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**THE
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Breaking Boundaries

The challenge of
technological disruption

The future is exciting.

Ready?



At Vodafone Global Enterprise we recognise that we operate in a world where frequent disruption is fast becoming a way of life, and that this disruption is now a key driver of change in both our business, and our customers' businesses. This year, we held our Annual Customer Advisory Board at ESTEC, the European Space Agency's innovation centre in Amsterdam. Together with C-Level decision makers from our multinational corporate customers we discussed the concept of 'Breaking Boundaries' in a world of disruption - examining new business models and employment practices; and talking through the potential impact – positive and negative – that these have on customer experience and business reputation.

This report was created in partnership with The School of Life and explores the topics which were discussed at the Customer Advisory Board using contributions from the attendees as well as third-party industry experts who are listed in the appendix. Whether you believe that 'Breaking Boundaries' is an opportunity or a threat for your business, we hope that you find this report valuable.

We look forward to hearing your thoughts and continuing the conversation.

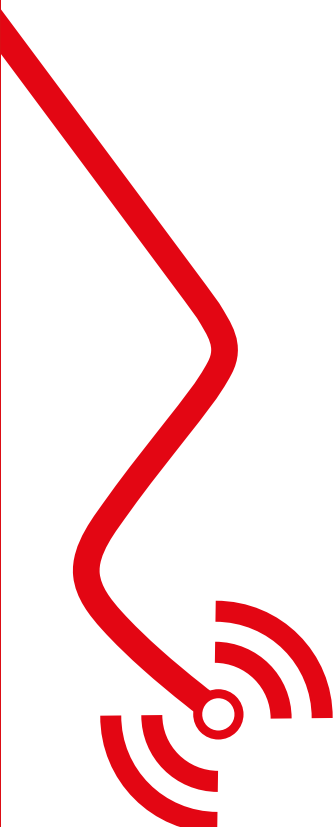
Kind regards,



Erik Brenneis
Chief Executive Officer,
Vodafone Global Enterprise



Introduction



The technologist Ray Kurzweil predicts that the exponential pace of growth means that businesses won't experience 100 years of technological progress in the next 100 years, but the equivalent of 20,000 years of advances. The world our grandchildren will grow up in will be as far from ours as ours is from the Palaeolithic era. It's no wonder that even well-established businesses will be in a perpetual threat of disruption – and will equally have the opportunity themselves to continually disrupt others.

Companies today who are unable to cultivate the mindset of a digital disrupter are likely to have short lifespans. Half of the companies on the Fortune 500 list, for example, have lost their place since 2000 as a result of the challenges caused by digital and technological disruption. But there are some prizefighters out there, companies that have frequently been knocked down yet who manage to get up every time. So what's their secret?

Most of the time, what keeps these prizefighters going is their capacity for genuine innovation. That's why innovation remains one of the most important priorities a company has. In a Vodafone survey of IT decision makers, innovation was ranked second only to security and compliance as a key business priority.

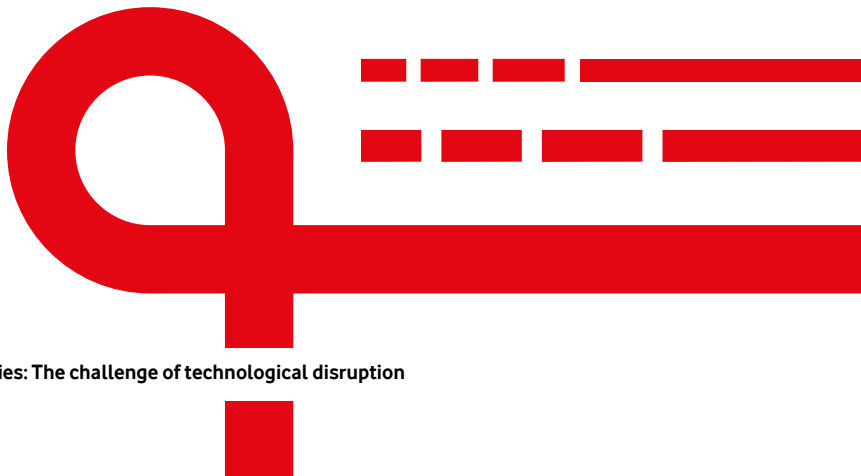
Yet many big companies find it incredibly hard to innovate. They face an almost universal cultural challenge: over time, as the successful business matures, a corporate immune system develops that swiftly roots out and kills off any new ideas that threaten the smooth running of the system.

In a sense, of course, the fact that this happens is very natural and desirable. After all, every business leader wants to efficiently and predictably generate value for shareholders at the next quarterly review. And the next. And the next.

All too often, however, this dedication to short-term results means that large companies find themselves merely tweaking and improving their existing products and services rather than producing something new and genuinely disruptive. A company that aims only to operate within its existing boundaries is consigning itself to long-term oblivion; over time, a combination of new technologies, new business models or simply changing customer tastes will make the current business irrelevant.

In this new world, technology is both a threat and a huge opportunity. Moore's Law states that the number of transistors that can fit on a microchip (and with it all computing power) doubles approximately every two years. But this is just one aspect of the wider trend – which is that all technological change is growing at an exponential rate. Just two decades ago, things such as Wi-Fi, SMS, 3D printing, GPS, e-books, artificial intelligence (AI), robotics, social media, nano-engineering, drones and self-driving cars would have seemed like they had been taken from a fanciful 1950s sci-fi vision of the future. Now they're here – and about to become old news.

The long-term successful corporation will be the one with the wisdom and maturity to engage in the challenging task of breaking those naturally forming boundaries, again and again. Effective use of technology, combined with a mature understanding of how best to engage staff at a psychological level, can give companies a huge lead in the race to growth. Innovation will also come from finding new ways of listening more deeply to customers and harnessing the data and suggestions they provide – moving beyond mere transactions to allow a richer relationship of continual co-creation that will lead not only to increased profits but to more sustainable and meaningful ways of working.



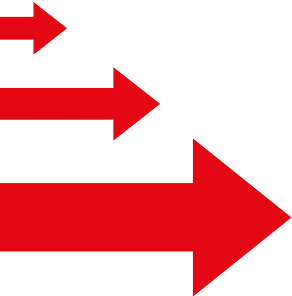
New business models

Abstract

The days of developing a sustainable competitive advantage are long gone. Today, the rate of technological change is increasing exponentially, and with that comes an increasing set of risks for large corporates. Average corporate life expectancy has fallen from sixty years, for companies starting life in the 1950s, to just twelve years in recent times. Nearly nine out of ten companies listed on the Fortune 500 in 1955 are gone, over half having disappeared since 2000. Businesses can no longer afford to stand still as the digital environment is increasingly providing the infrastructure for disruptive new entrants to topple them quickly.

However, digital competence or expertise alone is no guarantee of continued success. The accomplishments of companies such as Starbucks, Salesforce, Uber, Dyson, etc. are not predicated on technological innovation, but on adapting their business models to generate a step-change in simplicity, ease of use, productivity, fun or environmental friendliness.

To succeed today, businesses need to be brave enough to find ways to break the boundaries of their existing business – to effectively become their own competition. However, big businesses will always run into the age-old innovator's dilemma of their own bureaucratic policies – which frequently do a great job of stifling innovation. The challenge the big multinational incumbents face is this – how do you mobilise a large organisation to do a new, necessary, but unproven thing, when your working culture and all the processes, tools and operations that you have painstakingly developed to run it efficiently are designed to do something quite different?



