Capgemini Consulting
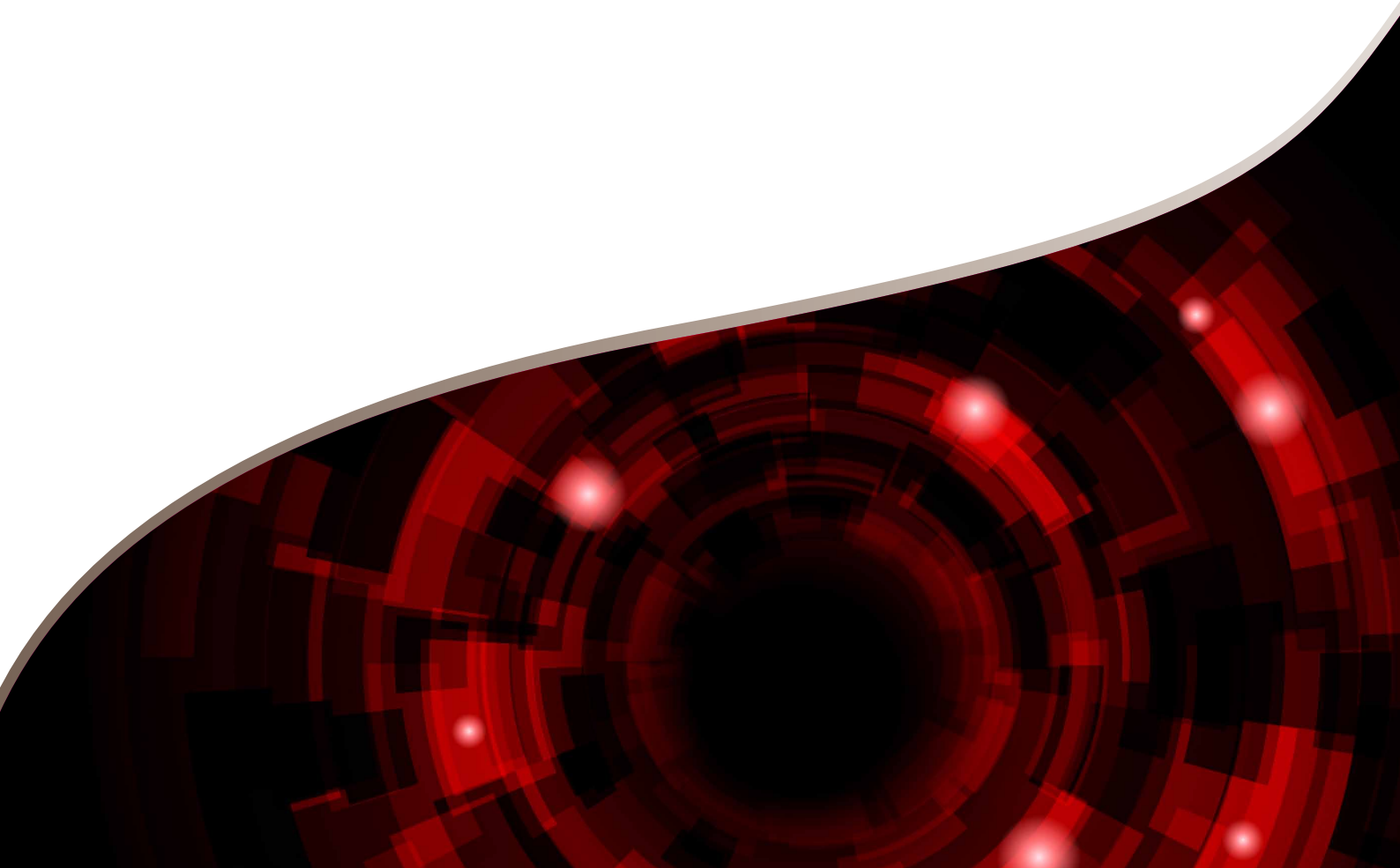
Transform to the Power of Digital

Digital Transformation as a Driver of Corporate Performance

Abstract

Digital tools and technologies have invaded the business environment, triggering significant changes in the way we work, communicate, and sell. Industries and governments alike are undergoing a digital transformation either crisis-induced, as part of a core strategy, or as part of a more controlled business transition. Under all circumstances, leaders need to be well prepared to anticipate the current and future impact of this enduring trend and steer their corporations accordingly at the right speed.

The journey toward digital transformation entails harnessing its benefits - such as productivity improvement, cost reduction, and innovation - while navigating through the complexity and ambiguity brought about by the changes in the digital economy.

We believe that every organization is likely to tread a different path in its digital transformation journey depending on its starting point and the digital maturity of its industry and products or services. It is imperative for businesses to remember that digital transformation is not just about technology. Instead, like any other business transformation, a roadmap across people, processes, and technology will enable organizations to successfully navigate this transformation.

An Enduring Trend Affecting Every Industry… But at a Different Pace

Over the past decades, digital technologies have progressively been embraced by organizations driven by advancement in technology, changing consumer behavior, increasing globalization of the workforce, and a desire to be more productive and innovative (see Figure 1). This digital wave has not only fuelled a number of fundamental changes in the way organizations produce, sell, and serve, but also changed the way employees work, communicate, and collaborate. It has therefore created a leadership and transformation challenge for most industry participants.

