

▲ **Digital disruptor:**

Digital disruption is the change that occurs when new digital technologies and business models affect the value proposition of existing goods and services [13]

How do we go about digital transformation?

Digital transformation is a journey, and each organization determines the appropriate next steps by focusing on the areas of greatest opportunity and business need. Businesses are at different stages and the journey can start from any point.

In order to achieve the growth that digitization promises; organizations must act quickly, decisively, and strategically along with three important dimensions:

73% say digital transformation key to meeting customer expectations (Source: Appian)

- ▲ Clear, long-term digital vision with open innovation
- ▲ Digital business leadership ambition
- ▲ Customer focused digital strategies

Moreover, organizations need to decide the intensity with which they wish to drive the digital transformation and to step into the digital era.

Digital Transformation Objectives

The primary objectives of digital transformation are:

- ▲ Strengthen customer engagement in order to increase customer loyalty and accelerate market penetration.

- ▲ Streamline operational efficiency to improve organizational effectiveness and profitability.

Digital Transformation Approach

["…transformation is not merely a digital front end to business. You can only go so far with this approach. To become a digital business, you will also need to embrace the digital transformation of back-end process… you may find that you need to spend $4 on digital operational excellence for every $1 you spend on digital customer experience…" Source: Forrester]

The transformation into the 'Digital Enterprise' will not be simple and it will require some fundamental rethinking and "best approach" that lead to a successful digital transformation.

In order to drive successful digital transformation - A multi-dimension approach is required as depicted in the figure below.

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Brief description of Transformation Approach:

▲ **Digital Strategy:**   Define the organizations digital strategy

▲ **Organization:**   Create a new digital business model, manage digital culture and mindset change

▲ **People:**   Managed digital skills/training/resources

▲ **Process:**   Digital capability management, customer behaviour analysis, automation and support

▲ **Technology:**	Digital technology management, responsive architecture, innovative tools and Applications
▲ **Adoption:**	Alignment with emerging business and technologies, governance and performance management

Essence of digital journey

Before embarking on a digital journey, let's understand the key concept of digital transformation:

▲ Understand how social media changes the way people work and adjust accordingly as business brings greater gains,

▲ Think about how modern technologies can change the workplace for the better,

▲ Completely map the customer journey,

▲ Carefully assess how customers interact with the organization and take strides to refine and optimize internal operations around those experiences

Digital Transformation Steps

The digital transformation approach requires the following steps:

1. *Organization and Cultural transformation*

   Our digital age requires a drastic, profound reset of how organization staff reacts to customer needs. This means thinking customer first, rather than technology, as organizations tend to think product/technology first, but customers don't. It means being conscious that small digital players and start-ups are driving changes gain market share faster in a manner that is more disruptive to traditional business models. For example FinTech companies are prime example of small digital players who pose massive threat to the traditional banks' models.

   It means understanding that organizational silos pose significant obstacles to creating new solutions for customers. Most importantly, it means looking inward, changing organizational beliefs, habits to client facilities and driving digital innovation.

2. *IT agility and customer experience*

   Choosing the right digital platform and tools that provides a development environment with more flexibility and the ability to respond to even anticipate customer demand, a platform where creativity can be delivered very quickly with low or no code using drag and drop functionality. An environment which empower developers to build sophisticated enterprise applications faster than a traditional approach and transforming the customer experience, creating happier customer interactions on web, social, mobile and anywhere.

3. *Digital business model*

   Organization need to create a new digital business model - where convergence of people, and business, can take place. Having cross-functional teams mixing IT, distribution, and marketing teams where they seek markets with new technology, digital products and laying the foundation for seizing new opportunities – with the idea that short-term gains will lead to long-term advantage.

Digital strategies that drive the successful digital transformation

Mobile is the cornerstone of digital strategy, as mobile becomes most customers' first touch point

Digital strategy is the cornerstone of successful digital transformation, before any organization embarks on digital transformation journey; they have to articulate the right digital strategy. Chart the organization futures with digital at the center and be clear-minded about where you can lead. Identify the capabilities the organization can provide better than anyone else.