There are many possible answers to the innovator's dilemma, but one possible solution is to ensure that your working culture and processes are designed to foster disruptive propositions from the edges of your organisation. A good example of how this worked in practice is Vodafone's development of M-Pesa.

“ **No strategy survives first contact with the enemy** ”

Many business leaders struggle with their digital strategy when it comes to innovation. A natural tendency is to look at what competitors are doing and select tried and tested approaches that can be implemented in a top-down way.

But when it comes to disruptive innovation, perhaps it is time to stop relying so heavily on strategy.

We might take a lesson from the military, who well understand the Prussian General Von Moltke's dictum that 'no strategy survives first contact with the enemy'. In the military, there is a clear understanding that, in the fog of war, the best laid plans become irrelevant very quickly. The key is to empower the boots on the ground to follow the 'commander's intent' even as the situation rapidly evolves and shifts.

Genuinely disruptive innovation does not usually start through clearly defined strategy. It most frequently starts at the fringes, often with new consumers who are looking for something simpler and cheaper.

Innovation in action: How Vodafone brought safe and easy access to finance to 25 million new people

M-Pesa

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2007

launched
in Kenya

**25.3
million**

customers
by the end of
March 2016

2 billion

transactions in
first six months
of 2015

10

markets
reached

300,000

agents across
markets

M-Pesa is a new digital innovation that uses SMS technology to enable financial transactions. And it found a very large potential market: the two billion people in the world who had no access to financial services but 70 per cent of whom had access to mobile connectivity and a phone. Launched, very experimentally, in 2007 in a small town just north of Nairobi, M-Pesa now has almost 25 million customers and, in the first six months of 2015, processed over 2 billion transactions in real time – annualised, the equivalent of PayPal. Its success has led to Vodafone being ranked by *Fortune* magazine ahead of Google in its list of companies most likely to change the world.

But how did it come about? How did Vodafone become the largest access to finance provider in East Africa today?

There were three key factors that enabled Vodafone to develop M-Pesa and take it to scale:

- The willingness to allow small-scale risk-taking.
- An ability to pivot and modify the product based on emergent customer behaviour.
- Strong backing from leadership, willing to give new ventures the support they need to grow.

The idea of M-Pesa was born when Vodafone's corporate affairs team was charged with coming up with ways Vodafone could play a greater role in sustainable development. It was originally envisaged as a way to use mobile connectivity to digitise microfinance operations. It was funded both internally and with a matching £1m grant from the UK's Department for International Development. Vodafone has since then invested many times more than that, but the UK grant helped create the institutional will to take the initial risk, even though it was not clear whether it would generate a reasonable return on investment.



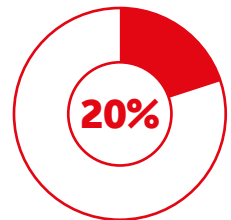
The pilot programme went well, and microfinance institutions appreciated the fact that they could spend less time processing transactions. But it also interestingly revealed that customers were not only using the system to repay their loans, they were also transacting with each other, something the team hadn't expected. It turned out that people who had moved from their villages to cities were looking for an easier and safer way to transfer money back home, one that didn't rely on a chain of intermediaries, each of whom took a fee.

The team was able to pay heed to this 'abnormal behaviour' and pivot quickly, modifying the product from being a microfinance enabler to being a remittance product – which was how the full product was launched.

M-Pesa also benefited from strong leadership. Within the company, the product was championed by Safaricom's CEO, who drove the team to be more ambitious and was willing to invest heavily in marketing and in building the network of agents that M-Pesa relies on. And he resisted concerns from Finance and the board about return on investment, understanding that payback on such an innovative product would need to be thought about very differently from established models. Years later, M-Pesa has reached ten markets and has 300,000 agents across these markets. In Kenya and in other similar markets, M-Pesa now contributes 20 per cent of Vodafone's business revenues.

M-Pesa essentially digitises three flows of money: consumer to business, business to business and business to consumer, and all parties have experienced the benefits of using the system over cash payments. On the consumer-to-business side, M-Pesa is used by customers to pay for services such as electricity, water, insurance, and so on, without having to queue at a collection agency. Businesses have been able to reduce the number of cash-collection points they manage, have benefited from an instant digital trail of payments made, and no longer have to reconcile cash payments to users' accounts.

Digitising payments has also enabled a new set of products and services that are directly connected to a payment system. A number of companies, for example, are now selling solar panels with a SIM embedded in them to customers. This not only allows



M-Pesa now contributes 20% of Vodafone's business revenues in Kenya and other similar markets.



Three flows of money



them to monitor usage but enables customers to pay for the panels in instalments. If a payment isn't received, the panel turns off, and, once a customer has paid in full, it becomes theirs. In this way, digitisation has allowed customers to monetise a consumer segment that was previously hard to reach.

In this market, business to business typically means transactions between a retailer and a distributor, transactions that face significant security risks when they are cash-based. Diageo, for example, is now using M-Pesa to collect payments from retailers before delivery, reducing the risk to its drivers of carrying large amounts of cash. It has also found that it is spending far less time on manual reconciliations and its working-capital cycle has come down to a few days.

Finally, on the business-to-consumer side, companies and government agencies are using M-Pesa to distribute benefits and subsidies without the fear of theft or corruption. G4S uses the system to pay its security guards, many of whom thought they had received a raise as, for the first time, they were receiving all the money they were due.



Three lessons from M-Pesa

1. Protect innovation efforts at the edge from the core business

M-Pesa today is very different from how it was originally envisaged, and it is an example of the kind of product that can only be developed by having a start-up mentality: being agile, being open to risk and being willing to pivot when customers use a product in an unpredicted way.

Big companies can find this difficult to manage and, unlike in the start-up world, ideas such as M-Pesa can all too often be killed off because they are not noticed, they seem too risky, they are unable to raise investment or simply because of an unwillingness to change existing business practices. One board member noted that there were probably ten opportunities like M-Pesa at their company that had sprung up at the fringes of their organisation, that were snuffed out before they were given a chance to succeed. As one member observed, 'M-Pesa would not have happened if Vodafone had applied its traditional business models in assessing it.'

The challenge, then, is for organisations to look hard at themselves and see how they can create a culture in which ideas like M-Pesa can flourish. Many board members have similarly found that trying to innovate in-house is hindered by existing processes and cultures. 'You are never going to be able to guarantee a three-year payback on an ROI business case,' said one board member, 'because you have no idea what is going to happen.'

One option is to set up a separate company or unit whose brief is to look at innovation (often called a ‘Skunk Works’ model after the pioneers of this approach in the 1940s – Lockheed Martin) and a number of the advisory board members’ companies have already reported doing this. Vodafone’s innovation team in San Francisco has noted the re-emergence of this trend for hot-housing, bringing together groups of like-minded individuals in a single innovation space. One member reported that their company has business innovation centres or incubators in many countries, whose job is to cultivate good ideas and help them flourish without being ‘attacked’ too early by the parent company.

“ **M-Pesa would not have happened if Vodafone had applied its traditional business models in assessing it.** ”

2. Adopt processes that encourage breaking boundaries

Innovation also relies on developing clear processes and principles that encourage and reward risk-taking and new ventures. The right processes are key because if they extend throughout the organisation, they do away with the need to invest all your hopes in a single, charismatic leader – which is always risky.

Outsider views

Put an end to silos

If companies are to act more like start-ups, they will have to dismantle the silos that keep experts insulated from each other. This will be hard, but it will be essential if they are tap into the cross-fertilisation of ideas that are the lifeblood of successful, innovative companies.