Digital Transformation has become a high priority on the leadership agenda

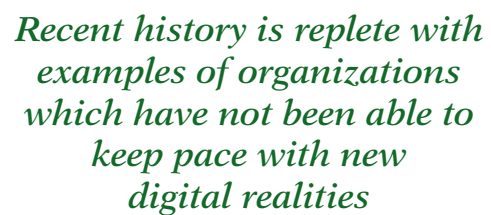**Figure 1: Digital Transformation of Enterprises**
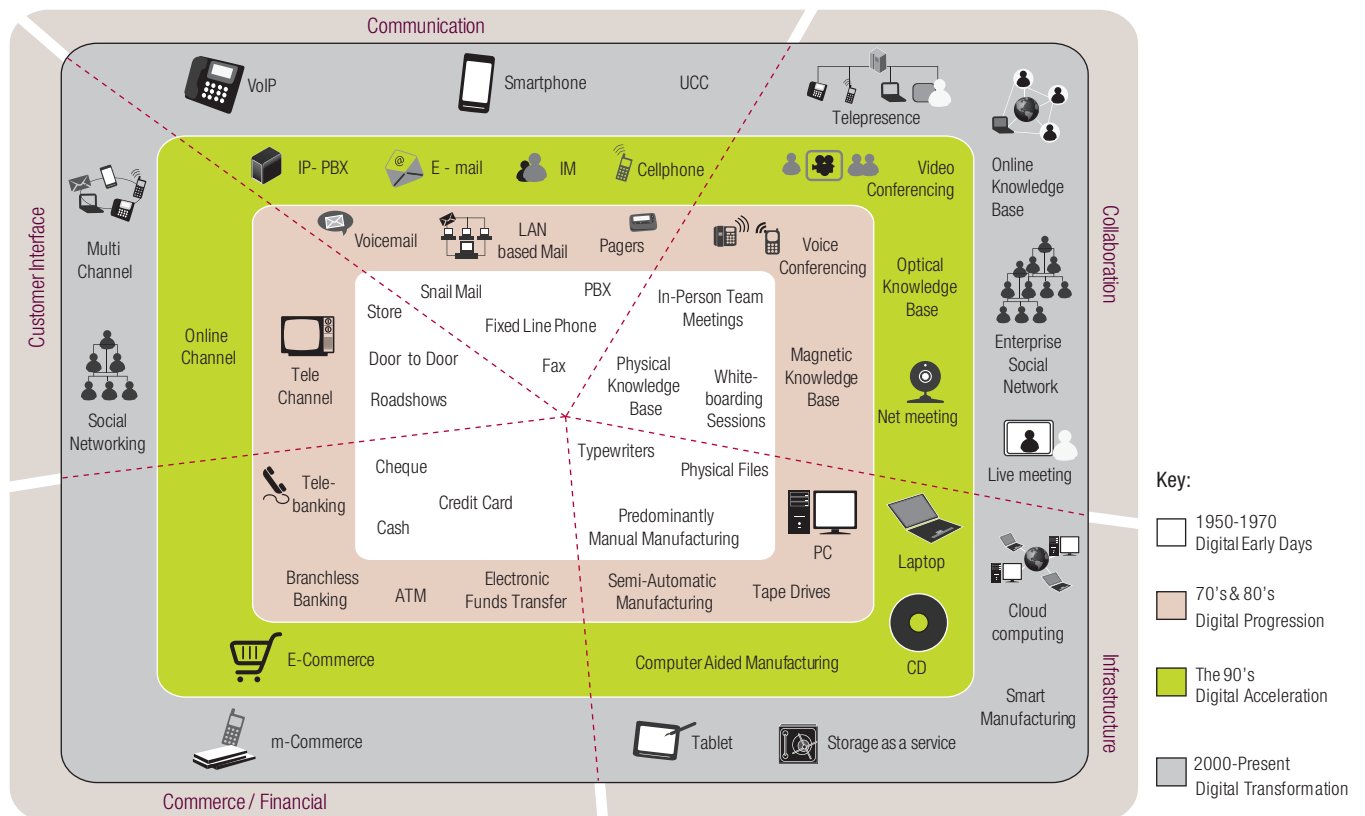
Source: Capgemini Consulting Analysis

Although the use of digital tools in the enterprise is not a new phenomenon, what has changed in recent years is the acceleration of both the capabilities of these tools as well as the pace of adoption by customers, employees, and organizations alike. For instance, while mobile telephony took around 13 years to reach critical mass-market[1], for the Internet it was less than 7 years, and for tablets it can be expected to be around 4 years[2]. This breakneck pace of technological change has triggered new consumer behaviors and usage patterns which are having a profound impact on organizations.

Simply stated, digital transformation is the increasing adoption of digital tools and technologies by an organization to fundamentally alter both its internal and external processes and functions. All industry segments and governments have been touched by this new digital reality, which has significantly altered management practices from hospitals to hypermarkets and financial services to the future of public services. As a result, it has become a high priority on the leadership agenda, with nearly 90%[3] of business leaders in the US and UK expecting an increasing strategic contribution of IT and digital technologies on their overall business in the coming decade. With the Internet, Hi-Tech, and Media sectors only accounting for approximately 10% of US GDP, we believe that the real transformation will be seen in the remaining 90% of 'traditional industries', where customer and employee behavior is fast evolving. We can expect a largely similar trend in other developed countries as well[4].

Faced with this transformation challenge and the need to stay relevant in one's industry, leaders have to embrace the implications of this enduring trend on their organizations in order to steer their strategy and drive better operational performance. Unfortunately, recent history is replete with examples of organizations which have not been able to keep pace with this new digital reality. The recent bankruptcy of movie rental company, Blockbuster, owing largely to its inability to rapidly hone a new business model[5], is one such example.

Every industry is going through a digital transformation, some crisis-induced, some as part of their core strategy, and some as part of a more controlled transition process. Under all circumstances, leaders have to steer their corporations at the right speed, taking into account the current and future competitive situation in their respective industry.

Recent history is replete with examples of organizations which have not been able to keep pace with new digital realities

Harnessing the Benefits of Digitization

Digital transformation should not be an end in itself. Like all other forms of business transformation it should be guided by clear managerial goals and realizable business benefits. Once a clear roadmap has been defined, digital transformation can help organizations address their most significant priorities and achieve both internal and external benefits, in areas such as innovation, customer experience, efficiency, or productivity (see Figure 2).

