DIGITAL TRANSFORMATION REVIEW

Digital Transformation: making it happen

• Pfizer: Think Digital First by John Young and Kristin Peck • MIT talks governance by MIT and Capgemini Consulting • The people factor by Capgemini Consulting • Big data, big results by Capgemini Consulting • Companies to watch by Ateliers BNP Paribas • PRISA talks about digital leadership by Kamal Bherwani • A revolution in healthcare by Dr Devi Shetty
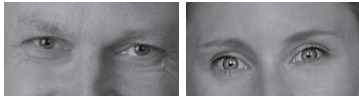
Summary

DIGITAL|TRANSFORMATION|REVIEW

Digital transformation: Making it happen

By Capgemini Consulting's Editorial Board

In the new digital economy, we are in the midst of a third industrial revolution comparable in scale and impact to the introduction of electrification. Digital technology has the potential to improve corporate performance and reach radically, leading to demonstrably better financial performance. However, while the potential of digital is clear, how to practically deliver on a digital vision is less so. In this third *Digital Transformation Review*, we aim to help business leaders understand more about the **managerial and change challenge** that they are facing.

We look at how an organization defines its digital **vision**, how to drive change through effective **governance** and a **people strategy**, and how to seize the opportunity offered by big **data**. We also offer a fresh perspective from pioneers across the globe, looking at an Indian organization's approach to innovation in healthcare.

One company that has defined an ambitious digital **vision** is Pfizer. We interview Kristin Peck, executive VP of worldwide business development and innovation, and John Young, president and general manager of the primary care business unit, who share the opportunities they see in the digital space as well as their journey in transforming their organization to create more value for their customers.

Governance is a major factor in a successful digital transformation. Digital transformation reinvents internal processes and business models as well as the way corporate entities interact with their customers and associates. There are challenges, however. Business cycles speed up and become more integrated, new risks appear and firms increasingly need cross-silo capabilities to achieve their digital objectives. We present our latest research from our partnership with the MIT Center for Digital Business on the criticality of governance to mitigate risks and fully leverage the benefits of digital. We investigate one of the governance models – the "*Digital Czar*" – further with an interview of Kamal Bherwani, Chief Digital Officer of media group PRISA.

People are another vital area. A corporation's

people will have experienced a digital lifestyle and culture beyond the walls of the organization itself. Their high expectations and aspirations as regards to what "digital" will do for a business need to be addressed. The way they work and interact is changing profoundly and will require every person to adapt. In addition, new types of skills (e.g. analytics, social media, and mobility) are needed for organizations to take full advantage of this transformation. We examine a six-pillar framework to design a successful **people strategy**.

One of the biggest challenges facing companies today is the explosion of data. The proliferation of digital channels has greatly increased the number of consumer interactions and consequently the amount of information that companies must absorb, analyze and respond to. We analyze how to turn big data into competitive advantage.

Finally, we present an interview with Dr. Devi Shetty of India, who is leading a visionary approach to innovation in healthcare.

In our research and work, it has become very clear to us that Digital transformation is as much, if not more, about leadership and organizational change as it is about implementing new technologies. It is therefore an exercise requiring skills and influence that only senior leaders possess. In this *Digital Transformation Review*, we offer some insights and best practices that can support executives along this path to **making digital transformation happen**. ●

Pfizer: Think Digital First

Pfizer is one of the world's leading pharmaceutical companies and has selected "digital" as a critical innovation platform for its business. Capgemini Consulting spoke to Kristin Peck, Executive VP of Worldwide Business Development and Innovation, and John Young, President and General Manager of Pfizer's Primary Care Business Unit

What is your perspective on the role of digital; do you see it as a way to improve business processes, a means of radically improving the way you operate or a combination of both?

JY: The healthcare environment is going through massive change and companies in our industry are really being challenged, and certainly we are challenging ourselves, to think about our go-to-market models and channels to the customer. We need to better understand where we are adding value – and perhaps just as important, where we are not.

John Young,
President and General Manager
Primary Care

Kristin Peck,
EVP WW Business Development
and Innovation

About 10% to 20% of the opportunity is about incrementally improving existing traditional channels, but the real opportunity lies in recognizing that the Internet and digital space are absolutely fundamental to our customers,

who are using these channels to access information in very different ways than they have in the past.

We know that more than 80% of physicians in the US actively use the Internet, many of them during consultation, and many patients are using the Internet to seek medical information. It's clear that digital has to be at the heart of what we do rather than just a means for business efficiency. We can add tremendous value for customers by providing high-quality information in a truly user-friendly way. It's unquestionably an area where we want to demonstrate our leadership.

Digital comes first

KP: I agree that 80% to 90% of the opportunity is creating appropriate two-way dialogue with our customers. Our approach is "think digital first." So when we're creating content and providing information, we now ensure that it's accessible digitally. Most importantly though, is determining the best way to engage with a specific customer – whether it's a consumer, a healthcare provider, or a payer – in a two-way collaboration. If we can learn more from customers about what they care about most, we can develop better products, services and resources for them.

CC: Healthcare is a pretty broad domain for digital advances with Health IT, electronic health records, alternative marketing channels, R&D, process improvement, etc. In that context, what are the areas you are focusing on? Is it the patient, the physician, the commercial side? What are your priorities?

KP: Our first priority is building a digital hub that creates a common set of platforms or pipes. We can create real value from appropriately uniting the data from the platforms and finding common insights across stakeholders to deliver the greatest value to them. Our second priority is building much richer and deeper collaborations with external parties, with a focus on customers' needs. Finally, we are really focused on building analytical horse power to extract the most value from this data.

Once we do those things, we can develop better products, communicate more clearly about the products that we have, and better target resources and information for the patients who will benefit the most from them.

KP: We have a strong focus on the customer as well. One of the features of our business and

Pfizer: Think Digital First

the disease areas in which we operate is that customers often wear more than one hat. An individual may be a physician in one realm and may also sit on a formulary committee (which sets utilization guidelines and reimbursement for our products), or have other roles in the healthcare space. As a result, we may offer different information to that customer depending on which hat the customer is wearing.

Further to Kristin's point, customers also need to access information in a simple and coherent way, irrespective of how we are organized. As an example, in Pain or Rheumatology Arthritis, our portfolio ranges from biological medicines through small molecules to products available over the counter. So while we need to make sure we have the organizational structure to support those particular medicines, that organizational structure can't be reflected in our digital face to customers: if you're a customer or patient, frankly you don't really care how we are organized. What you want is a simple, straightforward route to the information you need.

CC: Tell us about your innovations – what have the highlights been?

JY: We have so far only taken the first set of steps in an industry that we recognize is not necessarily known for being the greatest set of innovators beyond drug development.

Virtual conversations

In Europe the first thing we've done is enable our HCPs (Healthcare Professionals) to have a conversation with a sales representative through a virtual channel. It's in some ways very simple conceptually, but for our industry in Europe that's pretty cutting edge.

We also know our customers value the ability to get information on breaking topics to understand how to manage particular patient populations. This would traditionally happen in a forum like a medical congress or scientific meeting, but they may not want the high cost and time commitment of travel. So we've created webinars and similar ways for customers to access this information. Again, this isn't particularly radical but it enables us to use digital technology to expand our ability to meet customer needs.

It also varies by country. In a number of territories customers value the opportunity to get information by email, but this isn't true in every country. In Germany for example, our research tells us that customers are generally extremely keen to get information via email, but

not in Italy. So we are adding more digital channels that reflect insights from our customers about what they want and their preferences on how to get it. On their own they're tactics, but we are actually trying to combine these additional channels to really transform our go-to-market model, recognizing that our customers want access to information on their terms rather than the channels we decide.

People prefer digital

One thing that's been encouraging is that there is a significant segment of physicians – particularly in Europe – who have genuinely found value in our move to digital media. When you engage a customer through the channel of their choice, and provide truly valuable information through that channel, we see that it works. Many physicians have said they would prefer to have access to information or talk to a representative through digital channels versus a traditional office visit. Eighty percent of customers using these channels re-engage through them, and we have witnessed that the length and detail of the interaction increases by as much as three to four times the length of a traditional sales call. A digital sales team member in Italy with about 15 years experience said he had never in his career spent 45 minutes having a detailed product discussion about just one medicine. These may be soft metrics but they tell us a lot.