‘Business models will have to become

much more customer-centric,’ says Mark Curtis, Founder and Chief Client Officer of Fjord, a consultancy. ‘And this will force people to think across the organisation. You are not selling them a bank, for example, but ways to handle money, and people think about this in alarmingly different ways. So a bank has to be structured not in terms of retail, loans, savings and so on, but in terms

Processes can also help innovation by making it very clear what is allowed and what is not; something that staff sometimes have to guess. They can show, for example, that it is permissible to take risks. One board member spoke about being involved in a product launch that was not a success but after which many of the team members who worked on it were promoted. Their company also rewards people who have taken a big bet without permission, even if it hasn't paid off. Principles can also act as instructions: encouraging people to think constantly about disrupting their own business areas, for example. And they can regularise blue-sky thinking. One board member's company has a monthly breakfast club in which participants propose 'crazy' ideas that deliberately challenge or go counter to the existing business objectives. 'Ninety per cent of them are rubbish,' he said. 'But we pick four of five of them that are interesting in some way and we have a process to make sure they get out and are reviewed.'

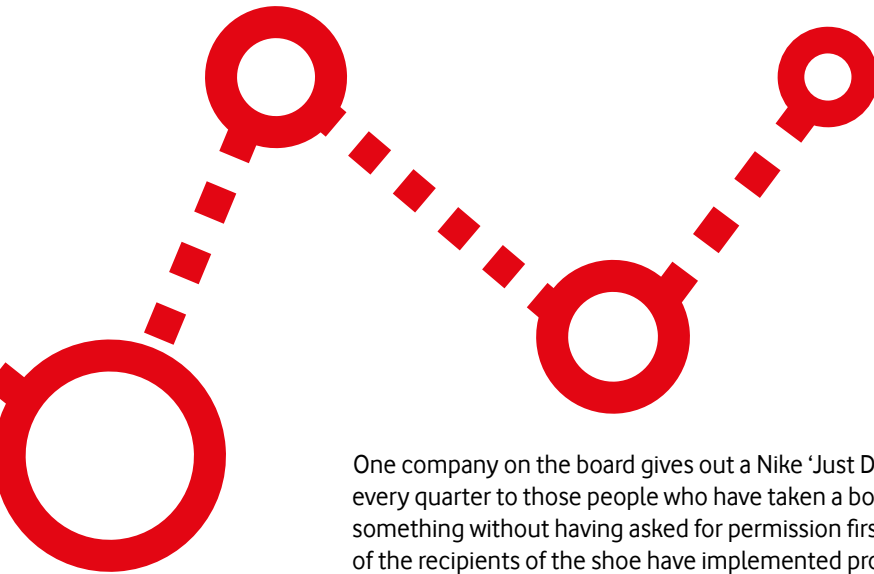


“I think culture is very, very important, and you build that culture with processes.”

of customer mindsets. This means that companies are going to have to think across silos. There will still be vertical experts but they will be selling their products to broader mindset champions. And organisations will also need someone to orchestrate this collaboration and pull the different parts together.'

Embrace serendipity

Harnessing data and reconfiguring teams, however, are only the beginning of making a big company more agile. Rory Sutherland, Executive Creative Director of OgilvyOne, says that companies have been relying too heavily on a mechanistic, numbers-based way of improving performance, led by



One company on the board gives out a Nike ‘Just Do It’ shoe every quarter to those people who have taken a bold bet on something without having asked for permission first. Some of the recipients of the shoe have implemented projects that failed spectacularly. It doesn’t matter, the reward is for trying something new. Failure needs to be celebrated and seen to be celebrated. If a company does not detoxify failure, how will people risk new ideas if they’re worried about jeopardising their career?

5.8x

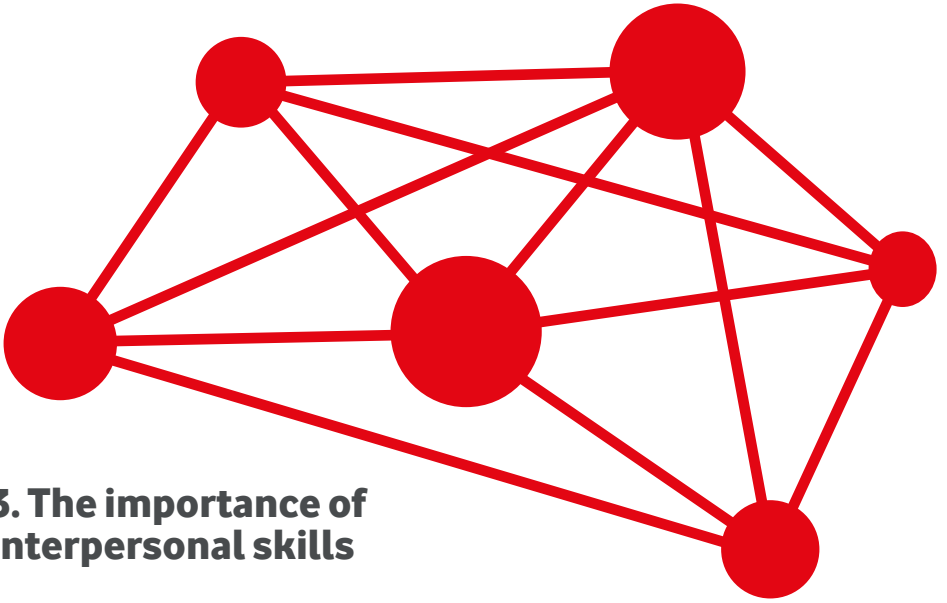
Entrepreneurs are 5.8 times more successful if they have failed once

A recent study one attendee referenced had shown that start-up entrepreneurs who have failed once and start a second start-up are 5.8 times more successful than those that succeeded the first time round. You gain lots of experience from failing. Companies have to ask themselves if they really have a culture that allows people to fail and then step up a second time and try the next ‘eccentric’ idea.

traditional economics, at the expense of understanding the psychology of their stakeholders. And technology, with its emphasis on data crunching, may be unintentionally exacerbating the problem.

‘We have become obsessed with numbers and a Taylorian way of running our businesses,’ he says. ‘But there is a sweet

spot between economics, psychology and technology, and companies have to find it. Uber, for example, is successful not because its prices are sometimes lower or because the technology brings together cabbies offering rides with customers looking for them, but because they understand the human dislike of uncertainty. People get worried when



3. The importance of interpersonal skills

This structured approach to innovation with its emphasis on processes rather than aspirations means that a company can continually try out new things. It's logical of course: if you know that many of your projects will fail, the only thing to do is to try as many as possible.

Having good processes or incubation units is great, but you can't do away with the need for strong interpersonal skills. Many companies find it essential to embed innovation in its leadership principles as a skill to be learned. 'As a manager, as an employee,

the cab they have booked is two or three minutes late, but if they can look at the screen and see that it is stuck in traffic and on its way, they feel reassured.'

The same applies to organisations. Disruption, caused primarily by globalisation and technology, has made business a very uncertain field, and

attempts by rival teams to protect their turf and sabotage the work of others is an understandable response to this. Instead, Sutherland says, companies need to embrace randomness.

'We put a huge amount of effort into trying to understand disruption and predict its effects,' he says, 'but we are

you are constantly reminding yourself of that principle of innovation. Thanks to this, there is rarely a point now when I say to my people or someone says to me, “You cannot do that because it is either too crazy or too risky.”

But encouraging innovation is a role that all employees need to adopt – not just the leaders. Most good ideas come not from the centre but from people on the periphery of businesses and they can be killed off by concerns about hierarchy or an attitude of, ‘That is such a dumb idea. It will never be successful.’ Vodafone’s certification programme for its innovation champions includes training on how to remain a ‘blank canvas’ when faced with a new idea. Trainees are taught how to decouple themselves from existing frames of reference and not to raise their eyebrows or frown even at ideas that seem crazy. This is hard and not everyone can do it. But it is crucial if ideas are to be given space to flourish.