It's About Productivity

Improving productivity is a key driver for sustainable growth. In recent years, productivity growth in developed economies has been steadily falling and is significantly lower when compared to emerging markets. For instance, during the periods 1995-2005 and 2005-2008, Total Factor Productivity[6] in the US and EU-15 nations grew at the lowest rates when compared to developing markets in India, China, CEE, and Africa[7]. On top of this, we can add socio-economic trends such as the shrinking and aging workforce. In Germany, Italy, and France, the working age population[8] is expected to fall by 15%, 8%, and 6% respectively between 2010 and 2030[9], thereby

exerting additional pressure on productivity. In order to stay competitive, companies in developed nations need to find new sources of productivity if they want to remain relevant on the global stage.

There is clear evidence that implementation of digital technologies has been a key driver of corporate productivity. Digitization has helped organizations improve productivity by automating tasks, enabling better decision-making, and freeing employees to create value in other areas. In the United States, IT was responsible for two-thirds of total factor growth in productivity between 1995 and 2002 and virtually all of the growth in labor productivity[10]. Similarly, EU firms that adopt e-business practices (such as online sales and purchasing) are twice as likely to report enhanced productivity and expanded employment when compared with firms that do not use Internet technologies to innovate[11].

However, research[12] points out that while investment in digital capital has a strong correlation with high productivity, technology alone is not the most important driver of productivity.

Figure 2: Key Benefits of Digital Transformation

Source: Capgemini Consulting Analysis
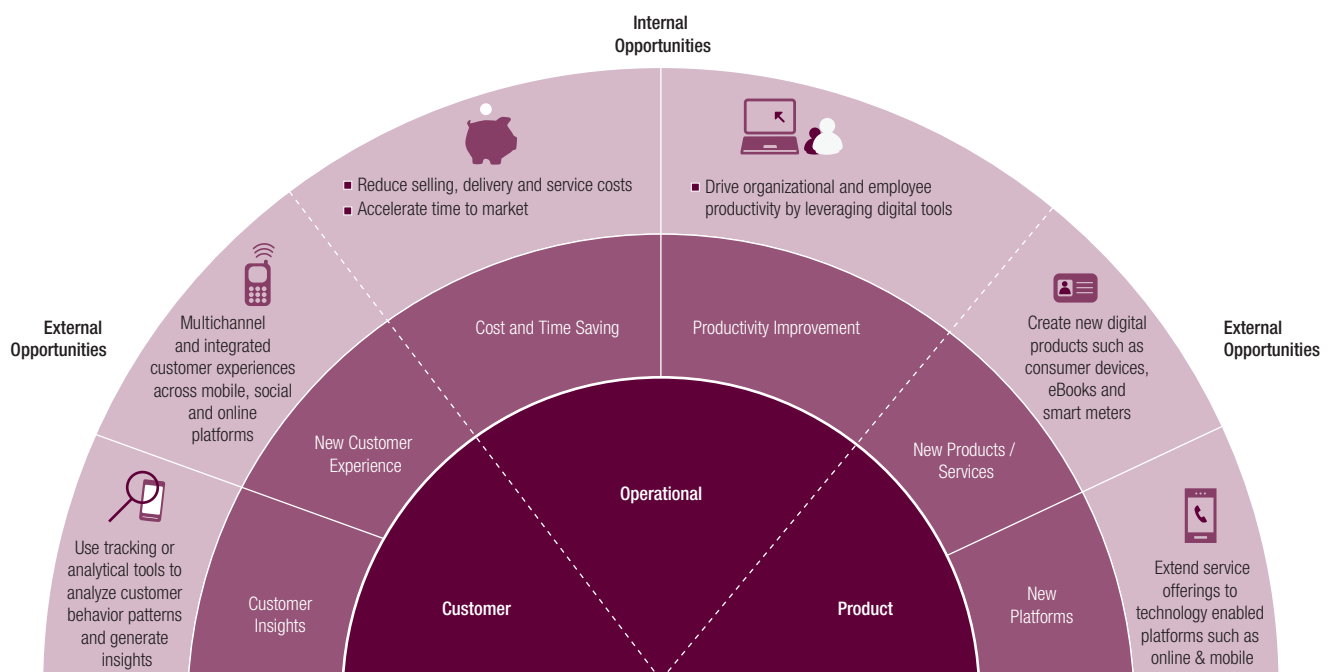
It's About Saving Costs and Time-To-Market

Digitization not only helps organizations reduce operational, communication, travel, marketing, selling, and product development costs, but also significantly accelerates problem resolution and time-to-market. For instance, customer acquisition cost on online channels is 50% less than that on offline channels[13]. Similarly, when compared to call-center technical support, approximate cost per contact is nearly 92% cheaper for a virtual agent and 99.2% for web self-service[14].

> *In the US, in 2010, adoption of e-business practices helped companies save $528 billion through efficiency gains*

The cost benefits of digitization span a whole range of industries and functions. The use of RFID tags in the supply chain environment can help reduce inventory handling and logistics costs. Remote health care enables monitoring of a patient's symptoms in real-time at relatively low cost. Smart meters can save utilities millions of dollars by enabling them to read meters remotely and controlling demand. In the US, in 2010, adoption of e-business practices helped companies save $528 billion through efficiency gains[15].

It's About Driving Innovation

Digitization is an enabler of innovation and the main driving force behind product and service innovation across sectors. An EU-commissioned survey has found that product and service innovation in most of the largest industries in Europe is either directly related to, or enabled by, ICT[16]. Leading the pack are the energy supply and telecommunications services sectors where 89% and 86%[17] of companies attribute product and service innovations to ICT.

Digital tools also provide an excellent platform to engage stakeholders in co-innovation, brand creation, and problem resolution. Philips successfully created a private online community, Sensorium, in 2007 to co-create better products with customers and deliver on-demand insights to multiple product teams. In the last three years, the community has helped Philips in identifying post-purchase concerns, creating effective product positioning, and understanding technical specifications for a new product[18].

