DISRUPTIVE DIGITAL

THE NEW NORMAL

Transform to an AGILE, Fearless &

Hyper-Connected Enterprise

ANUJ PANDEY

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CONTENTS

THE OUTLINE

Chapter 1: Shift to New World Order

The Chapter sets the context for Transformation and why organizations need to quickly align to the fast changing disruptive trends. It quickly gets into describing the 4 fundamental shifts, leading this transformation, and validates them with relevant reference cases leading change and driving disruptions.

Chapter 2: New Business Paradigms

Moving ahead, this chapter defines New Rules of the game leading up to a hyper competitive business environment. Highlight is on the existence of Capital and Startup eco-systems that have totally changed the business landscape forever. The theory is backed up with examples from new age successful startups like Google, Uber who have not only redefined the way businesses are run, but also in a way also redefined the way, products or services are delivered and more importantly how Customer's experience the product. The final part of book highlights the fact that, it's the VALUE CONUNDRUM in terms of its creation, delivery and sustenance, that will define the way consumers experience products and the better, the organization understand this for their customer, the higher they go in the value chain for their customers.

Chapter 3: Building Blocks

This Chapter goes deeper into defining what has changed for an Organization in the current scenario and how a new Definition of Hyper-Connected Digital Enterprise is taking shape. It further highlights the typical challenges; a Hyper-Connected Digital Enterprise will go through in its day to day operations and then defines the 6 key Building Blocks required to meet those challenges. This chapter finally ends by saying that the DIGITAL Enterprise has arrived and is here to stay.

Chapter 4: Enhancing Operational Agility

The book moves into the core of the Digital Maturity Model by clearly highlighting one of the 2 key pillars of the Model, The Organizational Internal Digital Maturity. The purpose is for organization to figure out where they stand against the key 6 capabilities on which the Organizational Maturity Level is judged. Final Part focuses on an assessment Tool for organizations to assess where they stand as against their desired digital goals.

Chapter 5: Customer Engagement Maturity

The Customer Engagement Maturity chapter highlights the key trends shaping and influencing Customer Experience and why is it the most sought-after area among new age companies. It goes further in highlighting the importance of Customer Journey Mapping in the Digital Era and how is it evolving over a period of time. Examples are cited for reference. Finally, Tools play a important part in measuring the scale of maturity in this area and the chapter focusses on building capability through the Customer Engagement Maturity Tools.

Chapter 6: Digital Roadmap Design

This is the core of the book, where all the pretext of the earlier chapter's comes together to build a constructive journey towards transformative efforts for building a Disruptive Digital Enterprise. The Digital Maturity Model, based on the tool sets built in the earlier chapters, namely Organizational Maturity and Customer Engagement Maturity, brings together both to define where an organization stand in the Digital Maturity, and if it intends to move to a different level of Digital engagement, what does it need to do. The Model highlights different stages of the Digital Maturity, namely, DIGITAL EXPLORERS, EXCAVATORS, EXPEDITIONERS & MASTERS. Roadmap design will depend on a lot of factors, though it will always be easier to define milestones based on which segment organizations want to operate on.

Chapter 7: The Transformation Agenda

The final countdown to building Roadmap for Digital Maturity is defining and Leading the Transformation journey of the Organization. It's certainly one of the most difficult aspects of Leadership within an organization and needs laser sharp focus, meticulous planning and a delicate but effective execution. The Final Chapter addresses the approach and provides guidelines and best practices to Senior Leadership to achieve a smooth transition and sustain it.

1. Shift to New World Order

For long we have heard about the 21st Century and the impact it will have on our lives. I have to be honest enough to say, that though I comprehend what others use to define it, never was I able to relate to it, in terms of how things are going to be any different from what we were doing then. Yes, the word itself sounded very overwhelming and the use of it meant that it was something transformative for the economy and people at large. Today, though, when I look back and try to comprehend the meaning with the impact it has, or it will have on us, it is very profound. Economies world over have faced the cyclical curve of growth and slowdown. It is during these times of dismay, when the great depression strikes there comes something innovative and transformative that has the capacity to alter the course of our being and with it the entire eco-system. So let's take a journey to the past to understand the key catalysts that became inflection points for the transformation of people and industry at large.

