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How to get digital transformation right

How can organizations better compete in a world of ever-changing digital technologies?

Mike Cooray and Rikke Duus outline the challenges and opportunities presented by the digital revolution.

Introduction

By 2020, 75% of businesses will be a digital business or will be preparing to become one¹. Only 30% of these efforts will be successful due to a lack of talent and technical expertise. Digital transformation is affecting businesses across industries. It is driven by new technologies, fierce competition and increasing expectations from customers of a 'digital-first' experience. Digital transformation can be defined as the use of technology to radically improve the performance and reach of organizations². Technologies, including cloud, mobile, big data and the Internet of Things (and now 'everything'), are amongst those causing disruption to established industries, organizational structures and customer expectations.

We are in the early stages of a research project looking at organizations' adoption and use of digital technologies. The study looks at organizations' use of technology to enhance operations, marketing, customer engagement and innovation.

Participants of the study include business-to-business (B2B) and business-to-consumer (B2C) organizations across multiple industries.

Preliminary findings show that 30% of respondents are using automation of processes to drive digital transformation and 82% rated this to be an effective initiative. The key factor holding back adoption and use of digital technologies is the lack of appropriate IT systems (61%) to implement digital initiatives in the organization.

In terms of organizations' use of data analytics and big data to enhance customer service, 31% of B2C organizations used these technologies compared to 12% of B2B. B2B and B2C organizations also take different approaches in their transition to digital. B2B organizations are more likely to appoint a Chief Technical/Transformation Officer whereas B2C organizations have digital transformation project teams.

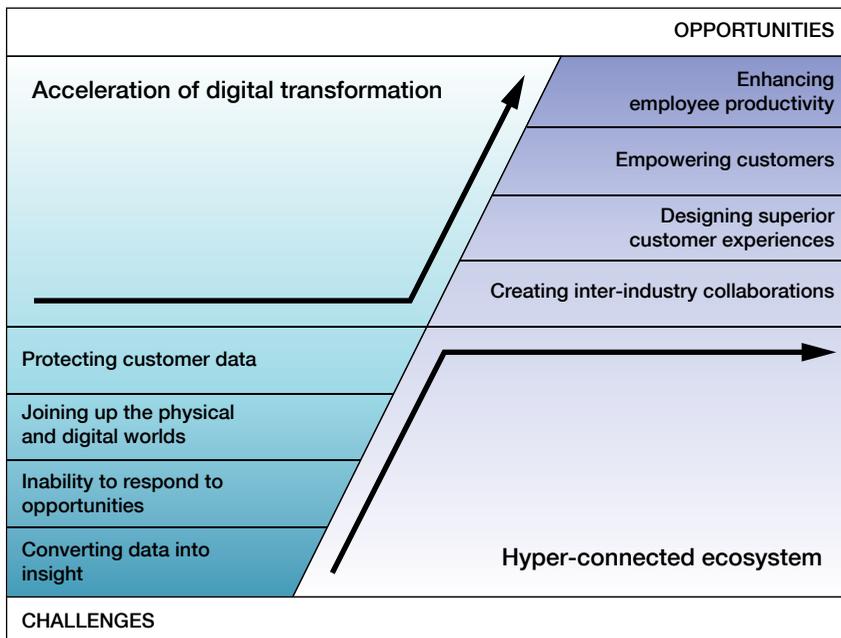
What has become increasingly clear, is that success in the digital age requires

more than talent and technical expertise. It requires the vision to re-imagine and re-invent the business, taking advantage of the opportunities digital creates.

Organizations have always had to adapt to change in order to survive. However, now change is not only fast - it is exponential and non-linear³. This is reflected in heightened competition, diminished differentiation and the ability of new market entrants to quickly create new markets and disrupt existing ones⁴. New competitors are often 'digital-first' with lean business models and the ability to acquire large user bases. For example, it took the app-based game, Angry Bird, only 35 days to acquire 50 million customers in 2015⁵.

With 608,110 new startups founded in 2015⁶ and many of these in tech domains, there is ample reason for larger established businesses to identify opportunities for a digital overhaul. One place to start is the business model. The question is, how can digital technologies help re-imagine and re-invent existing business models to ensure boosted competitiveness and value creation for customers? For the supermarket chain Morrisons, a late comer to online ordering, this means teaming up with the online retail giant Amazon for delivery of fresh, frozen and ambient products⁷. The supermarket industry has seen growing competition from startups including HelloFresh and Hubhub, specializing in convenient recipe boxes and food delivery from small shops respectively.

Business model re-innovation can be the key to survival. However, a recent study by Harvard Business Review⁸ found that executives are mainly using digital to improve customer service, productivity, product innovation and revenue and not taking a holistic business wide lens. Competing in the age of digital has its own challenges. In the section below we look at some of these and continue with some of the opportunities that organizations can also gain from thinking 'digital-first'.