Three questions to consider

- How do you ensure that ideas from the fringes of your organisation are given a chance to succeed?
- How are the metrics you use to evaluate new ideas different to the ones that you use on existing products?
- How do you encourage and celebrate risk-taking at your company, even when projects are not successful?

almost always wrong. Instead, we should make our organisations adaptable so that when the unexpected comes we are ready to take advantage of it. In business we are used to working out what is the “best” idea and then taking a bet on it. But that’s not how the military does things. There, there is the assumption that things will go wrong, so there is a Plan A, a Plan B and

so on. We need to encourage a culture of random experimentation. The results may be unknowable and four out of five experiments may fail, but, if the cost of each is low, the fifth may well produce returns that hugely outweigh the losses.’

New ways of cultivating talent

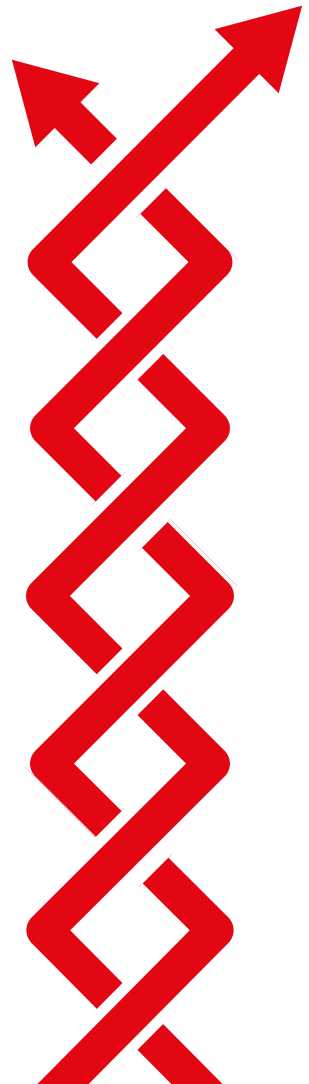
Abstract

The future of work is inseparable from the future of technology; one inexorably drives the other. The First Industrial Revolution used steam to mechanise production. The Second used electricity to produce things en masse. The Third used IT and digital technologies to automate that production. Now a Fourth Industrial Revolution is emerging, where a fusion of technologies (including AI and robotics) is blurring the lines between the physical, the digital and the biological. The focus of this revolution will arguably be more about improving human wellbeing and quality of life than commercial growth alone. No doubt, in five years' time, the workplace, and the expectations of the people in it, will be almost unrecognisable.

At the same time, many companies are currently facing a real crisis in engagement at work. According to Gallup, around 70 per cent of staff at large organisations report being actively disengaged at work, arguably for many because they are not able to fully understand or emotionally connect with the wider social purpose of the business they are working for. The cost to those companies will be catastrophic – they simply won't survive unless things change. Technology should be a key source of solutions here, but many companies will have to overcome a big digital skills gap, potentially through incentivising staff in the right ways to engage more fully with technology.

The traditional 9–5 office worker is an archetype that will not last much longer. Technology has allowed for a much more sophisticated approach to on-demand working. Businesses face a number of urgent challenges in terms of how they get the best out of their staff – knowing when to use automation and when to use humans, knowing how to monitor and evaluate employees in ways that drive real engagement rather than resentment,

Breaking Boundaries: The challenge of technological disruption



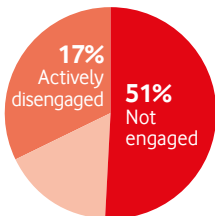
and keeping a critical focus on the essential soft skills which can often get sidelined.

In this context, the role of the IT Director and the HR Director will inevitably begin to merge in ways that will provide both challenges and also great opportunities.

“There are people alive today who will live to be 200. Companies will have to manage five generations of employees.”

In the past twenty-five years, the way people work and are employed has gone through a significant paradigm shift. And now, with mobile, social, cloud, agile and beyond, we are making another massive shift. Technology is bringing about big social, economic, environmental and cultural shifts that will significantly change the world of work.

Futurists like Lynda Gratton at the London Business School are now talking of the sixty- to eighty-year career. There are people alive today who will live to be 200. That changes the way they, and their employers, will view the idea of a career. Companies, for example, will have to get used to managing five generations of employees in the workplace.



2015 Gallup survey

At the same time, automation will change many jobs, remove some entirely and create new roles that we cannot yet imagine. Companies will have to work out how they can leverage technologies such as 5G, the haptic (touch-based) internet, virtual reality and AI to manage performance and cultivate employee engagement, which is at a very low ebb. In many big organisations, according to a 2015 Gallup survey, 51 per cent of the US workforce report being ‘not engaged’, 17 per cent report being ‘actively disengaged.’

This is not to do with people simply disliking work per se. There are plenty of fully engaged freelancers, for example, and there is a clear trend for office workers to seek a more entrepreneurial, 'meaningful' lifestyle that gives them more of a sense of control over their lives. For example, 'How to Balance Work with Life' and 'How to Be an Entrepreneur' are perennially two of the most popular workshops at The School of Life.

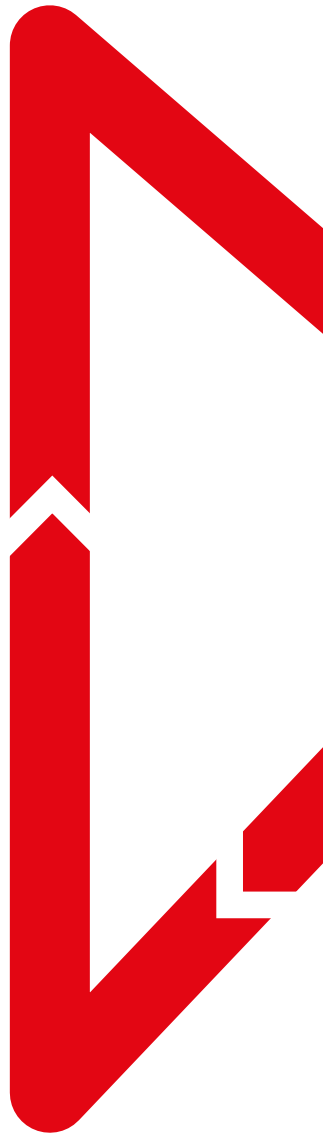
The issue is that either workers fail to understand or believe in the wider social purpose of the business they are working for, or they feel frustrated by their inability to effect positive change. That raises big questions for businesses about how they should best attract and retain the talent they need.

Three commercial archetypes

In their recent report 'The future of work: A journey to 2022', PwC argues that by 2022, there will be three dominant types of organisation.

1 The first type will be enterprises with a tiny core staff, drawing in specialists when they need them and where they require skills that are not able to be easily automated. Atom Bank, for example, recently launched in the UK, with a tiny leadership team. They use biometrics and big-data analysis to do the work normally done by human employees. While the constant stream of new specialist talent will help foster innovation, the technological challenge for these organisations will be to bring teams of highly skilled portfolio workers up to speed quickly and to enable them to collaborate efficiently across multiple locations – all without distorting the brand identity.