The constant drive to bring greater efficiency and productivity brought innovations that catapulted into Industrial Revolutions that have changed the course of human civilisation forever. The invention of power looms, for example, at the time of the first Industrial Revolution dramatically increased the productivity of the textile industry. Throughout the 18th Century Industrial Revolution, Britain's focus to use its natural resources to drive economic growth meant the replacement of manual work with mechanisation. Steam and other forms of power evolved to drive the greater proliferation of industrialisation replacing muscle power with machines. Thus, the rise of the factory system that gripped all of Europe and America, transformed the lives of people not only by improving their economic well-being but also their approach and culture. The 19th Century Industrial Revolution brought the world the first wave of automation with electrification, the automobile and mass production, just to name a few. These massive technological changes shaped the 20th

Century with IT, being an enabler for driving greater industrialisation. The 21st Century marks the era of robotics and intelligence with greater consolidation, collaboration and innovation driving a digital economy. It can also be termed as a disruptive Era, where businesses are going to build and rebuild under a constant threat of disruption.

Needless to say, post-2000, we have seen a significant influx of businesses posing questions on current business models and devising their stake in the new world order. In the process, traditional brick-and-mortar companies have been facing the heat nonetheless, for no fault of their own. The pecking world order has changed and the change was so sudden, that these companies, who, for years have been built under a defined set of assumptions and mindsets that helped them win in the market, now no longer hold true. The change was so swift and radical, that it just could not be ignored, for the incumbents would do that at their peril.

Disruptions Written All Over

While the pace of disruptions varies across the industry, it is pretty evident that no industry is immune to it. The rate at which such disruptions take place is enormous. It will be interesting to see how incumbent large enterprises, who with the scale and reach, fare in this disruptive and potentially explosive eco-system. Statistics tell us that companies starting up in the 1920s on the S&P 500 had 67 years at their disposal before they got disrupted. Today, this period has shrunk to fifteen years. The rate of disruptions is exploding at such a fast pace that you can no longer sit back and wait for things to happen. From 1955 to 2014, 89% of the Fortune 500 companies listed in the S&P 500 list were disrupted. What is alarming is the fact that the corporate mortality rate is only on the rise, engulfing with it, a higher number of companies every year. If we look at the recent scenario, since 2000, that is in just 17 years, we have 52% of them that existed on the list, getting disrupted. That's crazy, and so is the landscape we are moving toward going to be.
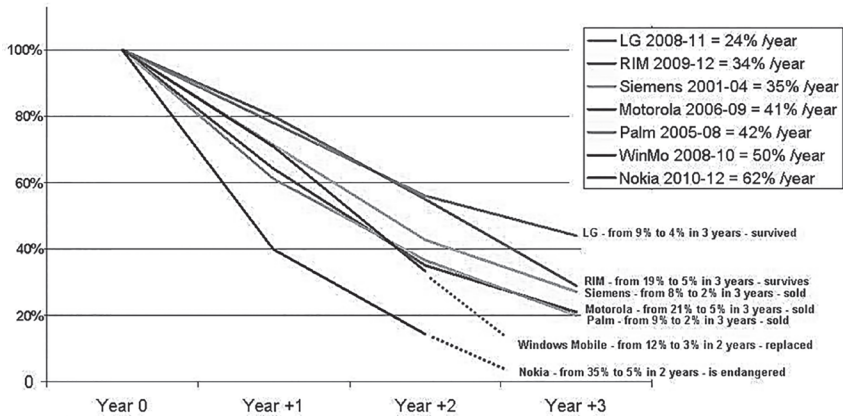
Take the example of the mobile handset industry, which is relatively new in the space as compared to others, but if you look at the pace of disruptions here, you would be able to understand what the scenario looks like in the future.

Mobile Handset Industry: Continuous Disruptions

The first significant disruption that rocked the mobile handset industry was when the devices that combined telephony and computing were offered for sales in the beginning of 1993. The first mobile phone to incorporate PDA features, maps, stock reports and news, was an IBM prototype developed in 1992 and demonstrated that year at the COMDEX computer industry trade show. Since then, whether it is moving from feature phone to smart phones, or from Native OS based system to a connected app eco-system, or, be it moving from 2G to 3G and now to 4G, mobile technologies have transformed our lives in the way we live, work and stay connected. According to Ericsson, in less than fifteen years, 3G and 4G technologies have reached three billion subscriptions, making mobile the most rapidly adopted consumer technology in history.