It's About Transforming the Customer Experience

Digital channels and platforms are helping organizations extend their reach to a wider and more engaged ecosystem of customers and partners. The high adoption rate of mobile devices and Web 2.0 tools - such as social media, collaboration applications, smart phones and tablet computers - is changing the way people share information, learn, communicate, and interact. For each transaction, organizations can interact and engage with customers over multiple touch-points, providing a seamless and integrated multi-channel experience. Defining and formulating a multi-channel strategy also enables companies to maintain a 360 degree view of the customer and balance sales, customer care, and retention across channels. Moreover, by aligning organizational structures and incentives, organizations can drive maximum value across all channels. In the UK, 76% of marketers have experienced improved brand exposure, 68% better customer service, and 62% increased revenue, by adopting a multi-channel strategy[19].

Today, more than 70%[20] of all digital information is consumer-generated and comes from outside the organization. Aided by sophisticated analytical tools, companies can leverage this ocean of information to extract better customer insights, maximize customer lifetime value, improve retention, up-sell, and cross-sell, and anticipate the success of new product launches. National Instruments, a leader in virtual instrumentation, has successfully adopted a web-analytics solution for lead generation and customer engagement. By tracking on-site visitor behavior, NI has achieved a 3% increase in the number of visits that reach the point-of-sale[21].
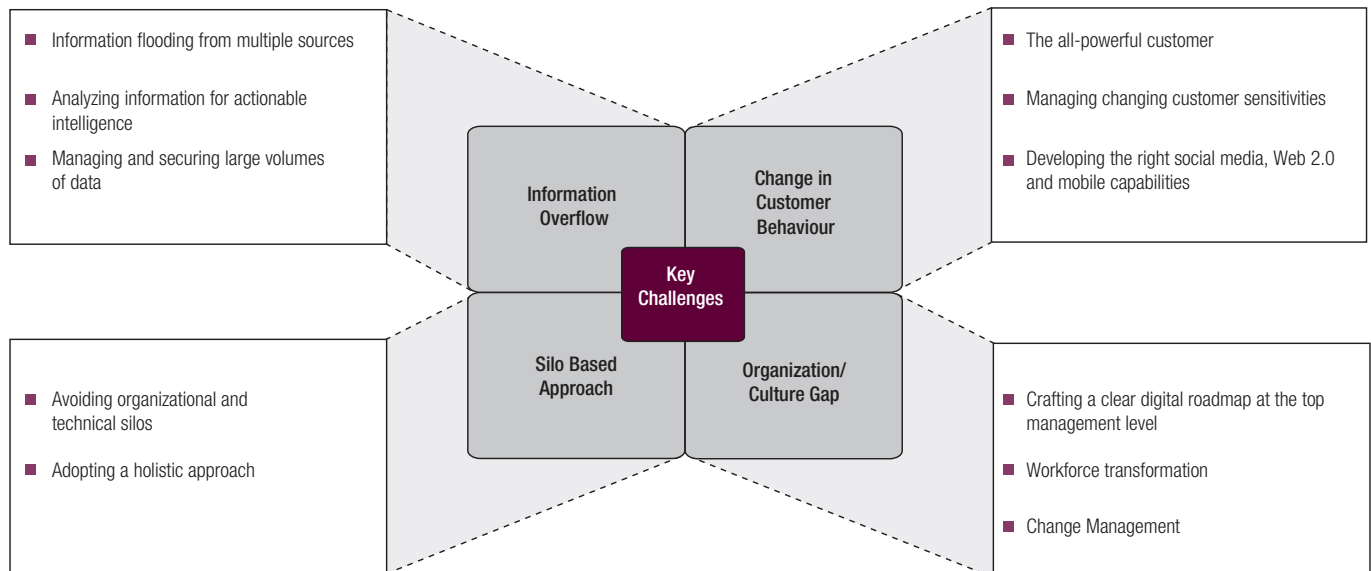
As outlined above, the business imperatives and benefits of digital transformation are compelling and have to be addressed at all levels in the organization. However, the path toward digital transformation is not without its challenges.

A Transformation With Its Own Challenges

In order to identify the key barriers in the successful implementation of digital transformation programs, we conducted a series of interviews with a number of global corporations from across different industries. Our analysis suggests that organizations across the globe are facing a common set of challenges as they tackle these new digital realities. These challenges can be broadly classified into four categories (see Figure 3).

More digital information was produced in 2009 alone than all information since the beginning of time

Figure 3: Key Challenges in the Path to Digital Transformation

- Information flooding from multiple sources
- Analyzing information for actionable intelligence
- Managing and securing large volumes of data

- Avoiding organizational and technical silos
- Adopting a holistic approach

Information Overflow

Change in Customer Behaviour

Key Challenges

Silo Based Approach

Organization/ Culture Gap

- The all-powerful customer
- Managing changing customer sensitivities
- Developing the right social media, Web 2.0 and mobile capabilities

- Crafting a clear digital roadmap at the top management level
- Workforce transformation
- Change Management

Source: Capgemini Consulting Analysis

Manning the Information Floodgates

The digital explosion has flooded organizations with an ocean of data. Between 2009 and 2020, the amount of digital information created and replicated in the world is expected to grow 44 times to reach an unprecedented 35 trillion gigabytes[22]. In fact, according to estimates, more digital information was produced in 2009 alone than all information since the beginning of time[23]. As interactions become more frequent and information-rich, customers, partners, and employees pour an overwhelming amount of data into the digital ocean. The more information organizations receive, the harder it gets to decipher what is credible and useful. Moreover, it becomes even more difficult to perform tasks and take decisions. Employees are unable to cope with the rising volume of information and this adversely impacts on their morale and productivity. A majority (62%[24] on average) of workers across the globe

believe that the quality of their work is hampered because they cannot process and make sense of all the information at their disposal fast enough.

Though organizations realize the importance of analytics, many of them do not have the skills - particularly advanced predictive analytical capabilities - to undertake it. Lack of senior executive support, a silo approach, an inexperienced workforce, and insufficient investment are some of the biggest roadblocks.