2 The second scenario is of very big companies that, in effect, take on many of the roles of the traditional state. Some of the Silicon Valley companies already fall into this category. They will offer long-term security and benefits and take on greater welfare and social responsibilities for their staff. In exchange, they will expect their employees to share personal data, such as biometric and health measurements, creating a world in which companies will be engaged in real-time tracking of their employees. Analytics will be used by HR teams



to engage with staff, in the same way that data analytics is currently used to engage with customers by marketing teams. And this will raise an important and sensitive challenge – tracking cannot be seen as falling into surveillance.

3 The third company archetype will be one that exists primarily for its social purpose, and as consumers increasingly demand more ‘meaningful’ interactions from companies (see chapter three of this report).

These kinds of companies are likely to grow in number.

Recruitment will be the vital issue here. The key will be attracting people to these organisations who buy into the enterprise’s values. The role of HR and technology will be to help them learn and develop the values and ethos of the company. Again, this will bring challenges. How, for example, can they help instil in people a sense of the company’s wider mission? And how will they manage the blurred line between employees’ work and social lives? In these organisations, HR will probably be a CEO function, as the brand of the company will be the brand and the behaviour of its people.

All three of these organisational types already exist, and there are aspects of all of them in many current organisations. But they all raise important questions that the IT Director and the HR Director will have to answer.

In this new world, tools for learning and development and for performance management will need to change. Many companies are currently poor at onboarding part-time or temporary staff and at training them in the processes, culture and values of the organisation, even though this will be crucial for cultivating innovation. And the architecture for learning and development will have to change in order to enable it to be rated and monitored more effectively.

Performance management will also have to change. This new world spells the death of the annual appraisal, which is far too slow to keep up with the pace of change. Instead, appraisals will be done by real-time peer or bottom-up reviews and star ratings of outcomes (especially relevant in the case of the outsourced, freelance workforce). And data analytics will have to be sharpened for the organisation to ensure its performance management is effective.

There will also be new challenges in terms of the nature of the skills that companies will need to invest in. One attendee, for example, noted how universities in Singapore, are finding that their strong emphasis on purely academic achievement is no longer equipping people well for the world of work. A highly qualified graduate who is unable to network or to interact with people is not able to make much progress in the workforce. So the universities are redesigning their curricula to include emotional-intelligence skills. Many companies are equally investing in soft skills training, reinforcing Peter Drucker's famous observation that 'culture eats strategy for lunch'.

Announcing the forthcoming marriage of HR and IT

This new world of work will require technology decision-making and HR decision-making to come together, but that will present challenges. Many IT Directors are finding themselves increasingly sharing HR responsibilities – training staff in new technologies and suggesting ways that technology can help with their jobs. And some HR departments are resisting what they see as this encroachment on their territory. As one board member put it, 'Many HR teams are unprepared for the implications of this changing world of work.' They still see technology as a way to support HR administration rather than to proactively lead change. Yet, as a Deloitte study has shown, very few HR departments are resourced or skilled enough to respond quickly to the changing world of technology. 'Businesses and HR teams currently treat IT Directors as a sideline,' one member observed, 'but in fact nothing can get done without them.'

“ Businesses and HR teams currently treat IT Directors as a sideline, but in fact nothing can get done without them. ”





And yet companies are already seeing many staff coming into work (of all ages but particularly millennials) who are adept at using technology to collaborate and exchange ideas regardless of the official guidelines of the HR or IT departments. Organisations tend to resist this, very reasonably putting barriers at the edges of their networks to defend them against cyberattacks or leaks. But this is fighting an irresistible tide. Companies will have to find ways of letting staff use external technologies to improve collaboration, innovation and engagement.

IT Directors rightly are concerned about the security of the networks they manage, but, to encourage innovation, companies will have to adopt a culture that is more open to rule-breaking and allow staff to use tools that are not officially sanctioned. As one board member pointed out, how many people already use WhatsApp for work-related messaging even though the data is stored outside their company's network?

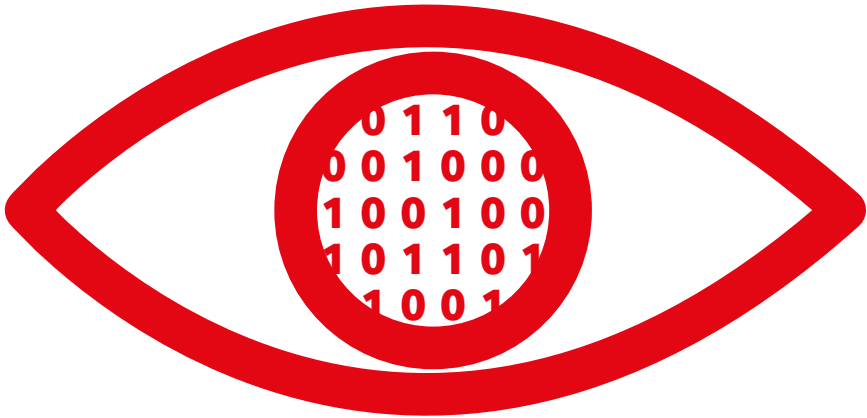
This will mean reassessing and possibly abolishing existing rules and processes – that in itself could very healthily lead to an improved culture of innovation. One board member spoke of a new Head of HR, promoted from within their company, who, rather than trying to fix existing tools and processes, simply removed many of them before introducing new ones. The transition period was uncomfortable. There were times when, for example, an old performance-management system had gone before a new one was in place. But their actions prompted other managers to challenge their own established ways of working.

Outsider views

Use technology to encourage rule-breaking and foster engagement

The traditional Hollywood stereotype has often been of a nonconformist hero (think Maverick in *Top Gun* or Han Solo in *Star Wars*) who switches off the clunky automated technological controls so that they can react on a more instinctive, 'human' level. That has flipped right around now. Today, the hero in the

corporate world will be the person who can use technology in the most skilful way to bring about unconventional results. David Baker, former Managing Editor of *Wired* magazine, acknowledges IT Directors' concerns about keeping networks safe, but he says that, rather than confining all the company's activities to a secure server, a more reasoned approach might be for companies to



Privacy: Whose data is it anyway?

It is dangerous to see the issue of data-sharing from a purely European or developed-world perspective. An employee handing over data to a company in order to gain free entrance to a gym, for example, may not be enough to persuade people to sign up in some geographies. In Africa, however, there may be many more advantages because sharing data can radically change people's lives. And people in India, China and even in the US have very different views on privacy, which may be one reason why so much innovation is coming from those countries.

Companies in Europe will need to help their staff and customers understand better that, while technology can be a threat, it also

realise that not all their data needs to be hidden, leading to more opportunities for open innovation.

'We will need to think hard about what needs to be secret and what doesn't,' he says. And rule-breaking over tools such as WhatsApp or ooVoo could lead to more important insights. Given permission, new recruits, seeing the world with new eyes,

can show organisations other rules that would be advantageous to break. But they will only be heard if the organisation has a culture in which it notices these things, appreciating the innovations that such rule-breaking can bring.

And beyond rule-breaking, engagement at work is a serious business. Happiness Works, for example, tracks staff

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has a positive side and offers huge opportunities. One board member reported, for example, on an instant-rating system used by their company's call centres that turns an individual agent's avatar green, yellow or red in real time, depending on customer feedback. Currently, only 8 per cent of callers give feedback, but even that allows agents to manage their own performance, and many enjoy working towards achieving a green avatar. Similarly, Gartner has given staff a Fitbit to incentivise people to be more active and healthy, monitoring their employees' health data and awarding prizes for improved fitness (similar to prizes for innovation).

When it comes to encouraging staff to share data, whether personal or work-related, many board members noted, 'Demonstrating "What's in it for me" is going to be really crucial.' The evidence seems to show that the newer generation of workers are increasingly more comfortable with sharing personal data. As more people understand the benefits of sharing their data in this way, uptake will likely increase.