Seven Fastest Collapses of Market Share in Mobile Handset History
Nokia sets new world record for fastest collapse in history of mobile phones, falling 62% per year
(previous record was 50% per year: Microsoft Windows Mobile from 2008 - 2010)

LG 2008-11	= 24% /year
RIM 2009-12	= 34% /year
Siemens 2001-04	= 35% /year
Motorola 2006-09	= 41% /year
Palm 2005-08	= 42% /year
WinMo 2008-10	= 50% /year
Nokia 2010-12	= 62% /year

LG - from 9% to 4% in 3 years - survived

RIM - from 19% to 5% in 3 years - survives
Siemens - from 8% to 2% in 3 years - sold
Motorola - from 21% to 5% in 3 years - sold
Palm - from 9% to 2% in 3 years - sold

Windows Mobile - from 12% to 3% in 2 years - replaced

Nokia - from 35% to 5% in 2 years - is endangered

Source: TomiAhonen Consulting Analysis January 2013, based on company and industry market data

This fast changing industry has had its own set of casualties on its way though. The figure above highlights the seven fastest collapses during the 24-year mobile handset industry tenure.

The mid-2000 was dominated by feature phone companies like Nokia, Motorola, Sony Ericsson and LG. Nokia, being a brilliant

engineering, and manufacturing company focused on the product and features and had a dominant market share of 49.4% in the smart phone market by 2007. No one could beat Nokia in quality, price, and features of their mobile phones. Yet, in June 2007 when the first iPhone went on sale, Apple shipped just 1.5 million units in the iPhone's first two quarters. Since then, Apple had sold over 218m iPhones (up to the first quarter of 2012). In 2011, feature phones accounted for 70% of mobile phones sold worldwide and by mid-2013, smart phones outsold feature phones for the first time, accounting for 51.8% of mobile phone sales in the second quarter of that year. Without a doubt, all these developments were the byproduct of market forces and technological prowess that shaped and reshaped the market in a short span of time, thereby helping Apple become the leader in the high-end smartphone market closely followed by Samsung, while the fate of Nokia has been that of a swift fall. According to figures from Gartner, Nokia in just six years had suffered a massive slump from a dominant 49.4% in 2007 to just 3% in 2013 before Microsoft finally took over its business.

Motorola, the pioneer of mobile communications, on the other hand, enjoyed a 21% market share in 2006, second only to Nokia. And yet within a span of 3 years its market share dipped from 21% to 5% courtesy the iPhone phenomenon and changes brought about to customers by them, which rendered its flagship product Razr redundant in front of the customers. The latest we hear is that Lenovo acquired it after getting bankrupt.

Research in Motion (RIM), the famous Canadian smartphone maker, on the other hand, courtesy its focus on a niche segment, of enterprise or business users did really well garnering the number 2 position in the smartphone market with a 19% market share. In the absence of any real competition in the market segment, they had profitable growth in 2008. Battling Apple in the market for dominance, it was relatively immune considering its tremendous hold on its market of enterprise/business users. It then embarked on a disastrous market exploration and underestimated the impact of multi-feature smartphone requirements of consumers. In a span of three years, RIM fell from a dominant 19% market share to a minuscule 5% by the end of 2012.

And as they say, the law of averages has caught in with Apple too with competitors matching or almost matching its footsteps. The initial gains of iOS that helped build Apple what it is today, seems to be receding with Android running away with not only market share but also revenues. Each of them are aggressively competing to outsmart the other with new features. The upgrade cycle is now more incremental in nature with updates and features becoming the new frontiers for competition, similar to the PC feature war. With the space heating up, one cannot guarantee success and neither their place in the market. There is only one way to survive, and that's through continuous innovation and disruptions even if it means disrupting your own business models, as Apple did when the iPhone disrupted its iPod series, or the iPad arrived in (partial) competition with the Mac. Disruptive innovation in the mobile market will continue for the next few years, at least, and that's going to keep companies on edges. With a highly competitive market, there are only a handful of players staking their claim toward market leadership. Surely, these are interesting times for the consumers.

Today, the same mobile technologies combined with cloud, social and analytics are enabling business and industry disruptions never seen before. The powerful digital technologies and ubiquitous connectivity have created a knowledge economy that promises to spark the greatest changes in human history. Largest taxi companies are not companies that own a huge fleets, but are ones who connect taxi drivers with their customers instantly. Airbnb, Apple are other examples that follow the similar aggregation model, focused on creating an eco-system rather than creating own assets. Models are changing and so are businesses and with them the expectation of consumers.