The most capable organizations have a clear understanding of who they are and how they add value. This allows them to stay true to their unique identities and focus on developing the powerful capabilities that will reimagine and reinvent what they do and how they do it in order to thrive in a more digital world. The right strategy is bold yet practical—one that can actually be executed to drive transformations and to fuel sustainable and inclusive growth.

Most organizations have adopted the following digital transformation strategies to achieve their digital goals and vision

1. Creating seamless interactions through web, social, mobile and anywhere, based on customer expectation and experience. Automation of manual tasks and transforming process creation by configuration, a plug and play philosophy, data collection, analysis and reporting

2. Digitization of the back office process and adding mobility functionality, so that staff can access back operation anytime, anywhere, on mobile devices which contribute to the operational excellence

3. Digitization of channels, processes, organization, people and products with omni –channel, physical and digital operation integration, responsive architecture, mobility context, digital platform, remote advisory and transforming them into opportunities for innovation and growth

New type of technology platform that support the digital transformation

A new type of digital platform is required, one that drive faster development of customer-focused data management, analytics, mobility, social collaboration, and cloud based applications. This platform enables convergence of information on any topic from systems across the enterprise and enables action to be taken on that topic – in a single location, regardless of where the data resides. This kind of fast, easy, actionable, accurate, information is indispensable to digital transformation success. It fuels faster, more personalized customer interactions – resulting in improved customer experience, digital revenue and increased lifetime value of the customer base.

Digital platforms will also turn the back office into a high performance digital machine. It will also help to innovate faster so organizations can stay on top of fast-changing consumer expectations.

New type of architecture, applications and the methodology that support the digital business

Digital business requires next generation responsive (continuously variable) applications, which have the characteristics necessary to function

in a global, data driven, digital nervous system that ebbs and flows with changes constantly.

Responsive apps are architected in such a way that they can dynamically be reconfigured on the fly to account for any number of changing business conditions and technical requirements. This is done with a supercharged agile application development process and a low or no code digital transformation platform.

As mentioned above digital business requires the agile application development (DevOps) and liquid delivery process. Organization must embrace this process in order to implement the continual changes in a manner which keeps pace with all the digital changes and fluid delivery of these applications. Constant change is the hallmark of digital business and requires software that can self-adapt to continual changes.

Very few current applications are architected and designed to be responsive and they are not nearly fast enough to catalyze the emergence of digital business. Furthermore, given the sheer number of applications that will need to be written, the gap between available and necessary software engineers capable of this level of development is anticipated to decrease for the foreseeable future.

The role of security in digital transformation

The mantra of digital transformation - "customer interactions through web, social, mobile and anywhere anytime" possess new set of security threats and challenges to the organizations, as they digitizing their processes to improve efficiency, productivity and the overall customer experience, they must be able to do so securely and this is fundamental to effective digital transformation journey.

In today's environment cyber threats and criminal activity are becoming increasingly complex and the rise of malware campaigns deliberately targeting enterprise networks is a growing business concern. We can't protect what we can't see, and it is therefore critical that organization must embeded security across the entire network, applications and access points so as to detect, analyse and block any anomalous behavior. Tailoring usage and user behavior so that it aligns with corporate policies is also essential, as is continually identifying and assessing the cloud applications accessing

79% worry about hiring and retaining skilled developers to support digital transformation efforts.
(Source: Appian)

"Digital business moves at a faster pace than traditional business, and traditional security approaches designed for maximum control will no longer work in the new era of digital innovation."

By 2020, more than 25% of identified enterprise attacks will involve IoT, though IoT will account for only 10% of IT security budgets.
(Source: Gartner)

the network to determine if any data or IP is at risk. Therefore, it's incumbent upon organization to improve their existing security capabilities by adopting adaptive security architecture and technologies in order to protect their business and its customers in this new era of digital evolution.

The role of Big Data, Data Analytics in digital transformation

Big data analytics is the key for a successful digital transformation journey and many organizations recognised and understand the value Big Data provides to them. They are investmenting more frequently and relevant in Big Data and Data Analytics technologies and ensuring that such technologies have had a significant impact on the results of their organizations by establishing new ways of leveraging and montetizing on data.