Keeping Pace with Customer Expectation

The increasing proliferation of digital platforms has fundamentally altered the way customers interact with brands, research and buy products, and influence the decision making of other customers. Customers are increasingly becoming wary and distrusting of traditional marketing vehicles and instead are turning to online social networks, blogs, wikis, and community forums to formulate their brand perceptions and make purchase decisions. Today, consumers trust consumers more than they trust brands. While 50%[25] of consumers do not believe in the advertising promises of brands, 73%[26] trust the recommendations of friends and family.

Companies can no longer afford to ignore the voice and preferences of the customer. Customer backlash against GAP's recently launched new logo was so intense on the web that the company had to scrap the launch. In certain industries, such as music, changes in consumer behavior have completely disrupted traditional models and rendered many players obsolete.

Despite being faced with this very visible customer expectation challenge, many companies have been slow in developing the right skills and capabilities to manage this new customer sophistication. For instance, 56% of Fortune 50 companies still do not have social-media icons on their home pages while 60% hide their twitter streams[27]. This failure of organizations to rapidly adapt themselves can be attributed to factors such as lack of clarity around customer and social-media ownership, inability to tailor business models catering to changing consumer behavior, and failure to take an "outside-in view" of their business.

Adapting the Organization and Culture

Aligning the existing corporate culture with new digital realities is one of the main inhibitors in the digital transition of companies. One of the clearest indicators is that a clear governance process for the transformation is often lacking. In our interviews with CXOs, it has become clear that one of the major issues is the lack of accountability in digital transformation programs. Further, enterprises' traditional decision-making systems are too vertical and too intrinsically slow to keep pace with rapid technology-driven transformation. Consequently, corporations have started to experiment with various organizational formats - such as cross-functional taskforces and identifying digital leaders at board-level - in order to adapt their culture to digital challenges.

> *It is not technology that is the obstacle to digital transformation, it is people*

Far too many enterprises are investing in digital tools and technologies without trying to drive changes in the operating model, working practices, and culture. Companies often focus too much on the technical and customer-facing aspects of digital transformation, forgetting that true value can only be leveraged if we align people and processes. As Raffi Amit, Professor at Wharton, pointed out: "It is not technology that is the obstacle to digital transformation, it is people". An aging HR infrastructure, non-alignment between business and HR leaders on the most critical business drivers, and ineffective rollout of change management programs to train employees on new digital ways of working are some of the key barriers.

As with any transformation program, there can be inherent reluctance and resistance to change from within, especially from middle management. Digitization results in the democratization and free-flow of information. Managers perceive this as a threat to leadership because they have less control of information flows. For instance, the US Department of Defence (DoD) had to face a lot of internal resistance during the formulation of its social media policy as the traditional military hierarchy and the network security group were used to doing things the old way[28]. It is important for corporations to have confidence in their employees by involving them closely in this journey and giving them ownership of processes.

Many enterprises have responded to the impact of digitization through multiple, separate, and uncoordinated initiatives

Overcoming Silos

Our discussions with organizations have surfaced a common pitfall - adopting a silo-based approach, be it technical or organizational. Many enterprises have responded to the impact of digitization through multiple, separate and uncoordinated initiatives, even when the impact is felt by the same brands, customers or employees. Functional silos frustrate interaction and create information silos, making it harder to connect the right people in the right ways to create and maximize value.

Similarly, a completely technology-centric approach often fails to challenge the fundamentals of a company's business model. This is because this approach aims to automate existing processes rather than attempting a step-change in performance. In addition, technology-led transformations often alienate IT from the business functions, resulting in significant resistance to change. Digital transformation is first and foremost an enterprise-wide business transformation and technology should be seen as a second-order priority.

To overcome the silo mentality, corporate leaders should take a holistic approach, cutting across all aspects of their value chain and management functions. As well as the many challenges outlined here, this is as much about a fundamental change in mindset.

Digital transformation is first and foremost an enterprise-wide business transformation

Navigating Your Own Digital Transformation

Orchestrating your Digital Transformation

Digitization can extend the reach of organizations, improve management decisions, and speed the development of new products and services. At the same time, overly rapid adoption of technologies can disrupt traditional business models. Organizations need to tread a careful path toward digital transformation, crafting a winning strategy and a clear roadmap across people, processes, and technology (see Figure 4).

Strategic Leadership and Boundary Definition

Digital transformation is about leadership. It has become the ultimate challenge in change management because it affects not only industry structures and strategic positioning, but also all levels of an organization (every task, activity, process) as well as the extended supply chain. Leaders must

constantly challenge their organizations to ensure that this technology-enabled change can unlock productivity gains and significant competitive advantage. At the same time, they should understand where and how the fundamentals of their current operations could be unsettled by agile new entrants or new business models.

A significant issue facing the top-management is that most companies have traditional decision-making systems that are not well adapted for the digital world: they are too vertical, too slow to deal with the cross-functional, technological and rapid nature of this transformation. For instance, when focusing on customer issues, you need the active participation of the Marketing, Sales and IT organizations. However, historically, alignment between these different functions has been difficult to achieve. Similarly, the Human Resources department must also be involved, given the importance of the people dimension in digital transformation. Digital transformation requires a mix of skills which are often scattered