Amidst these massive transformations, we are looking at disruptions of a different magnitude. One, which is multidirectional, and has its impact felt across the horizontal and the vertical landscape. If we have a closer look into these disruptions in detail, we will find out, that, fundamentally, four disruptions have led to a defining moment in the industry and all these are significant in themselves.
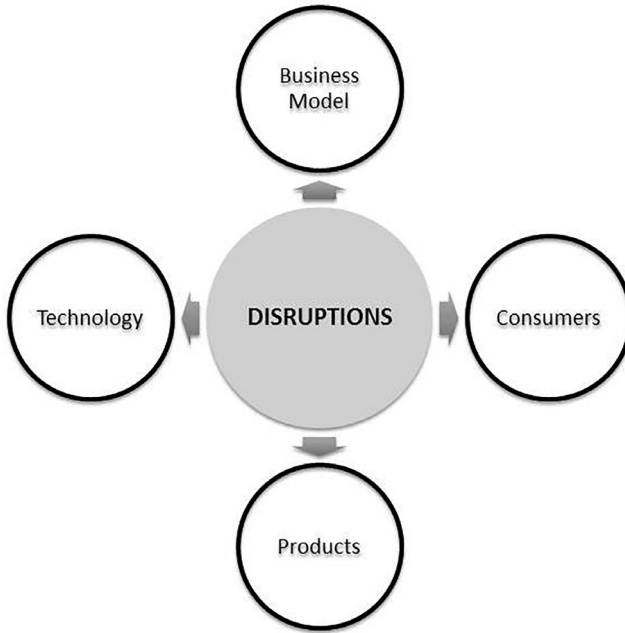
Figure 1: The 4 Disruption Trends

Consumers

Compared to other disruptions that have hit the industry earlier, like the Industrial Revolution, which changed the way people existed, the Digital revolution is also witnessing a similar, but larger in scale disruption, where the control is shifting from product centric approach to experiance-centric one. The hundred years long Industrial Revolution was a period of rapid change, driving greater efficiencies by means of production that drastically altered societies that participated. With a greater emphasis on process and mechanised way of working, steam and muscle power got replaced by machines, leading to a significant restructuring of not just labour, but the entire socio-political landscape built around it, thereby moving society from being more agrarian to being primarily industrial. However, the digital revolution, which began roughly sixty years ago, transitioned from a slower and more localised means of distributing information to a fast-paced information highway available anywhere, anytime, where consumers are in the midst of everything. What is driving this change in behaviour and why is it important for organisations operating in this landscape? Let's find out.

A Connected Social and Professional World

The seeds, of today's social and the inter-connected world, were sown way back in 1969 when ARPANET used an early network of computers to be connected to the University of California, the Stanford Research Institute, and the University of Utah. The world today has significantly evolved from that stage and is a very different one, altering the very fabric of societies and its people at large. Networks have given way for platforms to connect people, the same way they connected the world through the World Wide Web. Suddenly, as if, at a blink of an eye, we see the world started revolving around these platforms with 26% of the world population today spending a large part of their time on social media platforms. Facebook, which was established in, as early as 2004, today has 1.1 billion active users every month, Twitter formed in the year 2006 is adding three lakh users every day. As per the the latest figures published by the social media behemoth "Facebook," their users are spending 50 minutes a day, on an average, on Facebook, Instagram and messenger platforms (excluding Whatsapp) an average user spends on an average an hour on the Facebook.

The inter-networking capability of these platforms and the need for over-reliance on the communication happening within communities and groups within them are leading to a profound impact on the behavioural patterns so much so, that people's online presence assumes greater significance than their physical ones. Selfies, Photos, etc. are primarily clicked to be uploaded and shared within circles, all of which creates lots and lots of data. In fact, it is claimed that 90% of the world's data has been created in just the past two years and it is expected that the amount of new structured and unstructured data will grow by 60 to 80 percent respectively by next year. All these developments are leading increasing reliance on digital and online personas driving the connection and informed mindset among people. A world being connected, informed and responsive is becoming the order of the day.

Being Hooked to Mobile

The mobile world is exploding with more mobile devices than human beings in the world. As against the 7.18 billion global population, there are 7.4 billion unique mobile devices, 3.61 billion unique mobile subscribers,

and 3.1 billion active internet users. In fact, of the 2.03 billion active social media users, 81% are mobile. It all started with the internet in the 1990's when the World Wide Web started connecting people digitally and later, advancement in technology, the increased capability of smart phones to do complex computing, completely changed the dynamics of doing business globally forever. The move from regular feature phones to smart phones has just been phenomenal, so much that, mobile today drives over 50% of all e-commerce traffic across the world. And an enormous credit of this goes to Apple which made this a reality with its iPhone launch in the year 2007.

Mobiles have been a single largest contributor to the change we see in a highly connected world. And with the hardware form factor changing on a regular basis, like Phablets combined with the ever increasing app eco-system in place, it's bringing the luxury to being connected 24×7 with the ease of getting information, whenever required, thereby enhancing its value from being a piece of hardware to becoming an integral part of our lives.