KP: It's partly because you're speaking to them when it's most convenient for them and about what matters to them. The reality is that our customers do want to engage with us but at a time that works for them, and about products in which they're interested.

CC: In many countries in the world there are concerns about counterfeit and stolen drugs. Do you see opportunities in the digital space to enhance the safety and reliability of your products?

KP: Pfizer has a team of experts who constantly assess new and existing technologies to identify counterfeit drugs and to make it more difficult for those who counterfeit our medicines to make convincing copies, and to help patients and healthcare providers distinguish authentic from counterfeit Pfizer medicines. Recognizing that there is no "catch-all" solution, Pfizer is working closely with the U.S. Food and Drug Administration (FDA) and other regulatory authorities to ensure that pharmaceutical companies have the resources they need to implement the anti-counterfeiting technologies that

Pfizer: Think Digital First

work most effectively for their products. As part of these anti-counterfeit efforts, our global supply team has developed a serialization initiative that enables authentication at the pharmacy level. In addition, our Viagra team created an educational YouTube channel to increase awareness of counterfeit medicines, which was quite successful.

JY: It's important to note that our ability to quickly scale pharmacy-level validation is dependent on the nature of the supply chain in individual countries. Technology has the potential to be transformative in this area, but we also need to have partners who are equally willing to come to the table.

CC: From a management perspective what are the issues you've been addressing with regard to your digital initiatives?

JY: We have to make sure we accelerate our learning process so the knowledge and capability of our employees aren't limiting the opportunities that exist with our customers.

One potentially effective option is to leverage partnerships with major players in this space in other industries, for example, by sending our best and brightest to these companies to do short-term learning "fellowships." Or conversely, to get technology companies to send their people to Pfizer, so we don't learn in a linear fashion but exponentially. We believe this is going to be absolutely at the center of our learning in this area.

Governance is vital

KP: Governance is a challenging aspect of our enterprise-wide digital effort. We have many different brands in many markets, so when it comes to

digital opportunities, we can have 1,000 flowers blooming – and that's not really scalable to any of our stakeholders who actually care. First, brands have to think digital first. Second, common platforms need to be created across brands. While a brand in a specific market may have the coolest app, a physician searching for specific information wants that information to be consistent and readily available, regardless of applications or any cool features.

So we're changing the governance so that relevant information is available digitally and common platforms are established. We believe it will be relatively simple when we set rules everyone has to follow. The way to overcome this challenge is through the support of senior leadership. It's critical that all the leaders of the businesses support the governance of our digital efforts.

JY: I agree that senior leader support is essential for governance, particularly in an organization that exists in a highly regulated and normally conservative industry.

Risk in the form of compliance issues, inefficiencies in internal processes, and confusion for the customer are more likely to occur when you have those "1,000 flowers" simultaneously blooming without governance. While we don't want to discourage innovation, and it's understandable that people are eager to be part of the wave and jump in with their own initiatives, as leaders we must help guide and prioritize.

For example, while we clearly need to respect and understand local laws, languages, and customs, this doesn't mean we should create 50 different versions of a website. In addition to being highly inefficient and difficult to govern, over-customization could actually make it more difficult for patients and customers to get the information they need from us.

CC: So it's about focusing the brand teams on the core of marketing rather than the enablement?

KP: Exactly. We want our brand teams to focus and decide upon the global platform that we'll use. We want this decision made internally and not by third parties in individual markets. So, while we're making an investment, at the same time we are recognizing savings in our third-party spend.

CC: How do you manage the relationship between IT and business?

Digital initiative

JY: First, the challenge is to define who (our digital platform, business units and brand teams and technology organizations) is responsible and accountable for what in a space that is by definition highly complex.

In Europe, we created a conceptual framework to work through business opportunities and challenges in the digital space, and understand the roles and skills of different parts of our organization, how we can work best together, and complement each other to accomplish our common goals. This is what's behind Ian's [Read, Pfizer CEO] "making digital successful" approach – we are all in it together, no one function or team is "leading" it, and IT is a critical partner.

JY: And of course there's medical and legal. These and other functions are important internal stakeholders that help ensure our initiatives, including social media activities, meet our legal and regulatory obligations and benefit our customers. The answer is to

Pfizer: Think Digital First

look at what we want to do as a company, and then include input from our internal partners, such as medical, IT, and legal.

CC: In a sense we've come around to asking how you manage the transformation itself.

JY: The foundation for our transformation is really everything we've talked about – strong leadership and governance, collaboration, innovation and efficiency. And as we digitize our existing content and create global platforms, we're simultaneously looking for opportunities to add customer value we can't offer in any other space. For example, by drawing on customer insights and finding ways to creatively leverage existing digital channels. One of these existing channels is a highly-valued telephone-based medical information service for customers, but 80%

of the questions that come into the service are common ones. Here's an opportunity to direct the common questions through a robust digital channel, and leave the complex questions for the telephone service where they can be more quickly and effectively answered.

KP: We also worked through Epocrates. If customers had questions, they could just go through Epocrates and click on "Ask Manufacturer." This inquiry is then routed to Pfizer, and we can get an email back in 24 hours. If it's urgent, we can get someone online right away. If we can't answer the question, we get a technical expert online. And if necessary, we can get an expert to your site. The question is how soon people want an answer, and in 80-90% of cases 24 hours is fine. Digital channels allow you to get the right answer to the right question at the right time, rather than whenever we

happen to stop by. This type of example demonstrates the potential and the mindset.

CC: Can you think of three or four keywords to describe your company from a digital standpoint in two years time?

KP: The words that come to mind are: collaborative – what we aspire to is two-way communication; integrated – we're trying to build a network where the different parts can speak to each other; and innovative. We're not yet on the cutting edge, but we're hoping to get there and lead the industry transformation.

JY: I agree with everything Kristin said but would add one additional word, and that is "valued." We really want to add significant value to the customer experience. ●

Companies to watch:
view from Silicon Valley

By L'ATELIER
BNP PARIBAS GROUP

ZocDoc: Americans rate their doctors, patients gain power

Mobile e-health applications market rises to

718 million in 2011

ZocDoc simplifies the lives of 1 million patients and their doctors by booking same-day appointments close to their homes. Patients can check which health insurance categories are covered, rate healthcare providers and rank doctors, all on their phones. Transparency is the order of the day, and doctors who want to get closer to their patients can use the web to showcase their expertise. ZocDoc has already raised $95 million.

Sonar geo-tags: its network in real time

According to the IAB,

10 % of American

media consumption is through mobile phones; however, mobile advertising constitutes only 1% of the total spend.

Sonar is an app that lets people identify individuals around them by geo-locating them on a map through their mobile phones. Sonar retrieves information from Foursquare, Facebook and Twitter. This application, developed by the start-up firm Sonar Media, opens up a new marketing avenue based on "proximity graphs". An individual's presence at a particular location confirms his affinity for that place and makes it easier to recommend POS, restaurants, etc.

Nest, homes get connected

1.8 million homes

are already connected worldwide in the US.

Setting a thermostat can be tedious and fiddly, leading many people to give up and stick with inefficient energy use at home. Nest is a revolutionary thermostat. It's very easy to use because you just have to enter the desired temperature. After that you don't have to program again because Nest remembers your preferred temperatures for the time of year. Better still, it can be managed through your smartphone. Nest adds to the trend towards 'connected homes' or 'Smart homes' that will allow better control of every home's energy budget.

Governance: A Central Component of Successful Digital Transformation

As part of their 3-year research programme, MIT and Capgemini Consulting have identified governance as one of the key success factors of any digital transformation.

Digital transformation allows the reinvention of internal processes and business models as well as the way corporate entities interact with their customers and associates. There are also challenges, however. Business cycles speed up and become more integrated, new risks appear and firms increasingly need cross-silo capabilities to achieve their digital objectives.