Challenges

Converting data into insight

Data alone does not always lead to new opportunities and may even put the organization on the wrong track. That is because data, in isolation and without context, is not always the best indicator of which strategic move to make next. Prior to the launch of P&G's Oral B Genius smart toothbrush, the company had information about consumers' tooth brushing behaviors and patterns, but insight was limited. So the company launched its newest smart toothbrush at the Mobile World Congress in Barcelona this year. This connected toothbrush uses built-in motion and acceleration sensors, plus a video recognition algorithm to map the brush's position and pressure in the user's mouth⁹. This data is then visualized in real-time in a smart phone app that helps users maintain more effective hygiene. This provides Oral B with a vast amount of data that can be used to understand this 'automatic habit' of brushing teeth while also using this data for future new product development and targeted investment in Internet of Things (IoT) platforms.

Inability to respond to opportunities

Organizations may have all the required skills and expertise, systems and financial resources to take advantage of new digital opportunities. However, bringing these together in a way that leads to cutting-edge innovation, timely competitive responses and the best utilization of skills is a challenge for most. British retailer Marks & Spencer has struggled with online sales in the last few years. Losing out against competitors in the race for online orders, the company re-designed their online shopping interface in 2014, only to disappoint their customers yet again¹⁰. Not giving up, Marks & Spencer has recently launched its first app, Cook for Apple Watch, in an attempt to take advantage of this new digital platform and extend engagement into the wearable sector.

Joining up the physical and digital worlds

Many traditional bricks-and-mortar organizations realize the need to extend their presence into the digital space. How best to go about this, while still serving their core customers, is often a challenge. The opportunity lies in using digital to enhance value created for customers and engaging with them at their convenience. This means embracing new digital platforms and partnerships in order to extend their presence and gain new digital capabilities. A company that could easily have suffered a painful death if not for digital innovation is the notebook company, Moleskine. Responding to a digital environment, the company has struck up several digital partnerships with Adobe, Evernote, FiftyThree and Livescribe. These partnerships enable seamless transitions between paper and multiple digital media. With this



move, Moleskine continues to cement its relevance in a space rife with competition from new digital players.

Protecting customer data

With the datafication of business, organizations need to deliver on the responsibility of keeping customers' data safe. Numerous data breaches have hit large consumer-facing companies in the last couple of years including Target, Sony, JP Morgan Chase and UPS. Recently, the personal details for 2.4 million Carphone Warehouse¹¹ customers have been accessed in a cyber-attack. According to recent research by Symantec¹², only 21% of British consumers trust retailers to keep their information safe. Therefore, it is important that organizations build consumer trust by offering transparency in how data is gathered and utilized. The online social network Ello is a move in this direction¹³. This anti-Facebook social network was launched in 2014 and has a small group of core fans. Its founder, Paul Budnitz, promises a social networking experience without advertising, extensive data-mining and with users in control of what data they make available.

Opportunities

Creating inter-industry collaborations

Digital transformation requires organizations to collaborate within and outside of the organization. Business models must be designed to facilitate these collaborations in order to create win-win situations. Organizations that are better equipped to bring together expertise, systems and data are able to develop stronger business models faster and be more effective in fiercely competitive sectors. Three companies that collaborate successfully are airline British Airways, American Express and supermarket chain Tesco. By gathering and sharing customer data and shopping patterns,

the three collaborators create integrated customer value. They do so by enabling customers to convert Tesco shopping into Avios air miles and free American Express companion vouchers on British Airways, when a British Airways American Express credit card is used.

Designing superior customer experiences

Proactive organizations use data and digital interfaces to create customized and individualized experiences for customers. Data can be used to add value to the key customer journey and build a competitive advantage for the organization. In tough competition with other theme parks, Disney has responded by developing the MyMagic+ ecosystem. Visitors are offered the MyMagic+ Wi-Fi, GPS and RFID (Radio Frequency Identification)-enabled bracelet that also acts as a credit card, room key and ticket for park rides. The MyMagic+ app creates a personalized experience and enables visitors to book rides, make restaurant reservations and schedule greetings with Disney characters prior to arrival. The technology also lets Disney collect visitor data to better understand expectations, improve operations and provide better real-time support.

Empowering customers

With digital technologies organizations can intensify their engagement with customers and put more control in their hands. Consumers are excited to be empowered by organizations and are looking for immersive omni-channel experiences. Tennis Australia and the All England Lawn Tennis Club use the IBM SlamTracker and IBM CrowdTracker to engage with visitors during the Australian Open and Wimbledon tennis tournaments. Through these interactive apps, fans can access up-to-the-minute match data, player stats, video, radio and social media. The CrowdTracker gives fans a birds-eye view and interactive map of the site, helping them to better plan their tournament experience.