As the organizations collects data that can be analyzed for insights that help the organization personalize its interactions with customers. Data can be used to find trends around a customer's habits, which is typically indicative of their future interests. Additionally, data collected from customers can be used for sentiment comparison, which shows the company how well or poorly products and experiences are being received. In addition to this, advanced analysis grants businesses more of an insight into any organization and production processes, customers and markets. With this information, businesses can more closely target and anticipate their customers' needs, making the necessary adjustments to improve their offerings and better engage their targeted audience members.

With the use of Big Data and Data Analystic technologies many organizations gain business better insights through data analysis and take faster and more accurate decisions, and ultimately have a valuable competitive advantage by developing new business models, discovering new product offerings or monetizing own data are the key areas of profit opportunities.

The categorization and analysis of data is also a critical part of a business' operational efficiency. Along with optimizing customer experiences and engagement, improving efficiency is viewed as a key driver of digital transformation.

By 2020, IDC is predicting that 50% of the G2000 companies will see the majority of their business depend on their ability to create digitally enhanced products, services and experiences.

Data analytics can drive growth and have a significant and positive impact on revenues. A successful digital transformation relies on these analytics; without them, businesses risk financial and competitive consequences. It's time for businesses to get serious about digital transformation if they want to advance, and to do that, they must begin taking control of their data that becomes the new currency of the digital economy.

Common myth and questions about digital transformation

1. Is digital only for customer facing touch-points, e.g. web, mobile, ecommerce?

Indeed customer facing touch point is very important and this is the corner stone of digital strategy, however organizations also need to focus on digitizing their back-office, which will help them to innovate faster so that they can stay on top of fast-changing consumer expectations. It does also provide the back-office the capability to run operations from a desktop or mobile device and allow employees to be fully mobile. They also have better visibility into the status of back-office operations.

2. What is the difference between digitalization and automation?

Digitalization

1. The process of using disruptive technologies to innovate and increase business success.
2. The means to reinvent business value, open new economies, expand into new markets, and provide new levels of customer satisfaction. [9]

Automation

Automation is the process of converting data to digital for use in a computer. Another term for Digitization. [9]

3. What is the impact and suitability of digital to the African marketplace

In this age of digital disruption, the African marketplace is not exempt from this disruption which has impacted the way African business operates. One of the main driving forces for the digital business is the ongoing mobile revolution. Currently, there are around 900 million

mobile phone subscriptions and around 400 million smart phones in Africa - and people really are using those phones. [5] For example Nigeria's teledensity is now 100.59 per cent as at the end of Jan. 2015 and active lines/phone numbers on the telecommunications operators' networks reach 140.82million. [7]

The growth numbers in the tech space are staggering but can also be misleading as there are major challenges that need to be overcome. Bandwidth problems, unavailability of skilled workforce and poor infrastructure create challenges for digital business models to materialise at its full capacity.

Another thing is sure now: African digital business models are emerging and the context of Africa is dominant in those models. if you want to succeed in digital business in Africa, you need to understand how culturally changeable and different Africa is. That requires that you need to be able to adjust your offering to the local environment. This all has its own implications for success in digital business in Africa.

4. **What industries are most vulnerable to a digital revolution**

Digital disruption is everywhere – reshaping the customer expectations and market to a new breed of data-rich entrants and startups.

Here are the seven industries most vulnerable to a digital disruption in no particular order.

1. **Banking and Insurance Services**

Banking and Insurance services industries are being disrupted by the digital revolution – Digital disruptors are attacking the banking and insurance industry, redefining customer expectations and reshaping industry boundaries with partnership of a new breed of startups - resulting in both improved operational efficiency and higher customer satisfaction.

2. **Technology Products and Services**

Technology Product and Services industry has the greatest potential for digital disruption between now and 2020. Technology innovation will continue to accelerate at an exciting and unnerving pace. This is thanks to a perfect storm of mobility, cloud, analytics, security, and a host of other technologies. Agility and rapid

execution will be critical if technology companies are to drive their own disruption and respond quickly to new challenges.

3. Telecommunications

Advent of startups such as Skype (Lite), WhatsApp, etc., are disrupting traditional messaging, voice and video calls, further eroding the revenue and customer base of established telcos. This shows how digital innovators are rapidly gaining market share and scale faster than incumbents.