Governance is a key determinant for firms to implement their digital transformation successfully. The need for these new rules of governance is driven from three areas: faster and more integrated business cycles, new risks and an increased need for firm-level governance.

Where are the new challenges coming from?

WHERE ARE THE RISKS?

I) Branding and social media
Social media changes the nature of an online conversation. Social interaction is almost invariably a one-to-many interaction, whereas people are accustomed to their communications being confidential in the email model. Anybody searching the Internet for "Twitter blunder", "Facebook blunder" or any similar string of words will find evidence of people who have alienated their employers, even governing bodies in the territories where they work, and therefore their markets simply because they failed to take account of the visibility of their words. Withdrawing unwise words and images can of course be done, but once someone else has repeated them on another network they can be judged to be around permanently.

ii) Confidentiality
The other major risk is in confidentiality and regulatory breaches. Social media and consumerisation, in which employees use their own tablets and other smart devices, usher in new risks to data protection legislation in multiple territories. This applies in particular to financial institutions, but any

organization handling data has to look after it. Information published on Facebook and LinkedIn accounts needs to be compliant. In some industries notification has to be sent to all clients if data is compromised, which will damage reputations. In addition to this it is absolutely essential that all devices can have their data locked down. This is happening precisely at the time when employees expect to be able to use their own equipment. There are software and network solutions of course, but the IT department will now need to be confident in every device and be able to ringfence data from any 3G network or external service to which it will connect.

What has to change ?

Cross-silo capability

Another imperative the digital

Governance: A Central Component of Successful Digital Transformation

transformation of an enterprise brings is a final end to the siloed mentality which has existed across generations. Customers now expect interaction based around them and not on the company's products and services, while internally staff expect to be able to collaborate. The same colleagues who can collaborate with someone internationally over a public network like LinkedIn or Google Docs will expect at least the same level of integration internally.

This means data silos across departments are often inefficient, whether across product or region. Data integration is a must, or else advanced approaches to customer engagement simply won't happen.

> **Data integration is a must, or else advanced approaches to customer engagement simply won't happen.**

To achieve these objectives of cross-silo integration (both internally for collaboration and externally for customer interactions), firms often need new firm-level capabilities. Governance and leadership are key elements to make it happen: An important objective of governance is to make enterprise-level platforms happen. It can be very difficult to build a single view of customers, or an integrated view of operations without strong leadership and governance. The platforms provide clearer information to decision-makers, and serve as the bases for advanced analytics capabilities and new digital services.

Governance

To enforce the challenges, needing faster business cycles, accommodating new risks and achieving more firm-level digital integration, it is critical to have governance in place around digital initiatives.

MIT and Capgemini Consulting believe that good digital governance achieves both sharing, in which local units use common capabilities and resources, and co-ordination.

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There are three primary mechanisms to achieve this sort of governance. There were other models but these three have an appreciable number of adherents:

1. Shared digital units

Several of the organisations interviewed had set up independent units to make

resources is essential to reach maximum efficiency. Several of the businesses surveyed had central funding in place for a number of capabilities.

A shared unit will also help to develop essential new digital skills across the company. 77% of the companies interviewed had skills gaps[1]; in general large and long-established firms are precisely the companies that won't have the new skill sets in house. These skills might involve social media, advanced analytics and mobility.

In some cases it will not be necessary to hire someone with all of these skills for each individual department. These can come from inside or outside the business: "*Of course, the key thing is to have the right people. It must be a combination of our existing people and new people with new thoughts. And looking at service industries, we need that type of competence,*" explained Timo Paulson, Senior

digital transformation easier and more affordable across an entire organization. These shared digital units can develop a "digital service catalog" to ensure consistency across a business so that every stakeholder understands what is on offer and their dialogue is facilitated.

The idea of a shared unit offers many advantages. Fewer redundant initiatives, particularly in cases in which an innovation

might be duplicated. Often, the problem is that the local units will have many difficulties finding the right people and skills. The shared unit can provide and develop skills for the company with less expenditure than would be necessary if every business unit had its own digital personnel. It can also eliminate duplication in resources such as databases. Identifying the appropriate level of centralization of these

1. See "Digital Transformation: a Roadmap for Billion Dollar Organizations", MIT and Capgemini Consulting, 2011.
2. See the case study "Volvo Cars Corporation – from a B2B to a 'B2B+B2C' business model" MIT and Capgemini Consulting, 2012.
3. See Nestlé 2011 Full Year Results Roadshow transcript:
http://www.nestle.com/Common/NestleDocuments/Documents/Investors/2012%20Events/Nestl%C3%A9%20FY11%20Roadshow%20Transcript%20(f).pdf.

Governance: A Central Component of Successful Digital Transformation

Manager Ownership Services and Brand Protection for Volvo Cars Corporation, about the shift from B2B to "B2B+B2C" that the firm is doing[2]. Finding competencies in other industries is a solution that several interviewees mentioned: "*We have been hiring analytics experts from other firms. We give them a chance to play a more senior role than they could with their previous employers, where their skills are more plentiful,*" explained an executive in a restaurant company.

In the right setting, a centralized resource can be extended to act as a talent incubator for the rest of the company. Nestlé set up a digital acceleration team with experts from all over the world meeting in a multimedia lab. Starbucks has had the same approach to mobile applications, explains an executive:

"*[We have] a mobile App lab where we share best practice of building Apps. We don't want to centralize the app building, we leave that close to the consumer in the markets. But there's common practice, best practice, efficient app building and we have a lab for that so people can tap into it and we can guide them in making good Apps.*[3]"

The final reason for working in this way is due to the need for new ways of working to adapt to the aforementioned faster and more integrated business cycles. People working closely together in a single unit can experiment more easily with new digital approaches than people spread across an entire organization and in different functions.

2. Firm-level committees for digital transformation

A second approach, favoured by a number of respondents, was to put committees in place to drive digital transformation throughout a firm. MIT and Capgemini Consulting identified two different types of committees:

1. Steering committees make decisions
2. Innovation committees identify opportunities and make propositions. Both are multidisciplinary.

A steering committee will typically accept that a change is coming or has arrived, then look at what policies are in place to ensure its implementation complies with regulations. It prioritises funds and resources and tries to make business cases. This leads to steering committees effectively taking bets depending on what has worked in the past: an apparel company invested in a global customer platform when there was no clear business case: "*This investment was primarily based on what I would call an 'art business case', rather than the 'science business case,' and this was the right thing to do. We did it big enough to be successful, but small enough not to be stupid,*" explained a senior executive.

Innovation committees are

tasked with fast reactions to technological and cultural change. An executive explained: "*We are bringing together all the people who can say, 'Wow, we could do this. It's not a problem.' That's our IT architecture folks. And then we've got everybody else saying 'Well, if we do this, how do we protect confidentiality? How do we retain data? How do we train? What's it going to take to make this usable before we officially condone it to the field?' So, it brings all of the right levels of perspective to the table.*"

3. Digital roles – the Czar emerges

The third approach is to appoint a specific digital champion. The higher-profile people in this position become known as the "digital czar" but they may not be as senior as this. The overriding objective is to get the whole organization accepting the importance of the digital culture; examples in which someone low-level has pushed

a digital agenda and found senior management ignore it are commonplace (this is of course not unique to digital!).

Czars generally spearhead the transformation of a business into something else. In early March 2012 Starbucks hired a chief digital officer, for example. Chairman, president and CEO of Starbucks Howard Schultz explained: "*Over the past several years, there has been a seismic shift in consumer behavior in large part because of the rapid adoption of social and digital media as a primary means of connection and communication. We have recognized this shift and have made it a priority to establish a position on the leading edge of innovation and are now taking this a step further.*"

The challenge is that there is no universally accepted definition of what the "digital" element of an organization should be. So

Starbucks' CDO is responsible for web, mobile, social media, card, loyalty, e-commerce, Wi-Fi and the Starbucks digital network as well as in-store entertainment.

An alternative (or complement) to the Czar is a lower-level group positioned across different units to help with digital transition. They may be formally CDOs within a division or "simply" digital champions, i.e. designated individuals at any level responsible for pushing the digital agenda.