The hard task of teaching soft skills

As organisations aim to become more innovative and agile, managers will have to be retrained, not least because they will be managing teams of people many of whom will be outsourced or offshored, meaning opportunities for face-to-face contact may be minimal. More training needs to be done in helping managers around the theme of communication in particular. Vodafone has invested in coaching to help managers have the right conversation with their staff and to be able to measure the

engagement over time and facilitates managers' ability to increase productivity and creativity and decrease attrition. Badgerville cleverly combines the metrics of the quantified self with the fun of gamification to drive engagement and productivity.

Time to promote mentoring

In this new world, mentoring and coaching will be essential. But, even in organisations with a strong, high-level commitment to mentoring, many managers only pay lip service to the idea, giving it too little time and attention and assigning it lower priority than what they see as more 'productive' tasks or fire-fighting.

'chemistry' of their teams. This has had good results and it takes its lead, of course, from best practice in customer relations. One board member mentioned how important these 'soft' skills are, reporting about a customer who stayed with them because: 'You know what? We like you guys.' Coaching teams to communicate better and understand each other's motivations simply means they can work more effectively and productively.

This understanding of chemistry can also help with external partnerships, with customers, suppliers and innovation partners. Improving the emotional side of these relationships amplifies their overall quality. One board member described regular performance review meetings with a big customer where things had not always gone right. The first part of the meeting focussed on the operational dashboard. If it was green, the meeting quickly moved on to strategic and relationship-development issues. But if it was red, the whole meeting was spent purely on operational issues, with no chance to move on. That provided a simple carrot and stick to fix the operational dashboard. It changed behaviours very quickly. And it helped them and their customer establish a relationship based on transparency and clarity.

Ensure technology gets out of the way when it detracts from real-life relationships

This human side of relationships can be both helped and hindered by technology. One board member commented that

This will have to change. Even in a company with a strong 'fail' culture, individuals are often left unsure about how much failure is acceptable and how much they can innovate without risking their jobs. This line between good and bad failure is a blurry one and not one that number-based systems can easily delineate. Employees need to be given 'soft' skills such as resilience, courage and

intelligent decision-making to navigate it, and those skills will come best from attentive, face-to-face coaching.

A crisis of meaning – and a door to new opportunities

Both staff and customers today are getting increasingly cynical, sceptical and frustrated with businesses who they feel do not have a valuable social purpose,

often people can spend more time filling in online forms than actually talking to each other, and it will be important to stop people hiding behind technology at the cost of human relationships. Another member reported that turning off email had improved relationships between staff members as they had to get up and go and see each other. And this provides a clue to how automation can be turned from a threat into an enabler. Technology can take away jobs, but it also lets the human do what humans do best – creativity, empathy and emotion. Apple Stores, for example, use technology to do what technology does well, which frees up the humans to focus on excellent customer service.



Three questions to consider

- How do you recruit and engage your on-demand employees and partners?
- How do you ensure that your business is recruiting for and embracing a digital skillset?
- What do you need to know about staff and what will they be comfortable with you knowing about them, in order to engage them properly?

or who are unable to communicate that adequately. As Alain de Botton, Founder of The School of Life, says, 'It is only in very recent history that we've even attempted not just to make money at work, but also – extraordinarily – to be happy there as well. How peculiar that idea would have sounded to most of our ancestors. What we want above all is meaningful work – which means in essence: work that either

alleviates the suffering or increases the pleasure of other people. When work feels meaningful, you'd be ready to lay your life down for it in return for a salary roughly equivalent to the minimum wage. When you know it ultimately makes no sense, you quibble over millions.' The crisis of meaning has implications for how businesses engage with staff, but equally with how they engage with customers.

New relationships with customers

Abstract

Innovation will come not only from developing the right internal culture and processes but also from improved communications with customers.

Social media and sites such as Glassdoor have made businesses far more transparent than they were before. Consumers are now able to easily search out relevant products, services and solutions themselves, which means expectations are increasingly moving beyond transactional relationships. Consumers are now seeking relationships with organisations that they can trust and find 'meaningful'. That means organisations with a strong reputation as well as sustainable and ethical policies. That raises particular challenges for companies in terms of who they partner with. A team of affiliated part-time freelancers or outsource partners wearing a corporate badge can destroy, or build, a company's reputation as effectively as an office full of permanent staff at company HQ. Consumers will not distinguish between who is 'really' a company representative and who isn't, especially if some of those representatives are becoming automated machines.

Consumers are also looking for quick and simple ways to communicate with companies and to feel that there is a two-way relationship. Companies would do well to listen closely. Digitisation of networks will be a fertile ground for enabling improved feedback from, and interaction with, customers. This will also enable businesses to capitalise on the opportunities for innovation that arise from these interactions.

Technology will significantly disrupt all three parts of the business-to-business-to-consumer (B2B2C) relationship, making each relationship more and more transparent. Technology opens up a number of new doors for communicating with customers but it will not improve customer relationships alone. It will have to always be allied with good service: as one board member observed, ‘technology enables – but service differentiates.’

The risks and opportunities of frictionless customers

The two most important issues facing all companies when it comes to engaging customers are consumer fickleness and corporate transparency. Traditionally, companies aimed to create ‘sticky’ solutions that would keep their customers with them, if possible, forever. But that did nothing to generate loyalty. Instead, it gave customers a feeling of being imprisoned. And now customers are quick to move to a new supplier if a better offer appears.

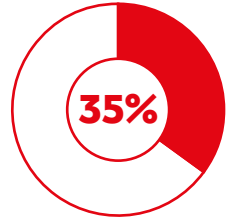
30%
of all
purchases
will be made
via an online
community
actively
commenting
on the brand
by **2020**

At the same time, social media means that the value of the service that companies offer is now far more transparent. Research by IDC shows that, by 2020, 30 per cent of all purchases will be made via an online community who are actively commenting on the brand.

Technology provides a solution to both these challenges, when it enables everyone in the supply chain to suggest new ways of meeting the end customers’ needs. Vodafone put this into practice well when helping a client launch a big consumer product that relied on an extensive and stable network to support it. As one board member put it, the emphasis was always on its customer’s customer: ‘With Vodafone, the language was really all around “your customers will care about this.”’ And this is going to be even more important in the future, with customers being even more demanding, especially when it comes to the technological infrastructure that the products they have bought rely on.

Another area that is of critical importance, and is set to become even more so, is how ‘meaningful’ a business is considered by

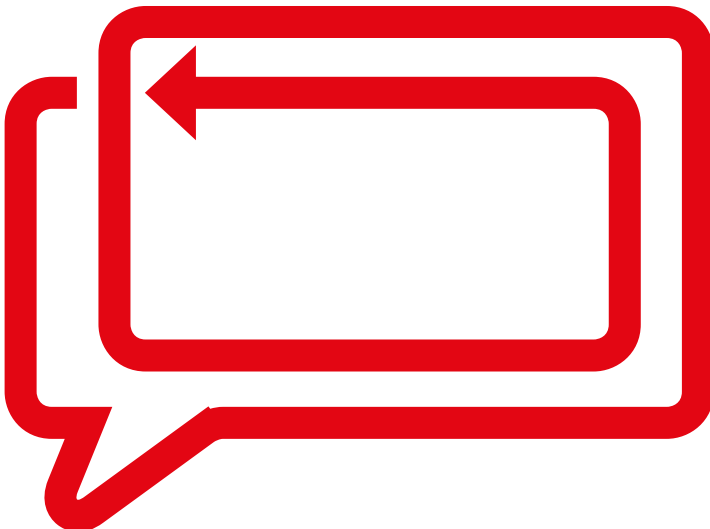
consumers. We are now arguably living in the era of the ‘good’ consumer. For example, Unilever’s ‘sustainable living’ brands now equal half of the company’s total growth and are growing twice as fast as Unilever’s other brands. Havas Media have similarly reported on how brands considered to be ‘meaningful’ by consumers regularly out-compete their competitors on the stock market by 133 per cent. Over a third (35 per cent) of CEOs now talk about business value for wider society, employees and/ or supply chain partners, reflecting a clear recognition of the changing expectations of their customers. This trend is only expected to increase in coming years.