It's necessary for telcos to rethink and develop strategies for turning the threat of disruption into opportunity by transforming their business with digital processes and business model.

4. Retail

In recent years, innovative online retailers such as Amazon, Flipkart, etc. have challenged the traditional retail strategies and capture a growing share of revenue that could be theirs.

Today digital is fundamental to the entire business and shopping experience, both in and out of the store. In this climate, all retailers must think like an agile startup as they blend their physical and digital assets to provide amazing customer experiences. There is a lot for retailers to gain.

Today, innovative retailers are using sensors, location services, and analytics to provide context-aware experiences that meet customers' specific needs at any given moment. For example a coupon delivered via text for an item the customer is looking at, or less time waiting at the checkout stand.

5. Media and Entertainment

The digital platforms are changing the fundamental workings of many businesses. Music and television have undergone radical changes in just a few years as mobile devices are empowering consumers and forever changing their habits in terms of how they listen and how they watch.

The sudden displacement of physical media by digital music players was just the beginning. The convergence of mobility, cloud, and video has already upended media and entertainment to a dizzying degree.

6. Print Media

Digital disruption is everywhere and print media is no exception to digital transformation. The evolution of digital media has significantly affected journalism and media outlets.

In fact digital technology is the driving force that shapes content creation and distribution. The distinction between print and digital is not relevant anymore: publishers have become, with varying degrees of success, digital media companies. Many print media companies have transformed themselves into digital media companies. But the industry continues to evolve, pushed by changing consumer behaviour and business innovation. Transformation, therefore, remains an imperative for many companies and turning the threat of disruption into opportunity by transforming their business with digital revenue, including advertising and subscriptions.

7. Education

Education is digitalizing rapidly. While web based initiatives and online courses are having huge success. They're proving that lectures and tutorials can be digitalized and copied like music, and that every student in the world can have access.

It's not just about video recordings of lectures and tutorials – it's a lot more advanced, with exercises, team work, forums and more. And this is just the beginning.

5. With connectivity issues and lack of bandwidth in rural areas, how does digital thrive?

It's true that a vast percentage of the population in Africa lives in areas that are rural, unserved, or underserved. A lack of adequate connectivity and bandwidth in rural areas are hampering the wider adoption of digital business. However, in recent years, teledensity has increased in several countries because African governments have

liberalized telecommunications markets, promoted competition, and adopted transparent regulatory policies. This is particularly true in Ghana, Uganda, South Africa, Kenya, Nigeria, etc.

Many rural and urban areas are rapidly developing; internet and mobile phone usage are growing, some urban and rural areas look the same as in Europe. So the connectivity and lack of bandwidth varies across different counties in Africa. For example rural areas of South Africa are very different from rural areas of Chad. Moreover, in South Africa a new cable, expected to come online in 2017, will further increase international bandwidth and so improve services generally, which further drive the digital adoption [5].

6. What is the relationship between cloud and digital?

If we want to understand the relationship between cloud and digital, first we need to understand that every application that enables the organisations to become a digital Enterprise is dependent on cloud services. The majority of these applications are designed to be Software-as-a-Service solutions. They are increasingly being built on Platform-as-a-Service so they can be configured for specific business processes and extended into various vertical markets.

Also, they depend on the economies of Infrastructure-as-a-Service connectivity, storage and computing services for mobile communications, data collection and analytics, and information dissemination. So, failing to incorporate a cloud migration plan into your digital transformation program will quickly derail your efforts.

7. What is the relationship between Robotic process automation (RPA) and other emerging technologies with digital transformation?

Many organizations across the globe are interested and exploring robotic process automation (RPA) emerging technology these days, especially they C-suite discussing how they can leverage this technology in accelerating their digital transformation journey.

Before we dive more into the relationship between RAP and digital transformation, let's first understand what RPA is.

Robotic process automation (RPA), software with artificial intelligence and machine learning capabilities that essentially automates other software, in simple terms "software that automates other software".