One thing that is certain is that culture has to change for digital transformation to be effective, consistent

Culture has to change for digital transformation to be effective, consistent and therefore manageable according to governance rules.

Governance: A Central Component of Successful Digital Transformation

and therefore manageable according to governance rules. Nestlé, for example, has a grouping of people from all of the territories in which it operates who come together, learn and then spread their expertise across the business. "*We have something like 15 people, from all markets, who have an interest or have already good experience in digital, who are sharing and connecting with the world in general with the Internet and social media. They are building expertise and then sharing that with other people in the markets*" explained a senior executive of Nestlé[4].

There are companies which have taken different approaches to implementing digital culture with equal success. ApparelCo is an apparel company engaging with customers all over the world through social media. The firm has built a digital hub – another way of expressing a shared digital unit – and also has a digital czar as well as committees to drive the firm's digital agenda. Spanish-language global media company Prisa has numerous specially-created digital roles and structures including a shared digital unit, which was radical against a backdrop of the existing highly decentralized organization; it also has firm-level committees monitoring the metrics by which the transformation is being measured, a digital czar reporting directly to the CEO and further liaison roles.

Conclusion: one size never fits all

MIT and Capgemini Consulting believe that although digital transformation is affecting every business (and one could add every public sector organization, charity, NGO and any other entity) there is no single ideal way to implement and manage this change or set of changes.

Things for business leaders to

> **Things for business leaders to take into account will include:**
> **-Strategic priorities**
> **-Definition of "digital"—there are radically different examples in the report**
> **-Existing culture.**

take into account will include:

• Strategic priorities

• Definition of 'digital' – there are radically different examples in the report

• Existing culture.

Governance mechanisms fitted around these areas are likely to produce the best results. The governance model a firm will

4. See Nestlé 2011 Full Year Results Roadshow transcript:
http://www.nestle.com/Common/NestleDocuments/Documents/Investors/2012%20Events/Nestl%C3%A9%20FY11%20Roadshow%20Transcript%20(f).pdf

adopt around digital should not remain static but must evolve over time according to changing circumstances and needs. Virtually none of the organisations in the study started off with the idea of changing in the exact way they have done but have adapted as new technologies and opportunities presented themselves. This is essential; the shape of the digital landscape is not as people might have guessed a few years ago, when social media was primarily written down and not visual and the shape of businesses that will do well in the new environment has to be equally fluid. ●

Digital Transformation:
People make it real!

By **Barbara Spitzer, Capgemini Consulting**

All of us have witnessed the profound effect
of digital on consumers and on our own personal lives,
with the expanded use of mobile phones, Twitter or Facebook.
Many still wonder though how this new digital environment
will translate into the workplace, and what is the effect
on our organization's people and culture.

How we work, and how we are led, has changed radically
over the past few years. The rules of the game are now
completely different, as digital pervades our working lives:
74% of C-level executives network in a professional community
weekly; use of Twitter amongst business leaders and decision
makers has almost doubled in a year; the presence
of senior executives on social networking sites rose
from 31% in 2010 to 61% in 2011[1].

We have identified six elements that define the changing digital people agenda: context, culture, capability, connection, contribution and communication (see Figure 1).
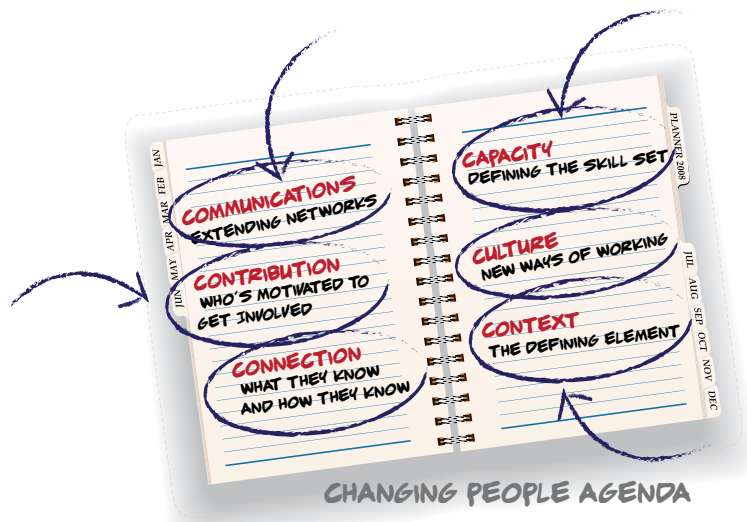
1–Context:
the defining element

Executives need to embrace a new context for their work, where online visibility has a larger role. Today, a manager needs to have a digital footprint and manage it in an appropriate way (not least so that they demonstrate they understand its impact and show colleagues how to manage it). They will need to embrace a smart, 21st century vision and work hard to inspire hearts and minds to make it happen (claiming to be an old-school manager who does not "understand digital" is no longer an acceptable tactic!). Senior personnel have to change their frame of reference on what it means to be a leader. They should embrace transparency, open communication and listening, and must be willing to be challenged from all directions – and to understand the context in which every communication is made.

2–Culture: New ways of working, new environment

Digital transformation is leading to significant changes in employees' expectations of work. Email is passé, eLearning is not new, borderless collaboration is here now and most prefer e-books and multi-player online games as a way to consume information. Employees regard constant connection to the outside world as an essential. Online

Figure 1: Understanding the Changing Digital People Agenda – A 6C Approach

Source: Capgemini Consulting

1. CNBC survey of senior executives, 2011

Digital Transformation: People make it real!

communities are now the norm and can be harnessed for commercial reasons given the right membership. Employees increasingly also break down the traditional hierarchies, even down to blurring the lines between who is inside a business and who is not. Business management needs to catch up with the new way of working and create an enabling environment. Business leaders will need to understand the cultural changes that are happening and adjust to them, and be sensitive to the evolving demands of the workforce as this happens.

3-CAPABILITY: DEFINING THE SKILL SETS

Globally, organizations face challenges in recruiting employees with the right set of digital skills. Relying on entry-level people with strong knowledge and skills they need at the workplace is not going to be good enough. For instance, in Europe, it is estimated that by 2017, over 90% of all jobs will require technology skills across all sectors and the shortfall of trained ICT (Information, Communication and Technology) professionals is likely to touch over 700,000 by 2015[2].

Organizations will need a multi-focus strategy to source skills from within, taking four broad steps:

• **Define a digital competency framework:** Organizations need to abandon the notion that digital skills are the province of only the IT department or that social media skills belong only in the marketing function. Every business function is being challenged though the advance of digital technologies. For instance, social media holds as much relevance to recruiting as it does to customer service. The incoming personnel will need an entirely new set of skills and it is up to the business leaders to ensure they have them.

• **Develop talent communities to replace traditional talent pools:** Talent communities need to be developed to operate on the principle that people with similar skills and background will engage with one another. Such communities work well as closed loop systems for attracting and retaining talent. A recent study found that companies which integrated social strategies into their recruiting systems saw referrals grow from 35% to 67% in their organizations[3]. Such communities can have a significant impact on corporate culture. In the long run, it will lead to more openness as people in geographically dispersed areas talk to each other because of their professional discipline. Such communities can also be a great

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2. The Information Daily, "e-Skills Week 2012: There Is A Job Waiting For You", Mar 2012

tool in aiding organizational transparency. For instance, if a business has been in the habit of playing people off against each other, or if there is any hidden discrepancy in pay rates between people doing the same job, they are very likely to be uncovered very quickly.

• **Look at an organization's learning environment:** Organizations should bear in mind that a generation comfortable with e-learning is entering the workplace at the current moment. The subsequent opportunities and impact arising from the blending of virtual and physical learning environments is significant. For instance, mobile technology enables e-learning modules to be consumed as and when the learner wishes, making them more flexible than anything previously. Organizations need to ensure that their learning environment is geared to support such changes.

• **Do not allow your social media skill set to stay still:** The pace of changes in social media is such that organizations will need to set up a dedicated center of excellence to continuously monitor and progress their social footprint. A center of excellence is an important step as it will act as a catalyst and formalize the changes coming into place. It also makes a corporate statement about the need to leverage these trends and as such will act as a beacon for the rest of the organization.