Enhancing employee productivity

New wearable technologies are emerging that enable employers to track their staff's health, productivity - and even their ability to create beneficial collaborations. Using wearable sensors and digital data, companies can create people analytics and insights to enhance the well-being and efficiency of the organization. Humanyze, a spinoff of the MIT Media Lab, offers solutions that measure staff conversations, quality of conversations, where staff spend time, their daily movements and stress levels. Virgin, in collaboration with Global Corporate Challenge and ShapeUp, is also exploiting this business opportunity and has launched Virgin Pulse, a global health and well-being solution to optimize employee engagement, health and performance.

At the core of these opportunities lie data, analytics and collaboration. Currently, this type of collaboration between customers and organizations typically means that organizations offer customers access to additional features, benefits and convenience in return for their data¹⁵. However, we believe the future lies not in the valorization of data, but in its commoditization, i.e. by making data non-personal and openly accessible to everyone. In the next section we explore opportunities that can be derived from open data and multi-partner collaborations with the potential to transform organizations and industries.

The future of connected ecosystems

Open data has the power to revolutionize and disrupt the way societies, markets and industries are structured. According to The Open Data Institute, open data is free to access and use and can be shared by anyone. It is non-personal and can be used to identify and predict large-scale trends and behaviors¹⁶. This is as opposed to closed data that is restricted to internal use by an organization. Many open data



portals are now available to corporates, government agencies, not-for-profits and startups with large datasets across health, education and employment, among other fields. Some of the open data initiatives include the European Union Open Data Portal, Opening up Government, and the Global Open Data Index.

Creating multi-partner benefits

Transport for London was one of the first public bodies to put open data to use to create new applications. More than 5,000 developers have registered to use its data, distributed through 30 feeds. This includes journey planning, disruptions, arrival and departure predictions, timetables, routes and fares. Collaborations with developers have led to the popular app, Citymapper, and accessible apps such as the Colourblind Tube Map.

Organizations across industries can benefit

from sharing and accessing open data and collaborating on novel uses for it that make citizens' lives better and also create new commercial opportunities. One example of this is the AIR Louisville project in Kentucky, USA. This project is a collaboration between health management company, Propeller Health, the Institute for Healthy Air, Water and Soil, local funders, and the City of Louisville's public health department.

According to the Asthma and Allergy Foundation of America¹⁷, Louisville is among the worst cities to live in for those suffering with asthma. The solution is a smart inhaler that tracks when, where and how often residents of Louisville experience asthma symptoms. Combined with real-time traffic and weather data, this information helps doctors and public officials to track down problem areas and

trigger points. This assists them in taking steps to improving air quality in identified areas. Connected health sees the convergence of digital technology, big and open data and healthcare which has the potential to transform healthcare provision and systems in the future¹⁸.

Gaining buy-in from ecosystem partners

To really make open data initiatives like this work it is vital to get buy-in from the public in order to share their data, and to gain their trust that it will be securely held and properly anonymized where necessary. Security is a major challenge due to cyber-attacks and data breaches¹⁹.

Another large-scale initiative that relied both on the buy-in from citizens and the collaboration of multiple partners is 'Future City Glasgow'. In 2013, Glasgow City

Council won £24m in funding from Innovate UK to identify ways of using technology and data to make life in the city safer, smarter and more sustainable²⁰. This was based on making large amounts of non-sensitive and non-personal data from various providers openly accessible online. Using this data, developers create new applications that organizations and individuals alike can use. Currently more than 370 open datasets are available that map the activities of the city, including travel, demographics, education, energy, health and safety data. This is cross-referenced with real-time data from CCTV, traffic management, Police Scotland, community enforcement and emergency services. Anyone visiting or living in the city has access to a personalized dashboard with real-time updates and information that can help them navigate the city. Initiatives like Future City Glasgow use

open data to create predictive systems that provide the information citizens need to make better day-to-day decisions. By drawing on shared data, local government and other public bodies can allocate resources more effectively to solve specific problems in a proactive way.

Looking ahead

Open data, analytics, cloud technology and the Internet of Things are set to transform industries and challenge the status quo. This creates new opportunities for non-traditional organizations to enter into established sectors. The power of digital platforms permits invisible competitors to successfully penetrate markets that they may not have the expertise, skills or knowledge of, yet successfully build them in a short period of time. Future organizations will not only be digitally transformed and connected, they will also have the unique ability to respond

to new opportunities with greater agility. This invariably raises the question of how these new-age organizations can develop strategy, align resources and develop dynamic capabilities. We see a future where organizations that are transparent, agile and collaborative stand the best chance of growth and sustained competitiveness. Through collaboration and sharing will come innovation, as connectivity is at its best when the ecosystem partners can work together and benefit from their relationships. The challenge for many well-resourced and large organizations is that their leaders' thinking is often analogue and the digital natives are able to take a march on them.

For more details about our open program 'The Digital Organization' visit www.ashridge.org.uk

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