And statistics prove it. In 2015, Flurry, a Yahoo-owned analytics company says that time spent on mobile devices was up 117% in the year compared to 2014. Analysing data on the worldwide smart phone and tablet use, it found that usage of "phablet" large-screen smart phone was up 334% year-over-year. In comparison, usage time was up 81% for small-screen slates and 26% for larger tablets. Mobile already overtook TV in overall media consumption, this year more users are going mobile-only for their online access and engaging in multi-screening behaviour if they do watch TV. Forty per cent of Indonesians use mobile as their only means of web time, followed closely by 34% in India and South Africa.

Virtual and the Physical Identity

The fact is that people are living with dual identities in the Digital Age, and each of them can be vastly different from one another. The multiplicity and ubiquity of the Internet provide a platform for individuals to represent aspects of their "self" online, thus projecting an identity. However, with social networking sites people, arguably for the first time, got a greater choice to present themselves to others, crafting their online identity in ways that were difficult offline. For example, it is easy to imagine that

you have one public identity at work and another at home, and while it may be possible to present yourself in certain ways offline much of your identity is determined by the way people perceive you. Platforms like Facebook, LinkedIn, and WhatsApp, have enabled these identities to be linked across other platforms, which help them build customisation to the likings of these identities. However, when individuals are online, they have much more control. Status messages, digital self-portraits, likes and dislikes and even other people opinions are all controllable and editable. The more fundamental aspects of our identity are also more malleable online allowing people to announce a false name, gender, age, occupation, marital status, sexual orientation, etc.

To a large extent, the relationship between online identities and offline peers determines the impact of their interdependence. For example, one could expect an online individual identity in a Facebook to differ significantly from their professional identity in the workplace. Conversely, the online identity of a LinkedIn user can represent a reasonably accurate reflection of the professional identity they wish to project in the workplace. Moreover, this places individuals on level playing terms, irrespective of their age. For instance, a forty-year-old getting online for the first time is on a level playing field with a fifteen-year-old who gets online for the first time in terms of navigation, knowledge, and experience with online platforms, and in the exploratory phase, could exhibit similar journeys.

On-Demand Consumption & Exponential Expansion of Consumer's Sphere of Influence

InMobi, a global mobile advertising company with reach over 1.5 billion unique mobile devices worldwide through its discovery platform, published a report on mobile media consumption in 2014. The research highlighted that mobile had become a key factor affecting purchasing decisions, with 48% of respondents worldwide listing mobile as a critical media which impacts purchasing decisions, and reliance on mobile is even higher in essential consumer markets like India, at 60%. The report also mentions that in response to mobile advertising, 52% of people surveyed have purchased something via a mobile and 78% have downloaded an application. These are pretty significant numbers from the point of view of consumer behaviour transition.

Beyond this, the consumption cycle is assisted with Peer Validation where potential buyers validate the legitimacy and experience of the product from people who have already consumed it. However, this is not a new concept. For years' people have asked their friends for recommendations, "What do you think of this product?" "Would you recommend this product?" etc. The difference now is that a significant percentage of these conversations that were largely invisible to marketers are available and accessible to social media, ratings and reviews, and blog. Additionally, consumers' sphere of influence has expanded exponentially from localised and concentrated conversations between family, friends, and neighbours to cover a greater expanse of known and unknown acquaintances through the network one creates through social networking sites and the web.

This is where social media is having the greatest impact on the way consumers consume content online. According to research, when consumers have a problem or know what they want, they search for information by directly going to the source, and that is the company's website. Their first stop is to check out what the brand has to say resulting in the need to get to the source directly for information. This is even true for passive content consumption and anticipatory content consumption. This is further followed up with additional research to validate that what the brand claims is, in fact, valid. If they can't validate the brand's claims, the chances that they will delay action or look for alternative increases significantly. Beyond this, Social media is actively being used to create actionable peer pressure for brand recall and create attention. The ALS Ice Bucket Challenge, for instance, was a campaign involving an act of dumping a bucket of ice and water over a person's head either by himself or by another person. It started in July 2014, to promote awareness of a disease called amyotrophic lateral sclerosis and encourage donations for its research and support. It is a great example of how social media has been used effectively to drive positive peer pressure and gamification for a noble cause.

In short, the sphere of influence is only on the rise, and because of the openness of these platforms, there is an increasing adoption of the thinking to use them in ways in which they can help the society day in and day out.

MOBILE leading Digital Growth in India

Source: Internet and Mobile Association of India (IAMAI).