4–CONNECTION: WHO AND WHAT THEY KNOW?

The notion of a connected, digital community has existed for a while in various forms, but the current extent of the constant connection is unprecedented. Social media is now coming into the workplace for internal conversations, effectively moving knowledge

management from a centralised repository model to peer to peer. The advantages over email are many. The open nature of social media leaves little scope for unprofessional conversation. Moreover, openness of the medium allows people other than the intended contact to respond to queries allowing for more comprehensiveness. Social conversations can also be archived and searched and in turn become part of the corporate knowledge base. These advantages are driving organizations to adopt social media. Indeed, it is estimated that by 2014 social networking services will replace email as the primary vehicle for interpersonal communications for 20% of business users[4]. Business leaders will need to be part of the redefinition of privacy, internal communications and employee engagement in this environment; once again, the leader who tacitly approves the

3. Jobvite, 'Jobvite Social Recruiting Survey Finds Over 90% of Employers Will Use Social Recruiting in 2012", Jul 2012

Digital Transformation: People make it real!

ideas without engaging with them will be left behind.

5-CONTRIBUTION: WHO'S MOTIVATED TO GET INVOLVED?

There is little doubt that traditional, core HR processes are being impacted not only by shifting workforce demographics but also by the dynamics of digital influences that accompany them. Organizations should strive to ensure that their experts take active part in online communities. This not only helps position the individuals as thought leaders, it can also in the long run help build up a positive organizational image. At the same time, organizations should strive to ensure that digitally prominent individuals, who have the potential to be a valuable asset to the business, are adequately rewarded. In doing so, social media, with its 'likes' and 'follows', itself

serves as an effective means of performance management in near-real-time.

Such social KPIs will become increasingly critical to advance organizational performance. These KPIs which reflect collaboration and knowledge sharing are different from those which many organizations are familiar with.

6-COMMUNICATIONS: NETWORKS ARE ALREADY EXTENDING

On the social networks a good leader will not only be managing direct employees but associates, clients and anybody else who cares to comment. It is all about engaging with stakeholders at every level. The digital environment is open and transparent. Criticisms of a company, or endorsements, need to be engaged with, to manage any reputational issues and maximize the value of positive comment. Managers

need to be comfortable with the speedy, open and transparent communication required.

NEW ENVIRONMENT, NEW OPPORTUNITY

These are exciting times for "digitally converted" business leaders who can reinvent rules of engagement with their employees. The speed of change we are witnessing requires immediate attention, as the critical hindrance to business transformation may well be the cultural changes within the company and the need to acquire new collaboration and communications capabilities.

To capitalize on the potential that digital has to transform the organization, we believe that business leaders should put people first in their digital agenda, and structure their approach around 4 key principles:

4. Gartner, 'Gartner Says by Year-End 2013, Half of All Companies Will Have Been Asked to Produce Material from Social Media Websites for E-Discovery", Feb 2011

• Align people spend to promote and reward the new culture

• Stay ahead of the game by not ignoring the inevitable tipping point where social networking becomes standard operating procedure in the workplace

• Demonstrate that "employees matter" with a real investment in a new, modern and smart work experience

• Put digital tools and cloud solutions to work for your people to transform ways of working and collaborating.

Digital technology and collaboration allows the creation of a truly connected organization.

Given the right leadership and structured approach, our people and our organizations will become much smarter than they ever were before. ●

Digital Transformation: People make it real!

Marcopolo: Driving Digital Transformation through People

Marcopolo is a Brazilian company and one of the largest bus manufacturers in the world, with operations in Brazil and across South-America as well as in South Africa, Australia, China, India, Egypt, and Russia. The company has over 18,000 employees all over the world, and recorded net revenues of USD 2 billion in 2011.

Capgemini Consulting spoke to Mauro Gilberto Bellini, chairman of the board of directors, to understand his perspective on how to conduct a digital transformation.

CG: Why is digital technology important to you as the President of Marcopolo?

MGB: As chairman of the board, I see my role not only anticipating digital innovations and promoting them, but by the same token, always performing a thorough analysis and asking why they are worth doing. We want to be at the forefront of digital innovation.
We use a great deal of digital technology. We have implemented SAP tools, created an intranet connecting our subsidiaries worldwide, purchased increasingly sophisticated software for product engineering and process. We participate in e-auctions and have connected classrooms across our locations.

CC: What is the key success factor in a digital transformation?

MGB: What has been key in our digital transformation, has been our investment in people. We have continuously invested in training for system upgrades and specific training to cope with technological breakthroughs. You have to acknowledge the human factor, people need time to adapt and they need the support of an organization.

CC: What have been your challenges so far?

MGB: One of the key challenges is making sure we make the right technology investment decisions and making the right choices is difficult. Also, the presence of technology means our customers expect to see more rapid change and we need to make sure we meet their expectations.
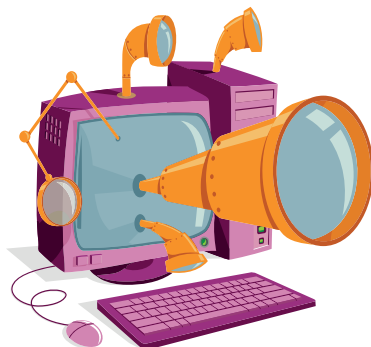
Companies to watch: view from Silicon Valley

By L'ATELIER
BNP PARIBAS GROUP

Privowny:
putting your privacy back in your hands

20% of digital advertising is reactive

The IAB has reported that one fifth of advertising is now based on behaviours because of the data we share on the Internet. Every time we fill a form, our data is stored and often shared with other websites. Search for an air ticket to Los Angeles and you will receive advertisements from restaurants and hotels in that area. A start-up called Privowny from Palo Alto has been created to help users manage their privacy. As things stand, in spite of cookie legislation in Europe, it's difficult to tell when your data is being handled responsibly or sold on to a spammer. Privowny does two things: First, every time you visit a website Privowny tells you what information that site has about you and what it does with your data. Second, it provides you with a list of all the websites that have information on you and lets you control this data, update it or delete it.

For example, it allows emails with a limited period validity for a trip to Barcelona, letting you make the most of this information before your holiday but cutting off Barcelona-related mails when your trip is over.

ShowYou:
the TV program chosen by my social network

In 2011,
the American TV market changed dramatically: Fox and ABC channels lost 20% of their audience while Netflix gained an audience of 25 million.

The convergence between social networks and TV continues apace. With the rise of connected television including Google TV and Apple's anticipated iTV, a lot of startups have arrived to take advantage. Among these, ShowYou is one of the most downloaded social TV applications on iPad. The idea is that instead of choosing a program from a selection of channels, the user's social network connections recommend videos. The iPad works as a remote control and puts the image onto the connected TV screen. ShowYou has already received $2 million from True Venture's business angels. ShowYou users spend 35 minutes every day using it.

Turning Big Data into Competitive Advantage

By Scott Clarke, Capgemini Consulting

One of the biggest challenges facing companies today is the explosion of data. The proliferation of digital channels has greatly increased the number of consumer interactions and consequently the amount of information that companies must absorb, analyze and respond to.

Companies must contend with wave after wave of digital data – from real-time computer tracking of shipments, sales, suppliers and consumers, as well as email, mobile, Web traffic and social network comments. Digital era technologies are doubling the quantity of business data approximately every 1.2 years. The increasing volume, variety and velocity of consumer data available to companies will continue to top the list of challenges facing companies as they enter the digital age. Companies are beginning to recognize the increase in productivity that comes through data-driven decision making; yet few are equipped to fully capitalize on this opportunity. In the next few years we are likely to see a major shift in focus among companies as they start to transition toward a more data-driven business environment. At present most companies still struggle to analyze these vast quantities of data, extract meaningful insights, and use them effectively. However, in order to overcome the demands of an ever changing consumer and technological landscape, the digitally mature enterprise of the future will be characterized by its ability to systematically make decisions based on facts and figures rather than on the basis of experience and intuition.