Figure 4: Framework to Navigate Digital Transformation
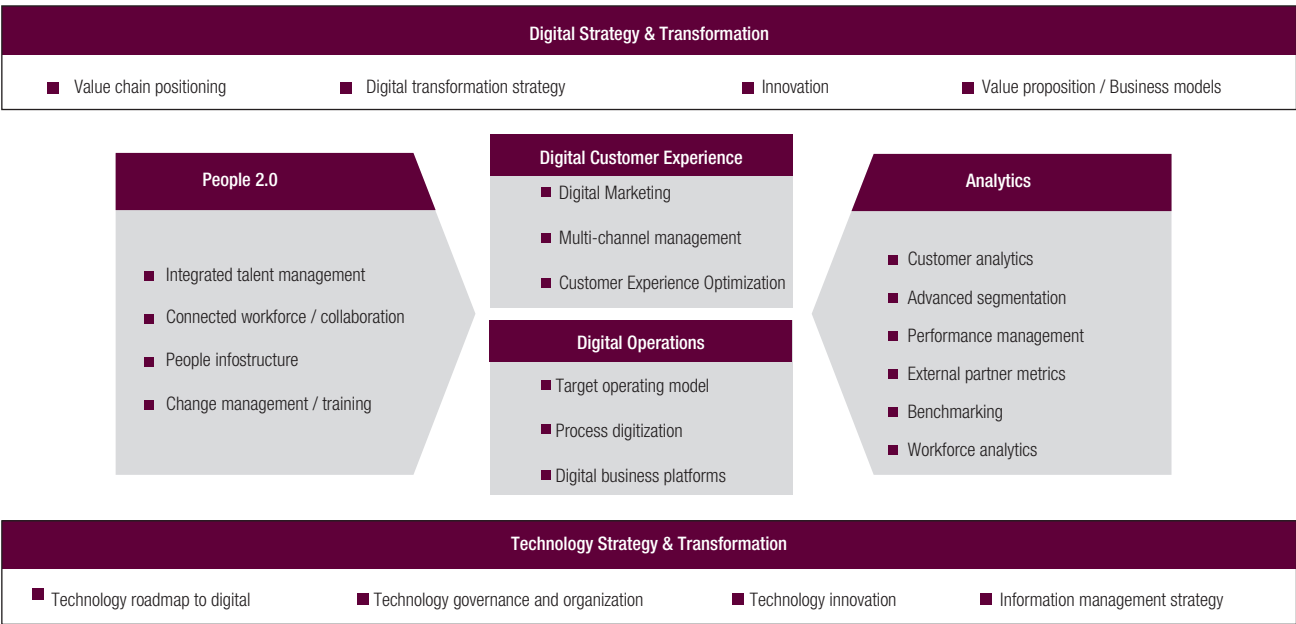
Source: Capgemini Consulting Analysis

> *Digital transformation requires a mix of skills which are often scattered across the enterprise and its external partners*

across the enterprise and its external partners. To succeed in this quest, leadership should not hesitate to redefine the traditional boundaries between its different entities, making them permeable and porous. We see, for example, the marketing or commercial departments acquiring technical skills to address rapid technological changes. Conversely, IT organizations are strengthening their marketing and sales expertise in order to better serve their companies.

Strategy formulation needs to gradually move away from the linear, annual process it once was. Once strategic directions are understood, senior executives need to steer their organizations into virtual laboratories where new applications and methods can quickly be put into "proof-of-concept" pilots and, when successful, rolled out to the entire organization.

An Outside-In View of Customers – Re-inventing Marketing

Marketing is undergoing the most fundamental change in its history. The increasing empowerment and sophistication of consumers - together with the proliferation of new channels, digital technologies, and tools - is forcing marketers to rethink the way they operate and the way they engage customers. The result is an opportunity to dramatically improve the efficiency and effectiveness of investments in marketing, advertising, and channel management.

Traditional marketing focuses on increasing reach and frequency by pushing information and offers through a variety of loosely aligned channels. However, the future of marketing in a digital world is to develop and sustain unique, personalized relationships with customers by collaborating and partnering with them through their own trusted networks. For instance, in 2010, Coca Cola cut advertizing spending on television by 6.6 % globally, and instead invested more on social

media campaigns via platforms such as Facebook, Twitter, and YouTube[29]. The social media strategy of the company is aimed at long-term sustainable engagement, developing advocacy, and encouraging brand loyalty.

The new digital customer experience requires that companies think "outside-in" about their customers and markets. Instead of thinking about finding customers for their products and solutions, marketers need to think about finding products and solutions for their customers. They need to understand what activities customers perform as they evaluate, buy, and use their products and services. They need to think deeply about when

> *The future of marketing in a digital world is to develop and sustain unique, personalized relationships with customers*

and where they hand-off products, services, and information to their customers. They need to ask which activities they can perform better than customers. Conversely, they need to ask what activities customers can perform better than the enterprise.

People at the Heart of Transformation

As in all forms of transformation, people need to be mobilized and engaged. Too often we see the technical nature of digitization resulting in companies underestimating this fundamental lever of transformation. Leaders should focus on a clear people vision and try to bring about inherent changes in the way people work and collaborate. There are a number of key challenges along the way: professionalizing and web-enabling end-to-end people processes throughout the organization, fostering collaboration and information exchanges between communities of knowledge workers to maximize productivity and speed-to-market, and adapting traditional organization models to the new demands of the digital world.

Digitally powered tools and processes must be developed to encompass the entire employee lifecycle. They should completely transform the way people join, learn, perform, earn, grow and leave the company. Leading global organizations are also embracing Enterprise 2.0[30] tools to foster a connected workforce where new forms of collaboration generate significant business benefits. For instance, Pfizer uses a range of collaboration tools such as Pfizerpedia (an integrated platform including people, projects, events, blogs, and discussion group to promote knowledge sharing) and Pfacebook (platform for employees to interact)

> *Digitally powered tools and processes should completely transform the way people join, learn, perform, earn, grow and leave the company*

to connect its people worldwide in a way that fosters innovation and speeds the pharmaceutical development process[31]. Of course, technology does not foster collaboration on its own, so it is essential that organizations properly implement these tools with work patterns and knowledge flows truly understood.

Digitizing Your Operations for Maximum Efficiency

As companies transform their business models in the face of new digital realities, transforming their operations becomes a pre-requisite to successful execution. Organizations need a clear roadmap in the form of a Digital Operating Model that is closely linked to the business strategy and customer priorities. For example, the physical distribution network and fulfilment processes should be optimally designed to support new digitally-enabled multi-channel go-to-market strategies from both a cost and customer experience perspective.

IBM was able to save $6 billion by re-engineering its supply chain processes, which included process-automation through web-based applications and

consolidation of functions. In addition, the company established an e-procurement system which helped reduce the average contract cycle time from 6 to 12 months to less than 30 days[32].