The RPA market is projected to reach $8.75 billion by 2024

(Source: Grand View Research, Inc)

Robotic process automation technology can eliminate or speed up routine digital tasks performed by humans - its promises to improve efficiency, boost productivity and save money by helping with or entirely replacing the manual, routine and often error-prone digital processing jobs such as claims processing, onboarding new customers, help desk support, customer service, etc.

Robotic process automation has already begun to make its way into many industries such as healthcare, financial, insurance and telecom/IT industries. One of the prime reasons for adopting this technology is because these industries handle large volumes of data entry and switching among various applications. Therefore, it becomes apparent that the use of RPA technology will only continue to grow.

Other emerging technologies:

The growth of technologies such as AI (artificial intelligence), and IoT (Internet of Things), will accelerate digitalization and further drive the digital vision, data usage, and evolution of new digital business model, jobs and processes. As more number of devices connects more people in useful and collaborative ways, every enterprise relationship will change. Organization, departments, and individuals need to accept the new reality of constant change to find a place in the digital future and turning the threat of disruption into opportunity.

8. **For companies running large ERP systems for many years, how does digital impact them?**

Traditional, or Core, ERP solutions provide better data and other business benefits to more efficiently provide products to customers. They also come with disadvantages; one of them is customization that can be problematic. Because customization requires a considerable amount of time and resources to implement the business and IT changes are costly to maintain.

Digital transformations, on the other hand, materially disrupt and improve current business models. More specifically, these initiatives find ways to leverage innovative technology to provide better products and service to customers. ERP is about greater efficiency without changing the business model, but digital transformations are about changing the business model and enabling business processes.

Digital transformation is putting new pressures on ERP systems to be agile enough in a constantly evolving IT and business environment.

Constant change is the hallmark of digital business; this requires new type of ERP solutions that can be dynamically reconfigured on the fly to account for any number of changing business conditions and technical requirements.

Therefore, organizations need to adopt an ERP strategy that deal with the speed and flexibility when reacting to digital business changes in business processes or on the organizational level, otherwise they could put digital transformation plans at risk.

9. What is the relation between BPM, iBPMS and digital transformation?

The business process management provides the necessary flexibility, agility, transparence and visibility that requires for the successfully digital transformation journey.

The best digital process management platform (iBPMS) provides a low or no code ideology built into it, that's why countless organization are turning to iBPMS to realize the agility and flexibility needed today for successful digital transformation.

BPM tied with agility is the key for digital transformation success

(Source: Forrester and Gartner)

How BITS Consultancy Services Can Help You In Your Digital Transformation Journey?

BITS Consultancy Services help companies in assessing their approach to digital transformation and defining their digital vision and operating strategies.

BITS also provide companies with an approach to execute their digital strategy while specification, selection and implementation of end-to-end digital solutions that empowering them to become digital leaders in their respective industries and capture wholly new sources of value.

Our areas of expertise are:

- ▲ Digital readiness assessment
- ▲ User behavior, expectation and experience analysis – Complete customer journey
- ▲ Digital strategy creation, actionable roadmap development and execution

- ▲ OMNI-Channel strategy creation
- ▲ Digital Products and Services innovation
- ▲ Digital technologies and solutions specification and selection
- ▲ Mobile application and website design and development
- ▲ E commerce design and development

For more information about our digital services offering, please visit www.bitscs.com or contact us: info-sa@bitscs.com

Conclusion

The evolution of digital economies and transformation has significantly affected all industries across the globe and has created more opportunities than ever before. Therefore, organizations must take the path of digitalization and have clearly defined digital strategy and blueprint with the focus on digital skills development and building the organization, leadership, mindset and culture, and adoption of appropriate digital technologies that the digital world requires.

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About BITS Consultancy Services

BITS Consultancy Services (BITSCS) is an established Business, Information Communication and Technology Consulting and IT resources Provider Company. It's specialized in delivering state-of-the-art end-to-end solutions in business and IT strategy, program/project management, business, IT and digital transformation, merger and acquisition, business app and technology specification and selection, enterprise architecture, business process management, enterprise-wide architectural design (EA), service oriented architecture (SOA), microservices architecture, system integration, system design and development, IT training, turnkey solutions and resourcing services.

For more information visit www.bitscs.com or contact info-sa@bitscs.com.

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