For example, in the retail sector Staples has begun to use sophisticated forecasting to optimize inventory and support other organizational functions. Staples synchronizes store and distribution center order forecasts over an extended period of time to deliver accurate, time-phased inventory order forecasts to various constituent groups within the company and to upstream sources of supply, based on true consumer demand. The integrated forecasts are used throughout the company for forecasting seasonal sales, scheduling labor, managing inventory and replenishment, and estimating annual budgets.

It's Not Just About Volume

Big Data has begun to flood every area of the global economy. Like other essential factors of production such as hard assets and human capital much of modern economic activity simply could not take

place without it. Companies are now systematically capturing trillions of bytes of information about their consumers, suppliers, and operations from a growing number of devices such as mobile phones, tablets, smart energy meters, automobiles and industrial machines that sense, create and communicate data. Indeed in the digitalized world, consumers simply going about their day to day activities - communicating, browsing, buying, sharing, searching - generate enormous trails of data.

Companies are beginning to capitalize on this phenomenon. For instance, in the world of consumer retail, leading retailers like Tesco, Target and Wal-Mart are shifting their focus from tracking transactions to tracking the consumer's journey before, during and after the transaction is complete. This allows the retailer to be more proactive and precise

in how they promote, price and position their products at individual consumers to drive maximum value to both the consumer and themselves.

> **Today, more than 90% of consumer data is unstructured, such as multimedia and social network content.**

But the concept of Big Data is not just about volume anymore. Just as important to the Big Data phenomenon is the increasing complexity and variability of the data itself. Today, more than 90% of consumer data is unstructured such as multimedia and social network content. The breadth and depth of this data means that it can't simply be stored and queried within a traditional database solution. As such, competing through Big Data often requires a complete transformation of a company's

data management and analysis systems and processes.

A New Source of Business Value

It is widely understood that Big Data can provide a source of tremendous value for companies competing in an extremely complex, dynamic and uncertain marketplace. It allows businesses to analyze a much broader set of data about aspects of their business as an integrated whole. By breaking down the silos of information that exist across the organization and by making Big Data more accessible to relevant stakeholders in a timely manner, a company can make quicker and more effective business decisions.

In recent research conducted by Capgemini Consulting, business leaders estimated that, on average, they have seen business performance

Turning Big Data into Competitive Advantage

improvements of 26% where Big Data analytics have been applied, and they expect those improvements to accelerate rapidly. Moreover, we have seen some enterprises increase their sales volume by more than 35% and their operating margins by as much as 60% by embracing Big Data and by enabling data transparency across the enterprise.

> **By capturing real-time information at the point of interaction as well as at the point of sale a company is able to understand not just what a consumer buys but also why and how they buy.**

One of the greatest sources of business value for Big Data is in a company's ability to develop and maintain a 360 degree view of the consumer across all channels, brands and product categories. By capturing real-time information at the point of interaction as well as at the point of sale a company is able to understand not just what a consumer buys but also why and how they buy.

T-Mobile USA, for example, has integrated Big Data across multiple IT systems to combine customer transaction and interactions data in order to better predict customer defections. By leveraging social media data (Big Data) along with transaction data from CRM and billing systems, T-Mobile USA has been able to cut customer defections in half in a single quarter.

With much of the consumer buying process shifting to social media platforms like Facebook, Yelp and Kaboodle companies are exposed to a new wealth of information regarding the sentiment and context behind consumer buying decisions.

Evaluating the consumers' behavior across these social media channels can help to reveal the key influencers across different product categories and consumer segments as well as help identify and contextualize the issues and considerations that are most important to the consumer, when they are important, irrespective of what conventional wisdom might suggest.

This ability is providing a new level of insight and opportunity, and ultimately a new source of business value. When supported by advanced analytics, Big Data can help drive competitive advantage on a number of different levels. In particular, a company is able to shift the focus from what the consumer has done to what they are likely to do next. By tracking the consumer journey across multiple channels a company is able to determine the 'next best action' at each point of transaction

and interaction. With the focus on insight driven action, companies are able to drive consumer value and advocacy by communicating content and offers to the consumer when and where they want to receive them. Moreover, by combining advanced predictive analytics with business rules and a response management capability, decision makers are able to automate the very high volume of small consumer-related decisions made every day within their organization.

Target is one of many companies who have already started to reap the rewards of Big Data analytics. For example, by analyzing trends in purchasing behaviour Target is able to identify 25 products that together could predict the likelihood of pregnancy. Each shopper is assigned a "pregnancy prediction" score and Target is able to estimate due dates to within a small window, allowing the company to send messaging and coupons targeted to specific stages of the pregnancy.

Overcoming the Challenge of Big Data

To succeed in the world of Big Data companies must overcome a considerable number of challenges. From a technology perspective, data management systems will need to continue to evolve in order to achieve the affordable storage of increasing quantities of data from a proliferating number of sources. Equally critical will be the ability to extract this data efficiently in real-time or near real-time and to be able to apply the appropriate analytical tools to successfully analyze the new forms of data – often in conjunction with more conventional data – to obtain insight and drive action.

However, technology is only one of several challenges that must be addressed. Perhaps even more critical to the success of the digital enterprise is the removal of organizational silos that often stand in the way of data transparency and knowledge sharing. Over the years, information 'tribes' have often formed around the various disciplines across an organization. Employees are often unable or, for fear of losing control, sometimes reluctant to share data outside their own department. In the future, organizational silos need to be abolished and replaced by a centralized analysis and reporting hub that promotes continuous knowledge sharing, data transparency, collaboration and unified decision making.

While this is complex enough technically, it needs to be accompanied by strong, top down analytics leadership. In a recent Capgemini Consulting study, 55% of business leaders surveyed felt that Big Data management is not viewed strategically at senior

Turning Big Data into Competitive Advantage

levels of their organization. For companies to achieve competitive advantage through Big Data there needs to be an enterprise-wide Big Data strategy. The presence of such a strategy will help to ensure that business decisions are consistently and systematically tied to relevant data and that the organization is able to maintain a holistic and unified view of the world inside and outside of its four walls.

This senior level leadership is also critical to building up the necessary internal capabilities including human capital to effectively deal with the opportunities and challenges of Big Data. Indeed a shortage of analytical and managerial talent necessary to capitalize on the opportunities of Big Data is a challenge that companies in most countries will need to overcome. In the United States alone, recent reports have estimated a gap of close to 150,000 people possessing the deep analytical skills necessary to compete in the new global economy. When this is added to a much greater shortage of managers and analysts necessary to analyze Big Data and make decisions based on their findings, the severity of the problem becomes very real indeed. Senior management will have to establish strategies both inside and outside their organizations to ensure that they do not fall victim to the emerging challenge of human capital.

Back to the Future

In the digital world of tomorrow, next generation analytics, enabled through Big Data, will become a strategic imperative. As the number of consumer channels continues to proliferate and the amount of data made available to companies increases exponentially, companies will need to develop clear strategies, guidelines and policies for turning Big Data into a competitive advantage.

With much of the consumer conversation and ultimately consumer buying decisions now taking place online, companies must be in a position to monitor this activity and respond, when appropriate, in a timely, calculated and impactful manner. It is already widely accepted that when a consumer tweets a service related question, the company in question will be able to capture that information and should therefore respond accordingly. How the company chooses to respond can have a significant impact on that consumer's willingness to engage in future business. Moreover, the ability to use that information to predict what the consumer is going to do next can help drive future value to both the consumer and the company. This all begins with the company's ability to determine,

within the 'noise' of Big Data, those gems of information often referred to as 'Signals' that enable the company to more accurately predict behavior and outcomes, and to shape their plans and actions accordingly. Due to the increase in smartphone usage and the growth of location based data these 'Signals' can now guide a company's decision making in terms of the timing, content and exact location of marketing communications.

However, the future of Big Data analytics far exceeds predicting consumer behavior. Big Data has now become a significant source of innovation, enabling companies to create new products and services, enhance existing ones and invent entirely new business models often through continuous dialog with the consumer. Manufacturers are now using data obtained from the actual use of products or through collaboration with the consumer to improve

future products and to create innovative pre-sales and after-sales services.