Mobile is also leading India's digital evolution. According to the report, out of 350 million internet users across all devices, 159 million i.e. 45% of all internet users are accessing the medium by mobile devices. Mobile is opening up gates of the internet for the first-time users in the country, but the web still rules. The share of web pages served by laptops and desktops account for 66%, whereas mobile stands at 33% year on year. What's interesting is to note that even though the web holds the ground, it is seeing -6% fall year-over-year, whereas mobile is witnessing a growth of 17%.

The growth of mobile's share of web pages has been attributed to the access speed of data. At 2.8 Mbps, the average mobile internet connections are driving better speed than a 2.3 Mbps average for fixed line. Additionally, 19% mobile internet connections are broadband, compared to just 10% of the fixed connections. Google recently highlighted that in India, affordable smart phones and data prices was resulting in higher smart phone sales of around six million every month, leading a surge in search queries from mobile devices than desktops.

Social media will witness a penetration of more than 10%. For instance, the growth story of Facebook's more than 124 million monthly active users is driven on mobile, globally and in India too. In fact, the March 2015 data states that 89 million users accessed Facebook via smart phone followed by 17 million feature phone users. Social networking also happens to be the most regular mobile activity followed by uploading photos and watching videos.

Technology

The world is going through a radical transformation, not that it has not been in this phase earlier. However, the pace and rate of change have been something which has been unmatched before. Faster, Easier & Affordable Reach of the network, infrastructure is bringing about radical changes

in the way we behave and operate in this increasingly networked world. The roadmap for infrastructure investments will rely on these four critical aspects along with business Priorities to bring about an integrated and always connected enterprise. Hence, a connected enterprise will be one, which will focus on these five areas in the future.

Mobility Brings a New Found Euphoria Beyond B2C

The rapid adoption of smart devices, both in the workplace and outside, coupled with increasing device capabilities are changing how individuals and organisations collaborate. It is critical that organisations harness these trends to improve staff productivity and teamwork, making mobile not only critical but a propeller driving a digital journey. It can be thought of in the same meaning as the 'last-mile' issue faced by the fixed line Telcos. By that I mean we have enabled the digitisation of the organisation, and now we have to push the delivery of the digitisation through that last mile to the end-user on their mobile devices. Components critical to driving this journey include the following

➢ **Enterprise mobile apps are making inroads aggressively**

As per Harvard Business Review, it is estimated that spending on mobile enterprise business apps will more than double from USD 26 billion in 2012 to USD 53 billion in 2017. According to Tomi Ahonen Consulting, there will be nearly 5 billion downloads of enterprise apps this year alone. And Apple's and IBM's announcement earlier this year that they had formed a partnership to develop 100 B2B apps for iPhones and iPads just confirms it. However, merely deploying standalone mobile apps will not be enough moving in toward a Digital Enterprise. Seamlessly integrating them with enterprise application like ERP, or applications, organisations have deployed to integrate their processes; will make an enterprise realise their true benefits. It's more about an integrated setup which will develop informed people, processes, products, and infrastructure.

➢ **Automation cuts across all critical areas of focus**

With greater demands for productivity and efficiencies improvement in day to day operations, automation has starting to pick pace finally after decades of work and time in waiting. Areas

like Automated Bill payments, including those made from mobile devices, have already begun to replace the use of checks. Chatbots, the new kids on the block, for instance with the combined power of artificial intelligence are driving greater productivity and efficiencies in the support related areas. In fact, the ability to use them in a social cause for consumers is opening up a tremendous amount of potential for public service. Take the example of the recent demonetisation drive by the Indian Government, which initially led to difficulties in finding ATMs with cash, was solved by a small mobile-based Chatbot app which helped them locate the nearest ATMs with cash, thereby tremendously easing the operations and chaos among people. Although to an extent we have been able to identify and track those processes, however with Internet of Things (IoT) & M2M at the forefront, we are taking this a level further to track behavioural patterns and way or working to give really minute information which can help to bring about a refined process.

➢ **BYOD (Bring Your Own Device)**

Better availability, accessibility, and mobility of data, at optimised cost for organisations' employees, is giving options to organisations to move toward BYOD. Many organisations, realising the device maturity of employees, are adopting BYOD strategy and consider them as primary means of increasing productivity by connecting, interacting for work-related purposes. We're seeing dramatic changes in the way users interact with technology on their personal devices and the critical role it plays in transforming business and IT culture.