Percentage of CEOs talking about business value for wider society

Enable feedback and interaction via clever automated systems

The challenge for many IT Directors at large companies is that while they may have good access to customers’ social-media presence, they don’t themselves get to talk to or hear directly from their customers often enough. Customers tend to talk instead to local retail partners. How often, for example, do automotive manufacturers hear from drivers about the user experience? The challenge now is for big business leaders to connect themselves with the end users of their products and services.



One way to do this is to use technology to provide a simple way to harvest instant feedback. An example is the Three Smileys feedback device after security at airports such as Heathrow. Currently the system gives a sense of the efficiency of security at the airport. But if passengers became aware of how much of their ticket price paid for security, it would also give an indication of how they saw the service's value for money. Insightful changes such as this could make feedback data extremely useful to providers and service commissioners.

There will of course be cultural differences about whether customers are happy interacting with technology to provide feedback or receive information. Researchers in the travel industry, for example, asked people whether they would accept help from a robot on their vacations – serving coffee, suggesting where to visit next and so on. Chinese respondents were perfectly happy with this, whereas French and Germans were resistant. In London, some people are moving back to using black cabs, which are now available via an Uber-like app. They prefer the educated driver who knows their way around. In this case, technology has been an enabler but service differentiation comes from the individual driver.

Outsider views

The rise of the machines

Even video may be superseded by the rise of chatbots. Powered by AI, these will provide an initially text-based means for humans to have a conversation with a machine, and the sector is being driven by a small number of impressive start-ups. Automation dispenses with the danger that offshored (human) customer-relations staff might detour from the company line.

Yet chatbots are a new technology and AI is by no means yet perfect. The IT Director will have to be able to advise marketing and sales staff on their potential – and disadvantages. But the trend for on-demand support and automated help is only set to grow. The new banking start-up Digit, for example, allows users to save small amounts of money every few days without thinking about it. The travel

Voice will remain loud and clear

Even in today's digital environment, voice is still the predominant way customers give feedback to companies. One advisory board member reported that 70 per cent of customer communication with their company is by voice, through call centres. (Twenty-five per cent was by email and three to five per cent through social media.)

To be truly useful, voice will have to be digitised. Already many callers display their numbers when they call companies (93 per cent, according to one board member). And it is important to make use of that identification. (KLM already does this to good effect – knowing who you are and that you have, for example, missed your flight, before you have to explain anything.)

But speech recognition will make customers' interaction with companies smoother and more satisfying. Companies should be seeing the end of 'Push 1, Push 2', etc. and, instead, enable networks to automatically recognise the language the caller is using (and their query) and route the call accordingly. Even some private banks are experimenting with automated voice customer service centres, despite their traditional focus on offering a highly personal service.

Voice recognition will also enable more sophisticated automated-response mechanisms. And there is an appetite for this among younger people. One board member pointed out that his children


service Pana allows you to make almost all your travel arrangements by text. And Operator aims to connect prospective shoppers with a nearby crowdsourced concierge who can advise on specific purchase decisions in real time.

Making data sell

Data analytics means that customer behaviour is instantly available to teams

deeper in the organisation, and the IT Director's role will be to ensure that the right information reaches the right people in the right form. Data-visualisation packages allow all relevant parties to see what is happening among an organisation's customers as it is happening.

Customer data can be used to trigger automated responses. This is common in



are comfortable using voice commands to operate technologies such as in-car control panels, whereas he would never do that. This is promising for the future. Amazon's Echo is already capturing a generation that prefers voice commands to typing. The more natural an interface feels, the more likely it is to be used.

Finally, voice recognition can go even deeper than identification and understanding. The insurance industry is already using algorithms to identify potentially fraudulent claims from a caller's voice – not to root them out, but to ensure that genuine claims are pushed to the top of the pile and dealt with swiftly.

The key here is a standard for encoding voice digitally so it can be used by a network provider's customers. It won't be the job of companies like Vodafone to offer end-user technology, such as fraud-detection systems and so on, but to deliver to its customers all the different voices that are communicating with them in one digital form. However, to make the best use of such raw material coming from Vodafone's digital network, its customers' networks will also have to be digitised, and this will be a big challenge.

Simplifying the communication channel

Voice, of course, is only one way customers can communicate with companies. Messaging services such as WhatsApp and pop-up chat windows offer other routes but they are seldom

companies whose main business is on the web. Amazon is a prime example. Customer behaviour not only changes the appearance of the web page they are on, adding recommendations and offers according to their previous purchasing history, but it also affects deeper logistical factors such as means of delivery and the position of goods in the company's warehouses. Zara uses hourly information

about its customers' purchasing habits to rotate its stock and quickly bring new lines into its stores. Smart meters enable utilities companies to manage supply more efficiently on a minute-by-minute basis. The IT Director will be called upon to source quicker and more efficient ways of turning data into action and to offer ways the company can improve its flow of data and the way data analytics are used.

as satisfying, and pop-up chat windows in particular are seen as 'pushy'. The problem seems to be that these text-based services are trying to replicate the convenience of voice through typing, something that often feels clunky and unauthentic. Chatbots may help here, making the conversation at least feel more authentic.

Instantaneous feedback

Customers do like, however, communications channels that are very simple. Domino's one-click pizza and Amazon's Dash are examples of minimising the effort it takes for customers to talk to companies. And one-touch video-assistant services, that connect customers to a real person at the push of a button, have proved very popular with two, interestingly disparate, populations: young children and the elderly. (This suggests that video may be a key part of customer relations for at least the next thirty years.) Combined with insights into the success of one-click customer service, video may give an insight into the successful interface design of the future: what customers really value is ease of use and being given back their time.

All of these messaging channels, especially live video, will require significant network infrastructure improvements, and this requires planning for now. Vodafone is keen to work with its customers on identifying not only the best ways for their customers to speak to them but also how these new technologies can be embedded in existing infrastructure.

For Mark Curtis, Founder and Chief Client Officer of Fjord, a consultancy, the biggest strength of technology is its ability to make 'the visible invisible and the hidden visible'. 'Digital technology has taken things off the thinking list,' he says, 'making the customer experience smoother. Uber and Hailo's payments in the cloud have removed the need to worry about paying and getting a receipt in the

cab, and customers like that. And it has made some invisible things visible. Many utility bills show information such as usage compared to an average user and so on. This comes from the company's own data, which it is sharing with its customers. We need to spend time looking at what is now visible that we could take away to improve the customer experience and what is now hidden that could be made visible.'

Breaking Boundaries: The challenge of technological disruption





93%

85%

93 per cent of IT Directors have a digital strategy but 85 per cent felt their networks were not ready to implement it

Digital agility

Vodafone research among marketers and IT Directors has revealed that 93 per cent of them have a digital strategy but that 85 per cent felt their networks were not ready to implement it. They were too big, too invested in old systems, to be changed. This is something Vodafone and its customers need to work on together.