To this extent, a whole new consumer experience is emerging where in exchange for more intimate knowledge of the consumer's needs, wants and product usage patterns, companies are able to provide personalized solutions that help the consumer reach better outcomes. An example which is emerging in the smart energy solutions market is a home energy management application. This application records power usage for home devices, identifies energy-inefficient equipment (i.e., a freezer), and shares the data with partner device manufacturers who then prompt the consumer with a cost savings case for buying a more efficient replacement.

In a similar example, by leveraging large quantities of data on more than 5 million users Intuit, through Mint.com,

provides a service to its customers where users can compare their financial situation to others who are similarly situated by demographic, geography or other factors. This service can tell users how much money they would save by switching to a new credit card or refinancing their mortgage. In other words, Intuit has effectively outsourced product management directly to the consumer.

In the years to come we will continue to see many examples of Big Data analytics being used to delight consumers in new and innovative ways. With many companies adopting a true 'outside in' approach to the marketplace, the ability to capture valuable consumer insights and turn these insights into real time or near real time action will not only be a source of competitive advantage but the key to survival in an ever changing global economy. ●

Transforming a media player for the digital age

Kamal Bherwani
*Chief Digital Officer &
Managing Director, PRISA Group*

Kamal M. Bherwani has been the Chief Digital Officer of Grupo Prisa SA since January 2010 and has more than 20 years of technology and operational experience. Prior to his appointment as Prisa's chief digital officer, he served as the Chief Information Officer of Health & Human Services and Executive Director of HHS Connect for the City of New York, where he implemented several award-winning initiatives that have been globally and nationally recognised. Kamal has also served as Chairman and Chief Executive Officer of Relativity Development Corporation and Chief Information Officer of Bridas Corporation. He is advisor to the Mayor's Office of the City of New York, Stony Brook University's Center of Excellence in Wireless and Information Technology (CEWIT) Advisory Board, and on the Board of Advisors of Violy and Company.

Impact of Digital

CC: How do you think companies are dealing with the impact of digital? Are firms transforming themselves fast enough?

KB: I don't think that we have a benchmark or a reference of a company – at least in the media sector – that successfully transformed itself, because I feel that the process of transformation is not yet complete. There are various media players who have different mixes of digital revenues, but the

> **"In the media industry, digital transformation has not yet come full circle, so we do not have a reference of a company that has successfully transformed yet."**

> **"Companies like media players have to transform at a pace that allows them to survive."**

key question to ask is - are those really profitable? That's the real test. We have some existing businesses that are doing well and are profitable but there are also new businesses that are growing and are on the path of profitability. The truth is that traditional media players have to transform at a rate that allows them to survive. If we shut down all the printing presses and leave everything there for free on the Internet at El Pais (PRISA's newspaper), then there is no way we can survive. So, digital transformation is not about having digital presence, but to find the right balance between transforming key elements of business to digital and profitability.

Understanding the Digital Consumer

CC: What impact has the advent of digital consumption had on your view of the customer?

KB: The biggest revelation to most of us in the media industry was that traditionally we didn't know the end customers because in the past we never had to. Our customers were advertisers and newsstands. We understood end consumers by taking a sample of metrics such as average income, average age and interests, and drove advertising based on that average whether it is TV or the press. This defined how we distributed content.

The advent of digital consumption has changed the market dynamics; the industry has moved from a distribution centric world to a consumer centric

Transforming a media player for the digital age

world, which forces integration of the company. Integration enables more intelligent selling of products and services that people might be interested in. You need to put your customer in the center, identify how the customer will use your products and services, and how you ensure your operations are consistent with the customer centric objective.

CC: How do you go about developing new products for this digital consumer?

While our larger view is that consumer behavior is unpredictable, we do strongly believe that if you want to implement something you need to experiment. Feedback from customers guides our future plans. For instance, recently we launched a coupon site that offered great deals on leisure, travel and quality products. The site received feedback everyday that helped us learn and innovate further. On the other hand, if we had spent one or two years imagining the best coupon site in the world, it wouldn't have worked.

Similarly, we launched an iPad application for El Pais in three months and it was voted one of the top ten in the world. The reason we launched that in three months is because we realized that we will not know the result until we experiment. We have lots of ideas that are innovative that might fail or be a success. I really respect companies that fail well. There is no way other than experimenting to see whether the idea works or not. This shows strategically where

"With the advent of digital consumption, the industry has moved from being distribution centric to being customer centric."

the world is going and what capabilities people might value.

Operationalizing Digital

CC: What do you think is more important for a company when orchestrating a digital transformation – strategy or quick execution?

KB: Strategy in the digital world is very important because without strategy you are making decisions on day-to-day basis that are collectively not building towards a single direction. Without a direction there will be random activities that are duplicative and redundant. It means the lessons are not learned at every level of the organization and mistakes are repeated. It also means that you don't leverage the integration of the customer experience and

the customer insights; so we need a very good strategy but a flexible one over time. Along with strategy it is also important to have a series of measurable quick wins as a build up to a long-haul execution and ensure that mistakes are not repeated.

> **"My approach has always been to cannibalize before someone else does it, it is a matter of timing."**

However, it is important to note that at the end of the day it is the not the strategy that is difficult but the execution of the strategy.

> **CC: What do you see as some of the biggest challenges inherent in a digital transformation?**

KB: One of the biggest challenges is the cultural transformation of a company like PRISA around thinking in a customer-centric way. Traditional businesses that have been successful have to worry about cultural change and their own employees. For a large company like PRISA, it is also a challenge to identify the right pace of transformation for each of its business areas.

> **"Globally there is an acute shortage of digital talent."**

The other issue is to align the regulation between different countries around privacy to a common format because we have a global internet with a fragmented regulatory policy.

> **CC: In the last 2-3 years have you seen any cannibalization in your existing business as a result of your digital transformation?**

KB: In the last couple of years we have indeed cannibalized our business. We launched YOMVI which is the VOD platform that allows you to get Canal+ and other channels and catalogues of movies without having a set-top box. We separated the content from the box. It is very much possible that some of the people who are YOMVI subscribers will not use set-top boxes.
My approach has always been to cannibalize before someone else does it. It is a matter of timing i.e. when do you want to cannibalize yourself and ensure you do it before any other business.

> **CC: At any point during your transformation, did you feel that there was a shortage of digital talent?**

KB: Globally there is an acute shortage of digital talent. One way of overcoming that is to

Transforming a media player for the digital age

ensure that the existing scarce talent is remunerated well. However, this will also mean that you are essentially subsidizing your transformation. This has an intensive cash flow effect.

> "It is imperative for organizations to drive digital transformation top-down."

Doing it right will require the ability to identify the right talent and in a quick manner. Though there is good compensation paid in digital business, the competencies required for digital are hard to find, therefore the market for digital talent is competitive.

CC: Given your experience in digital, what would be your guidance for companies starting their digital journey?

KB: It is extremely important for organizations to be close to their customers and understand their needs. Delivering value and personal attention to your customer is essential to gain their confidence and achieve customer satisfaction. Therefore, to keep pace with the digital wave, it is imperative for organizations to drive digital transformation top-down as it provides the right platform to achieve their objectives. ●

When medicine gets a digital lift

The digital environment has had a huge impact on health service delivery and nowhere is this more apparent than in India. Dr. Devi Shetty is a practicing heart specialist, also the chair of the Narayana Hrudayalaya group in Bangalore, where the innovations are poised to go worldwide. He therefore sees the healthcare market both as a manager controlling costs and as a clinical practitioner serving patients and their needs. Capgemini Consulting caught up with him.

Dr. Devi Prasad Shetty
Chairman and Heart Specialist
Narayana Hrudayalaya

When medicine gets a digital lift

CC: First can you give us an idea of the scale of operations for which your health authority is responsible?

DS: Narayana Hrudayalaya group has close to 6,000 beds and an approximately similar number of outpatients is taken care of in the hospital. At our health city in Bangalore about 46% of the patients are coming from lower socioeconomic strata whose surgeries are funded by micro health insurance programmes like Yeshasvini or Arogyashree which are state sponsored; another approximately 20% of the patients do not come under any schemes - the hospital charitable wing raises money for their operation. In one state of Uttar Pradesh close to thirty clinics and approximately 30,000 patients are treated every month as outpatients entirely free in those clinics. These patients get a medical consultation and medicines free of cost. This activity is funded as a charitable activity from our group hospitals.