Virtualisation, Consolidation, and Collaboration Reaches End-user

The rapid adoption of applications across industries and the quantum of them is giving rise to another problem for organisations to manage, that of, Compute Power. With lowering cost of hardware delivery, Virtualisation is already making a huge impact on IT, with 2014 seeing dramatically increased use, particularly in data centre networks, where it brings several benefits in power consumption, server utilisation, and application performance. How would organisations continuously

transform themselves with new applications and yet be shielded from running out of Compute power, underlying it?

➤ **Moving beyond server consolidation to network & storage virtualisation**

Virtualisation has slowly been transforming IT departments for more than a decade now, and the trend of server consolidation is going to continue through the end of this decade. However, the virtualisation of network hardware and storage systems is still in its relative infancy and being used by the early adopters in the enterprise space, but as the technology becomes more commonplace and easier to deploy, the next five years will continue to see growth in this area. Talks of SDN (Software Defined Networks) and NFV have already started, and telecom entities are already testing them in the market with their respective value propositions.

➤ **End-user computing transformation**

Everyone today, we can easily say owns a compatible pocket supercomputer. The CPU of an "iPhone 6" has 625 times more transistors than a 1995 Pentium, resulting in Apple selling 25X more CPU transistors than were in all the PCs on earth in 1995, during the launch weekend. However, despite this complexity, it's amazing to see the level of simplicity surrounding Apple's design that attracts its loyal customers. The complexity of the internal mechanics gets hidden around the simplistic design around its usage and handling makes it appealing to its users. The need for reduced IT complexity, while deploying a flexible, self-service approach demanded by end-users, has given rise to aggregated delivery models, centralised management and security, and support for a wide variety of endpoint devices. As individual use cases vary, companies will need a multifaceted approach to categorise end-user profiles and link it to dynamic delivery models for universal accessibility of applications and enhanced end-user experience.

➤ **Convergence of cloud and mobile computing**

As per Gartner, the convergence of cloud and mobile computing will continue to promote the growth of centrally coordinated applications that can be delivered to any device.

> *"Cloud is the new style of elastically scalable, self-service computing, and both internal applications and external applications will be built in this new style. While network and bandwidth costs may continue to favour apps that use the intelligence and storage of the client device efficiently, coordination and management will be based in the cloud."*

In the near term, the focus for cloud/client will be on synchronising content and application state and addressing application portability across devices. Over time, applications will evolve to support simultaneous use of multiple devices. The second-screen phenomenon today focuses on coordinating television viewing with use of a mobile device. In the future, games and enterprise applications alike will use multiple screens and exploit wearables and other devices to deliver an enhanced experience.

IoT (Internet of Things)

Probably the most pervasive trend is the IoT, where just about everything we see or interact with, becomes a computable entity. Right from our homes to cars and even objects on the street will interact with us and with each other, seamlessly. With edge computing gaining ground, Near Field Communication (NFC), allowing nearby devices with two-way communication and Ultra low power chips presenting a capability to harvest energy in the environment, will be two technologies, that will drive the trend in the coming few years. We are staring at an interactive and responsive world that is pervasive across our behaviour sets.

While the IoT is already underway, it's difficult to see where it will lead us. Some applications, such as mobile payments and IBM's Smarter Planet initiative, will become widespread in just a few years. Marketing will also transform, as consumers will seamlessly be able to access digital products from advertisements in the physical world. Still, as computing ceases to be something we do seated at a desk and becomes a natural, normal way of interacting with our environment, there's really no telling what the impact will be. IBM's version of Cognitive IoT is already giving new meaning to the way cloud computing, analytics, and IoT are coming together to transform industries like manufacturing, insurance, retail, and others.

Analytics Forms Part of Day to Day Functioning

It is estimated that a week' worth of New York Times contains more information than a person was likely to come across in a lifetime in the 18th Century. It is estimated that four Exabyte's of unique information will be generated this year. That is more than the previous 5000 years. The amount of new technical information is doubling every two years. With the volume, velocity and variety of data being produced across the following domains, it is creating an analytics revolution; which means organisations have enough information at their helm to take decisions. However, how quickly they decide, will determine the success or failure for them in the marketplace. Among this vast pile of information, which may be a mix of structured, semi-structured and unstructured data, will enterprises be able to realise optimisation goals and increase revenue consistently over a period? It is dependent on how effectively they envision it to be part of the organisational DNA and the use they put it to. Whether it be for ensuring building Proactive Maintenance of machinery, through predictive maintenance, or be for analyzing the results of product success in the market with modelling techniques called predictive analytics.