Digital Operating Models should be designed around four key dimensions: governance and performance management principles, organisation and management practices, process model, and system architecture. Only by integrating all these dimensions can an organisation create real "Organisational Capital"[33] and obtain the highest gains from their digital transformation.

Data-Driven Decision Making for a Smarter Organization

In recent years, digitization has brought a wealth of both internal and external data sources - such as supply-chain metrics, customer online data, and social-media commentaries - into organizations. Today, the notion that hard data and good analysis beats experience and intuition is generally well accepted. However, as the technology for capturing and analyzing information becomes widely available, at ever-lower price points, most organizations are still learning how to leverage them to the fullest.

> *Companies should leverage data driven decision making as a lever to compete on analytics*

In order to maximize the benefits of analytics, organizations should look beyond descriptive models, which provide simple operational statistics, such as sales-per-store or average profit-per-employee, and focus instead on predictive models to generate deeper insights. For instance, Seven Eleven Japan uses a sophisticated analytics system to manage the limited shelf-space at its stores. Point-of-sale and customer demographic data is analyzed on a real-time basis to gather statistics such as hourly sales trend for individual items, stockout ranking by individual items, and hourly sales trends by customer profile, to better match supply with demand[34].

Data-driven decision making should be made an integral part of organizational culture and companies should use it as a lever to compete on analytics. Recent evidence points out, that organizations which adopt data-driven decision-making achieve a 5% to 6%[35] higher productivity than those that do not. This significant boost in productivity can clearly separate winners from losers in most industries.

The transition to analytics should be driven by top management because of the fundamental changes required in culture, people, processes, and technology. Further, adopting an enterprise-wide centralized approach to analytics, rather than a department-level focus, makes more sense for an organization as it ensures that there is a critical-mass of analytical expertise, data from different departments can be correlated, and security and governance is centralized.[36]

Adapting IT Governance and Processes for Effective Transition

The most effective companies have taken years to optimize their IT governance, and must now re-examine it in the light of the particular rhythms and characteristics of digital transformation, where technology decisions, investments and initiatives are spread out throughout the whole organization. Formulating an enterprise-wide IT policy and governance which addresses key issues such as security, legislation, and information-management should be a key leadership prerogative. In addition, the historical quest to align IT with business strategy and with key functions such as marketing and sales has been difficult to achieve in practice. What is needed in the digital world is a true fusion of skills and functions to achieve accountability and speed of execution. This often requires new types of skills as well as flexible organizational model.

Since technology is a key enabler of digital transformation the role of a CIO becomes increasingly important in today's enterprise. CIOs must focus on equipping the workforce and the IT organization with new skills and tools required in a digital context. Interfacing these new tools such as social networks and connected devices to the legacy systems in order to drive value needs to be a top priority for organizations.

Finally, the increasing complexity of managing large volumes of digital information, from both within and outside, is exerting significant pressure on the IT organization. Companies which handle this stress better are more likely to gain an edge over the competition. Organizations therefore need to start considering virtual solutions such as cloud computing. In addition, they should deploy tools for prioritized storage as well as security and privacy protection in hybrid (both physical and virtual) environments.[37]

The historical quest to align IT with business strategy and key functions has been difficult to achieve in practice

A Different Type of Transformation

Every organization is likely to tread a different path in its digital transformation journey depending on its starting point and the digital maturity of its industry and products or services. In addition, with constant technological innovation and competitive activity, crafting a transformation journey is not an event but a continuous process. Our analysis suggests a few best-practice pointers on how to successfully craft and execute a digital transformation.

Lead and Educate

As with most successful business transformations, senior team commitment is essential. Leaders should create awareness and alignment in their top team around the possibilities created by the digital economy. The CEO should take charge and become the principal advocate of the transformation program, with a strong backing from top leadership. For instance, the CEO of US-based print media company, Journal Register[38], spearheaded its turn-around from bankruptcy in less than a year by championing the firm's digital transformation strategy, "Digital First". The company, which filed for bankruptcy in 2009, recorded a $40 million profit at the end of 2010 by adopting a series of digital initiatives[39].

It is also important for management to educate the board on the need for, and benefits of, this transformation in order to achieve complete buy-in on digital initiatives from all stakeholders.

Evaluate and Set Priorities

Organizations need to carefully review their current digital initiatives and conduct a "digital fitness" test on their operations so as to craft a coherent transformation map toward their digital future. Companies should also undertake a benchmarking exercise in order to identify best practices both within and outside their own sectors. Priorities need to be set based on the areas - customer value, revenues, cost position, etc - where digitization is likely to have the most positive impact.

Communicate and Mobilize on a Large Scale

Communication and mobilization are essential first steps to get the entire organization engaged around the transformation as well as to manage the traditional resistance to change. Enterprise 2.0 tools - such as social media, wikis, and discussion forums - can help mobilize and align the workforce on digital objectives by building awareness, creating transparency, and establishing open channels of communication.

A careful operational balance also needs to be set between managing the digital and the physical side-by-side. For instance, even as Netflix moves toward streaming digital media services, it still dominates the physical rental market and has not lost focus in this area. In 2010, Netflix had the largest single-company share of the physical disc rental market as it grew from under 26% in 2009 to nearly 35% in 2010[40] .

Invest in Skills and Competency Development

The right digital competences will not be widely available across the organization, so it is important to have a well-articulated talent and people plan to start injecting the right skills in the right places at the right time. Further, it is imperative to develop a mix of digital competences across all functions, such as marketing, HR, sales, and IT. Equally, investing in people development and connecting the workforce to improve sharing and exchange will be key to leveraging the people side of the transformation.

Set the Ambition and Iterate

Once the company is mobilized around a clear vision, leaders must translate that vision into a set of measures and targets to drive the desired results from their digital transformation. People in all functions need to understand "what good looks like" in terms of customer metrics, cost position, and productivity. Leaders need to decide the timeframe and the level of ambitions based on the particular responsiveness, the competitive situation, and the culture of their organization.