> Narayana Hrudayalaya group has close to 6,000 beds and approximately a similar number of outpatients is taken care of in the hospital.

CC: Technology has become very important in your professional life, both as a practitioner and as a manager. Can you give us some sort of overview of what's being used?

DS: Right now what we're using is pretty much a basic patient information system. I'll give you an example. In the Indian health scenario the most important consideration is the cost. Of course our main priority is treating a disease, but it has to be done at an affordable price. So we have an audit solution which is in the cloud. This covers 14 hospitals in 11 cities. Using it, at 12.00 midday every day, all the senior doctors get an SMS with the profit and loss of the previous day. So we run our organization by doing the accounts on a daily basis. This, we feel, is extremely important not just for us but for hospitals across the world. Looking at a profit and loss account at the end of the month is like looking at a post mortem report – the patient is dead. Looking at a P&L account on a daily basis is a diagnostic call that enables you to take remedial measures. The fundamental concept is low cost.

Scale of operations

CC: What made you run this in the cloud?

DS: As I say, we have 14 hospitals in 11 cities. We are in the process of adding 30,000 beds in the next seven years. There are 100 towns in India with a population of between half a million and one million where there is no hospital. We have to scale up our operations so that we can put information in from the Cayman Islands; scaling up becomes easier in the cloud, and of course you can enter data in real time.

CC: So can you tell us about the patient-facing healthcare applications?

DS: We believe within five years software will make smarter diagnoses thandoctors, and within ten years it will become mandatory for doctors to get a second opinion from the software before starting the treatment.

We have started working on a clinical, medical diagnostic system with smart algorithms, with the intelligence built in. When you put the patient history and the information into it, it gives you three differential diagnoses. The thing is, when a doctor gives a diagnosis the problem is there is no second opinion, that's it. If the

CC: How long have you been using this as an organization?

DS: We have been doing this for two years now.

CC: So presumably you have an idea of the impact on your service?

DS: There has been a huge, huge delivery with a very thin margin, so for us the constant worry is to keep our head above water. If you have a large budget you can afford to make mistakes, we can't. This is purely from the financial point of view of course, but that is a very important aspect of healthcare across the world.

> **Within ten years it will become mandatory for doctors to get a second opinion from the software before starting the treatment.**

When medicine gets a digital lift

patient needs a second opinion it is very expensive. The new system will supplement the first opinion with three diagnostic options, so that's what we're building now. It will take about a year and it will radically change the way patients are taken care of. Patient care will become a lot safer using this technology.

CC: Interesting. Is this built on an existing system or are you starting from scratch?
DS: We are building a totally new and different system. It's going to be based on iPads. It needs to be based on a tablet which is portable because on a hospital ward you can't carry a laptop computer around.

CC: How will you implement the idea?
DS: We will start with the post-op cardiac surgical unit, where we're now in the process of replacing all of our ITU charts with the iPad.

CC: Why standardize on iPad rather than Android? The cost is higher.
DS: We're coming up with a new concept so we need to use the market leader, which is the iPad. Yes it's expensive but we need it to be on the best and most familiar products. We're going to face a lot of scepticism from our medical fraternity.

CC: Taking all of this technology into account, both managerial and diagnostic, how does working in the digital environment affect your relationship with your patients and teams – and how they help you administer treatments?
DS: Well, the patients don't use the technology that much, and employees have no choice! They use it because there is no paper alternative in most places now.

Quality increase

CC: So has the digital technology in their healthcare had much of an impact on the patients in India?
DS: Because of the hospital management system the patient diagnostics protocol gets standardized and the amount of mistakes come down significantly compared to when we were doing things on paper. So quality of treatment has definitely increased but I don't think patients have directly experienced something different. Our patients aren't likely to notice internal changes, but for us the system of delivery has become flawless.

> **Because of the hospital management system the patient diagnostics protocol gets standardized and the amount of mistakes come down significantly.**

CC: How does this help in terms of the remoteness of some of India? There's a huge social imbalance, with large industrialised cities but also with tiny isolated villages, it's a very varied demographic.

DS: People are used to technology. We have 750 million users of mobile phones, and on those 600 million Indians are active. They communicate with each other – they not only talk, they send SMS text messages, so eventually these technologies have broken the communications problem already. Today people are very comfortable using technology here because the mobile phones have introduced them to electronic communication, sometimes without words. So a very big revolution has happened in India, it's very cheap to communicate with each other. So in terms of communicating and being used to technology, without realizing, people have embraced technology. Without realizing it consciously, people are learning and doing something new, they just do it automatically.

CC: Indeed, and in India the phone is a more popular way of connecting to the Internet than through a computer.
DS: Exactly.

Remote diagnoses

CC: It's clear that technology has saved money and improved patient care, and there's more to come. Are there any other ways in which your working life has been improved by technology?
DS: You see, without using technology there isn't going to be affordable healthcare. First, from the Indian perspective, technology gives rich people what they always had but in a better format. On the other hand technology has given poor people something they could only ever dream of. I'll give you an example. In a remote part of the country near Tripura, if someone has a heart attack and gets taken to the hospital, I can see the patient in ten minutes through a video conference using satellite communications. I can see the patient, I can look at all the reports, I can talk to the family members. Other than touching I can do everything. This service comes

to the patient free of cost. This would have been unthinkable only a few years ago. So in terms of my profession, in terms of technology, if we don't have digital technology there would be no way we could standardize and streamline our healthcare. It would be like a Mom and Pop operation, with no economies of scale, no efficiencies. Take medication: in terms of medicines we know exactly how much every hospital has all the time, when the expiry dates are, all the information we need in real time. And because of this we save money.

> **Without using technology there isn't going to be affordable healthcare.**

CC: And because of that you deliver more services. We've spoken about India exclusively so far, though: can you think of any ways in which it could be applied in other territories whether developed or emerging markets?

When medicine gets a digital lift

DS: This is something that is not an option. It has to be done. Look at the cost of healthcare; the US spends $2.4-$2.5 trillion on healthcare and 45 million people have no access to it. The US spends 17% of its GDP on healthcare.

We spend 1% of the GDP. We believe that India will become the first country in the world to disassociate healthcare from affluence. We want to prove to the world that you don't have to be a rich country to offer healthcare to your citizens because healthcare is an industry that is not dependent on natural resources like coal or other products like steel or cement. In those industries you can't control the cost because it's dependent on the input cost, whereas healthcare is totally dependent on human skills, which can be scaled up. This isn't a problem, we have a 1.2 billion population and we produce 128 million babies a year. They can be trained to take care of the sick. So we believe that a major transformation will happen in this country and that can never happen without using technology.

Future plans

CC: So what's going to be the next big development, the next milestone, in this process?
DS: The next important step is the algorithm that will come up with the diagnosis.

CC: And that's going to be around in five years and, you believe, mandatory in ten years. Has the digital environment had more of an impact on healthcare than other industries or is this typical?
DS: The healthcare industry is the last industry to embrace technology. Today if I'm correct, only 18% of US hospitals are using any significant technology for their IT infrastructure, so healthcare is the last area to embrace this. Why this has happened is because today the doctors at the helm of delivery are of my generation and when we grew up there were no computers. When someone delivered a box with a keyboard we got scared because we'd never used it, we branded it as useless and ensured that they didn't come

anywhere near a hospital! In the last eight years, though, the smartphones – BlackBerry, iPhone, all of them – introduced doctors to the beautiful world of technology. They started finding how to send emails, how to receive emails, how to communicate with each other without talking, and now we're comfortable with the technology. So now we're telling the software guys, look, here's what we demand, produce it! Earlier, the software guys wanted to talk to us and we didn't want to talk to them.

CC: And this could go worldwide?
DS: The cost of healthcare across the world will come down by 75%. This will happen – can only happen - through massive utilization of technology. ●

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