Networks Will Be Backbone of This Journey

The most critical part of this entire piece is the network, which will define the capability and maturity levels of organisations initiatives in the above areas. Networks today are becoming faster, more flexible and highly intelligent. Their evolution has been spread across two decades now, and today if we look at options, we realise that they are based on an organisations requirement and type. With greater emphasis around SDN and NFV taking much of the mindshare among Telco operators, and with 5G round the corner to provide differentiated and segregated offerings for various elements involved, organisations are fast adapting to the dynamic networking needs for their business, on an ongoing basis. Faster and greater adoption of Openstack technologies among the telecom service providers also, has made the services become cheaper and cost effective. Operationally as well, this means greater visibility, flexibility and faster access at reduced cost, making it a win-win situation for both the service provider and their customers. On the other hand options like MPLS have indeed become an imperative and critical component of any organisations roadmap. Not only that, the capability to provide the QoS, security, and Bandwidth at

an affordable cost are driving other areas like cloud, which sees a perfect mix of combining the flexibility, cost effectiveness and scalability features of cloud clubbed with security, reliability and QoS features of the MPLS. With this evolution, we are seeing more and more mid-size enterprises choosing to prefer public cloud for their critical applications workloads like an ERP to run on MPLS network. Also with the advent of 4G and in some countries, 5G, this benefit is only going to become bigger and larger to accommodate data (voice, video) and build collaboration, analytics and mobility solutions. They are much more entrenched and fruitful to the organisation and define their daily way of working.

Products

Products have always been at the forefront to bring about disruptions in the market, and they continue to do so; however, the pace of new disruptive products has increased. Technology is without any doubt been the focal point on which this disruption rides on. Product factories are becoming leaner and quicker. Compared to earlier years, when Product Factories used to work in silos and primarily filled with technology geeks, the product factory of today is much more integrated and focused on the strategy and timelines of the organisation. The product creation strategies too are well crafted based on existing product portfolio, advanced technological capabilities, and new product creation opportunities for the organisation. External voice of the customer and ongoing market sensing activities go hand in hand along with corporate leadership goals. Along with the adoption of Agile Methodologies in the new product creation process is seeing a big leap in introducing new products better prepared for the market.

Shift Toward Customised and Personalised Product

It has always been the top agendas of most marketers to build one to one relationships with unique offerings to their customers using right channels at the right time. And the Digital Landscape has just about given them the right platform to fulfil this agenda. As companies like Netflix and Amazon can suggest personalised offerings, it is only natural to see FMCG companies such as Cadbury and Nutella wanting to join the bandwagon. Perhaps a well-known example is Coca-Cola's "Share a Coke" campaign. Launched in the UK in April 2013, it saw Coca-Cola grow its Facebook community by 3.5% and globally by 6.8%. Thanks to

this campaign, Coca-Cola reversed its declining sales for Coca-Cola and increased value sales by 4.93% year on year to £765 million in the 52 weeks to 17 August, according to IRI Worldwide data. As a repel effect, sales of all colas in the UK grew 2.75%, all carbonates 3.11% and the total soft drinks market's value sales increased 2.36%.

Take the case of news consumption. The Deloitte's media Consumer Survey 2015 suggested that the majority of daily media consumption for those under the age of thirty now involves a smart phone. In the last five years, a revolutionary shift has taken place in the way we consume news. We have come a long way from consuming news reactively through traditional media and news websites, to have a more proactive delivery mechanism in which, the news gets broadcasted to us by our social network of friends. In fact, 75% of news consumed online is through shared news from social networking sites or email. Social news is finding us. With more than 90,000 smart phone news apps available, consumption of news through apps is now being enhanced by curation functionality that enables users to personalise the news they get. Third-party apps can now curate news from different sources in one location meaning that the power to choose the news has never been greater. Customisation of both the product and the end-to-end shopping experience will be critical to capturing value.

Simplistic Design Rely on Customer Experience

Teran Evan, design Director at PepsiCo once said, "A product needs to be intuitive. It shouldn't be something that comes with a list of directions that's like a scroll, where you have to figure things out." The greater variability of product introductions in the market is leaving customers with choices leading to their preferences based on their desired needs (specified or unspecified). Suddenly the product experience has become all the more critical affecting their Buying decision. Consumers are now more focused on how well their experiences are being met. Take the example of mobile handhelds today. Most of them come with a standard feature set in the market, differentiation for them lies more in terms of meeting their target customer's inherent needs the best. How does it look, how is it handle on the go, Is the User Interface intriguing, Is there enough Memory, Storage, and a processor for my requirement? Many of today's most advanced devices don't scream "feature by feature!" – and with good reason, customers are gravitating toward wanting as much

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