There are, clearly, big advantages to making networks entirely digital. Digital networks are flatter and more agile. They are able to respond quickly to new demands. And they are self-healing and easier to maintain and configure.

They also provide a rich ground for innovation. As the topology of networks changes and networks become more agile, new products and services will emerge. Many company networks, for example, are used for eight hours during the day and are relatively silent at night. A pay-per-hour system could offer big savings to customers. And they offer the possibility of radical new network infrastructures such as a shared fibre-optic network for businesses, similar to the shared public Wi-Fi service offered in The Netherlands by Ziggo.

Finally, digital networks will spawn new products and services for consumers. Smart metering is already disrupting the energy sector, allowing new products and services (and companies)

A new engagement with the wider world

Innovation goes deeper than speedier customer service. Customers are now looking for 'meaningful' relationships with brands, relationships that address a wider set of stakeholder values, including a commitment to social and ethical values. As David Baker, former Managing Editor of *Wired* magazine notes, 'it's really key that this sense of meaningfulness goes

way beyond what traditionally has been the domain of CSR, which can at times feel like it's just offering a quick "purpose wash" to a business'. Indeed, according to Robin Nuttall, a principal at McKinsey, radically engaging with society and a wider set of stakeholders is worth 2 per cent in superior stock-market performance, the equivalent of 20 per cent over ten years. A 2016 Cabinet Office review of 'mission-led

to flourish. Many other as yet unimagined products will emerge, in the same way that digital mobile networks have enabled the app economy.

Like the early days of the web, the opportunities that the digitisation of networks offer may yet be unknown and unknowable until they emerge. Vodafone and its customers will have to commit to making their networks more agile rather than trying to foresee the future. As one board member put it, 'You can design for agility without knowing how the business is going to change because the business probably doesn't know how it's going to change.' And while standardisation across networks will be essential, as one board member observed, 'if you ask for standardisation, demand for it to be flexible – and if you ask for flexibility, discuss standardisation.'

Building bridges with marketing

Customer relations are traditionally the domain of marketing but they are increasingly becoming part of the IT Director's remit. Some IT Directors will face resistance moving into this area. However, they will need to persevere, as almost all customer-service functions now rely on technology. Marketing teams cannot be left to build websites that function autonomously and leave the company open to brand damaging and costly cyberattack. And, internally, they need to be helped to see the customer-facing advantages of new technological tools as they become available (and helped be part of the process of requesting tools that will help them innovate).

businesses' reported that there are as many as 195,000 of these businesses in the UK, adopting new solutions to longstanding social issues and turning over an estimated £120 billion a year. The UK government review will examine how this emerging sector can be supported to enable it to double in size over the next decade, delivering ever greater economic and social benefits.

M-Pesa (see chapter one of this report) has brought about a significant rise in the standard of living and quality of life for millions of customers in the developing world. And numerous companies from Nike to Apple have benefited from responding quickly and genuinely to customer concerns about their supply chains. Technology can make these kinds of positive engagements visible

This will require a new relationship between IT and marketing that may, initially, feel threatening. But it is a good example of how removing silos can lead not only to better business and employment models but also to more innovative and profitable customer service.

“ **The biggest strength of technology is its ability to make the visible invisible and the hidden visible.** ”



Three questions to consider

- How are you using technology to enable richer feedback and more regular interactions with customers?
- How are you using technology to demonstrate your company's commitment to wider social values?
- How are you working with your marketing teams to ensure that your customer interactions are supported, and not threatened, by technology?

and profitable, allowing companies to broadcast their good work widely to customers and prospects.

But technology is also creating inequality, and customers (who are also workers, of course) are worried about technology taking over their jobs – as much in the white collar legal or medical sectors now, as in the blue collar sector. To maintain

a socially responsible role, companies will have to be able to respond to such concerns, pointing out how the value savings of automation flow back to the consumer. And the IT Director's role will be to ensure that technological disruption will generate enough value to assuage the fears of customers and employees alike.

Conclusion

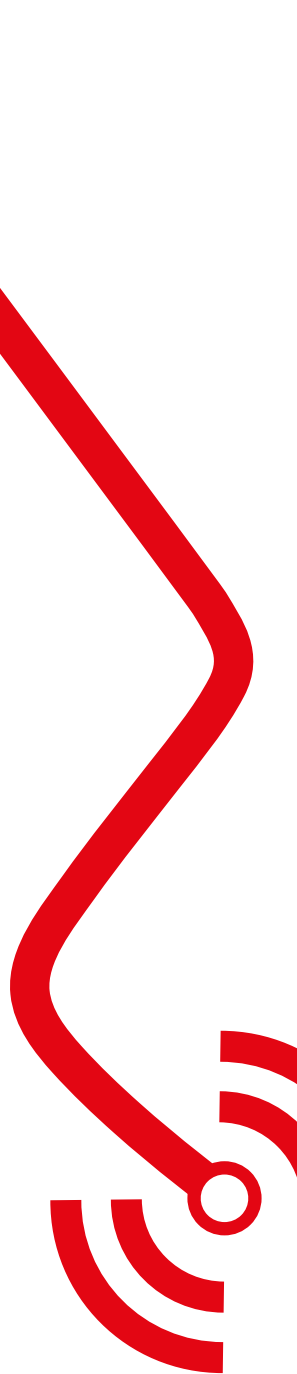
The days of developing a sustainable competitive advantage are long gone. Today, the rate of technological change is increasing exponentially, and with that comes an increasing set of risks, and opportunities, for large corporates. Businesses can no longer afford to stand still as the digital environment rapidly shifts under them and lays the groundwork for disruptive new entrants to topple them.

To succeed today, businesses need to be brave enough to find ways of breaking the boundaries of their own existing operations – to learn to systematically become their own competition.

IT Directors will need to operate ever more as champions of change, in the vanguard of innovation, skilfully guiding their staff to continually explore new territories and embracing the inherent risks that lie in these unknown spaces. The potential rewards though will be vast. The new products and services that will emerge on the other side of the current boundaries will undoubtedly not only be more astonishing than we are even able to imagine today – they will fundamentally change the way we work and live.

The companies that will succeed in this brave new world will have a number of features in common; they will

- Embed processes that allow disruptive ventures to emerge from unexpected parts of the organisation. They will do this by incentivising staff to take risks and ‘Just Do It’ (as exemplified by M-Pesa).
- Engage in the hard task of developing the soft skills that will create the right environment for risky new ideas to be safely brought forward within teams.



- Break down the barriers between HR and IT and employ technology to tackle the current crisis of disengagement in ways that help staff to feel supported rather than surveilled.
- Rigorously protect their brand reputation by adapting their recruitment, onboarding and partnering strategies to balance the advantages of automation or offshoring with the need to present a consistent and reliable brand identity.
- Develop cutting-edge digital networks that will facilitate continual, real-time dialogue with customers. They will absorb this feedback in ways that will help to spark new disruptive ideas.
- Embrace purposeful ventures and ways of working which offer customers benefits that go beyond the transactional to elevate themselves into the firmament of trusted and meaningful businesses.

With the right processes in place, staff will be empowered and motivated to keep their businesses relevant by breaking new boundaries, time and again. It can feel incredibly risky to keep taking leaps into the unknown, but it's critical to long-term corporate survival. As the writer Kurt Vonnegut said, when it comes to innovation, 'we have to continually be jumping off cliffs – and developing our wings on the way down.'



Third-Party Contributors



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The School of Life

The School of Life is dedicated to developing emotional intelligence through the help of culture, philosophy, psychology and science.

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'The School of Life offers radical new ways to raid the treasure trove of human knowledge'
– Independent on Sunday

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