The road toward successful digital transformation is indeed a long one. However, every industry will be impacted at some point so those that do not take advantage of "the power of digital" will be at a competitive disadvantage in the short- to medium-term. Industry leaders have a unique opportunity to start steering their organization from the physical to the digital in an orchestrated way in order to improve their corporate performance.

Every organization is likely to tread a different path in its digital transformation journey depending on its starting point and digital maturity

Author Contact Information:

Didier Bonnet
Vice-President,
Capgemini Consulting,
didier.bonnet@capgemini.com
@didiebon

Priyank Nandan
Senior Consultant,
Capgemini Consulting,
priyank.nandan@capgemini.com
@priyanknandan

References:

[1] Years necessary for an invention to be used by a quarter of the US population

[2] Capgemini Consulting Analysis; The European environment Agency, State and outlook 2010: "Accelerating technological change: racing into the unknown", Nov 2010; Forrester Research eReader Forecast, 2010 To 2015 (US), July 2010

[3] Gartner: "Gartner CEO and Senior Business Executive Survey, 2010: Anticipating the Post-Recession Landscape", March 2010

[4] Interview with Andrew McAfee, Author of "Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges"

[5] Blockbuster failed to effectively adapt its storefront model to online technology

[6] Total Factor Productivity Growth measures the Growth of GDP over the combined contributions of total hours, workforce skills, machinery and structures and IT capital

[7] The Conference Board Total Economy Database, Summary Statistics 1995-2011, Jan 2011

[8] Working-age population = 15-64

[9] Stanford Center on Longevity: " POPULATION AGE SHIFTS WILL RESHAPE GLOBAL WORK FORCE", April 2010

[10] ITIF: "Digital Prosperity: Understanding the Economic Benefits of the Information Technology Revolution", March 2007

[11] Information Technology and Innovation Foundation: "The Internet Economy 25 Years After .com", March 2010

[12] MIT Sloan, Center for eBusiness : "THE DIGITAL ORGANIZATION: SEVEN PRACTICES OF HIGHLY PRODUCTIVE FIRMS", May 2003

[13] Forrester Research: "2009 Cost Of eBusiness Operations And Customer Acquisition", May 2009

[14] Forrester: "It's Time To Give Virtual Agents Another Look", March 2010

[15] Information Technology and Innovation Foundation: "The Internet Economy 25 Years After .com", March 2010

[16] Information and Communication Technology

[17] European Commission: "ICT and e-Business for an Innovative and Sustainable Economy"", 2010

[18] Forrester Research: "Case Study: Philips Achieves Consumer Proximity Using Private Online Communities", January 2011

[19] DBG Report: "Multichannel Marketing Today", September 2010

[20] 2010 Digital Universe Study: "A Digital Universe Decade – Are You Ready?", April 2010

[21] Forrester Research: "Case Study: National Instruments Replatforms Web Analytics", November 2010

[22] 2010 Digital Universe Study: "A Digital Universe Decade – Are You Ready?", April 2010

[23] MIT Sloan Management Review, 2011 MIT Sloan CIO Symposium

[24] LexisNexis Press Release: "New Survey Reveals Extent, Impact of Information Overload on Workers; From Boston to Beijing, Professionals Feel Overwhelmed, Demoralized", October 2010

[25] "The future of advertising agencies: learnings from Forrester", Feb 2010

[26] Forrester Research: "Three Ways To Find, Create, And Energize Advocates", Sep 2010

[27] Adage: "Most Fortune 50 Brands Still Hiding Their Social Media", April 2011

[28] ReadWriteWeb: "U.S. Department of Defense Goes Social...Yes, Really!", March 2010; Scout Comms: "The Department of Defense gained a social media beachhead in 2010", Feb 2011

[29] socialmediatoday: "Coca-Cola Cuts Ad Spend by 6.6% and Invests More in Social Media", March 2011

[30] Harvard Business School Professor Andrew McAfee coined the term "Enterprise 2.0" in 2006 to describe how Web 2.0 technologies could be used on organizations intranet and extranets

[31] Various Websites

[32] Information Technology and Innovation Foundation: "The Internet Economy 25 Years After .com", March 2010

[33] Because effective work organization can be costly to develop and implement but yields a stream of cash flows over time, it can be thought of as an asset. This asset is called "Organizational Capital"- Erik Brynjolfsson, "Intangible Assets: Computers and Organizational Capital", October 2002

[34] Graduate School of Business, Stanford University: "Operational Analytics", September 2007

[35] New York Times: "When There's No Such Thing as Too Much Information", April 23, 2011

[36] Babson Executive Education: "Competing on Analytics", THOMAS H. DAVENPORT, DON COHEN, AND AL JACOBSON, May 2005

[37] 2010 Digital Universe Study: "A Digital Universe Decade – Are You Ready?", April 2010

[38] Journal Register Company Owns and operates 18 daily newspapers and more than 150 non-daily publications and affiliated websites

[39] Company Websites; CEO John Paton's Digital First Blog

[40] ScreenDigest: "Netflix dominates physical rental even as it moves toward digital", May 2011

About Capgemini Consulting and Capgemini

Capgemini Consulting is the Global Strategy and Transformation Consulting brand of the Capgemini Group, specializing in advising and supporting organizations in transforming their business, from the development of innovative strategy through to execution, with a consistent focus on sustainable results. Capgemini Consulting proposes to leading companies and governments a fresh approach which uses innovative methods, technology and the talents of over 3,600 consultants worldwide.

For more information:
www.capgemini.com/consulting

Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, enables its clients to transform and perform through technologies. Capgemini provides its clients with insights and capabilities that boost their freedom to achieve superior results through a unique way of working, the Collaborative Business ExperienceTM. The Group relies on its global delivery model called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients. Present in 40 countries, Capgemini reported 2010 global revenues of EUR 8.7 billion and employs over 112,000 people worldwide.

For more information:
www.capgemini.com.

Capgemini Consulting

Capgemini Consulting is the strategy and transformation consulting brand of Capgemini