

Industry Bulletin March 2016

End-to-end Digital Transformation



shaping tomorrow with you



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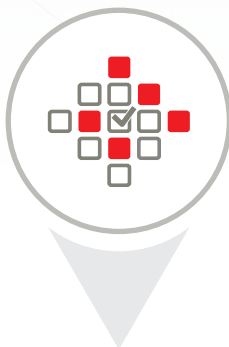
Introduction

Senior IT and business leaders from cross-industry corporates are engaging in media discussions on end-to-end digital transformation, and the challenges they face in its implementation. Four key pain points can be drawn from these discussions: the implications of legacy infrastructure on digital transformation; the lack of a defined, unified strategy; the digitization of the workforce and organizational culture; and the challenges arising from shadow IT and data.

Implications of legacy infrastructure on digital transformation



Lack of a defined, unified strategy



Digitization of the workforce and organizational culture



Challenges arising from shadow IT and data



How is your business dealing with legacy infrastructure?

The legacy challenge

IT and business leaders from large organizations acknowledge that legacy infrastructure and processes are a challenge, especially when looking to adopt and implement new technologies to keep up with innovation and competition in the market. In the utilities sector, the electricity model is 'increasingly regarded as out of date,' as Peter Terium, CEO of RWE, states, adding that 'the electricity industry fundamentally has to change to keep up with...a modern, digital world' (Computer Weekly). The need to undergo a massive structural change indicates the scale of the impact that legacy infrastructure has on a business. David Loughenbury, CIO of Police Mutual, says, 'With the rise of digital and online services, outdated technology threatened to trap us in the past. Our systems and processes were built up by piecemeal over time, and were...creating corporate drag in multiple areas of the business.' He says that 'this critically threatened' various aspects of the business, including 'customer service, performance, competitiveness and culture.' His response? 'We knew we wanted to overhaul our IT...realigning...technology investment...strategic objectives and...people' (Computing).

Paul Coby, IT Director of retailer John Lewis also acknowledges that technology innovation is 'quite challenging for big organizations, but...that's one of the reasons for having JLab,' a startup incubator supporting startups and entrepreneurs in creating new products and services that John Lewis can then use or acquire (V3).

In today's increasingly digital world, it seems that cross-industry corporates cannot afford to allow their legacy infrastructure to hold them back in implementing new technologies. How is your business tackling the legacy challenge?

'...the electricity industry fundamentally has to change to keep up with...a modern, digital world.'

Peter Terium, RWE CEO

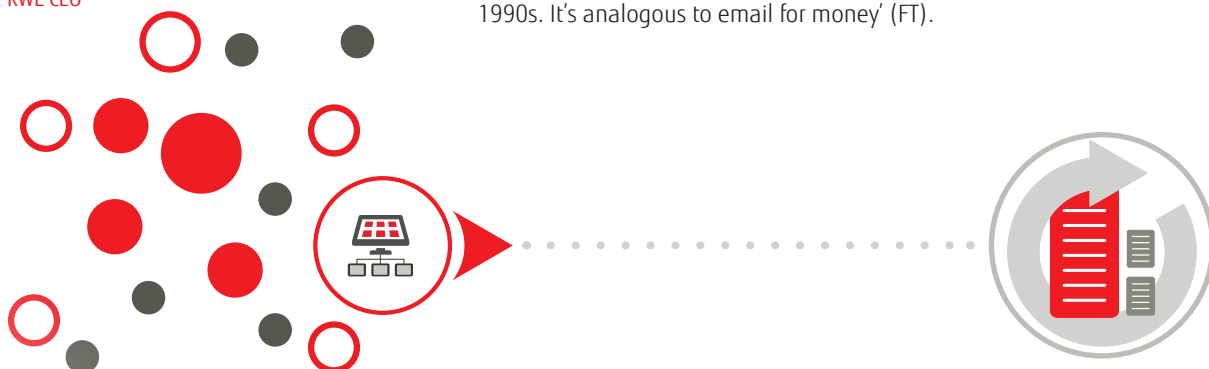
'...about 80% of [DB's] 7,000 applications were outsourced to a multitude of vendors, design was basically done in silos and joint standards [were] either hardly used or not used at all,' resulting in 'systems [that] do not work together...are cumbersome and often incompatible.'

John Cryan, Deutsche Bank's co-CEO

Reinventing the business model

Many business and IT leaders respond to this challenge by transforming their business model. Ian Cohen, CIO of insurance company JLT says that IT was 'hampered by a failing first generation infrastructure outsource,' and the company needed a 'ground-up rebuild' to achieve 'a genuine people, process and technology change' (Computing). Similarly, Deutsche Bank's co-CEO John Cryan says that the bank's legacy IT and old technology strategy meant that 'about 80% of [DB's] 7,000 applications were outsourced to a multitude of vendors, design was basically done in silos and joint standards [were] either hardly used or not used at all,' resulting in 'systems [that] do not work together...are cumbersome and often incompatible.' He says the bank will 'become less risky by modernizing [its] outdated and fragmented technology' and will simplify its IT systems by reducing its 45 operational platforms to just four, using the savings to invest in new technologies (CIO).

Another way that many banks are cutting costs is by taking advantage of bitcoin infrastructure. According to Michael Harte, Chief Operations and Technology Officer at Barclays, this change in infrastructure 'could go the way that file transfer technology changed music.' Former JPMorgan executive Blythe Masters adds: 'You should be taking this technology as seriously as you should have been taking the development of the Internet in the early 1990s. It's analogous to email for money' (FT).



'...the financial industry will face a series of UBER moments...'

Anthony Jenkins, former CEO of Barclays



Think like a startup: easier said than done

IT and business decision makers of large firms are looking to startups and technology firms to learn best practice in terms of digital transformation. 'We...look to see what social media companies do,' British Gas CIO David Cooper says. 'The technology they use can deal with my volumes of data and...get me there at a much lower cost' (Computer World). Barclays CIO Roy Aston suggests that a startup environment can help to overcome heritage processes and see transformation across the business rather than in silos. He says: 'Barclays is an innovative organization and we have an innovation heritage...now it is about accelerating the speed of delivery' (CIO). However, they are aware that startups do not have the problem of legacy infrastructure that they face. Anthony Jenkins, former CEO of Barclays, points out that agile startups are not burdened with legacy technology and cultures that are fearful of change. He says 'the financial industry will face a series of UBER moments,' which he describes as 'massive pressure on incumbent banks which will struggle to implement new technologies at the same pace as their rivals' (Crowdfund Insider). Anthony Thomson, Chairman of digital-only Atom Bank, confirms how the structure of challenger banks differs from that of traditional banks, much to their favor. 'We think we are the first real alternative to the high street banks,' he says. 'We have no branches, no legacy costs, no legacy IT systems or legacy balance sheet' (Telegraph).

So, the rise of startups across industries has significantly changed the digital competitive landscape for mature organizations, with corporates and tech firms now competing for business. This means that now, more than ever, it is crucial for large corporates to overcome the challenges arising from legacy IT.

Startups and tech firms: partnership, not competition

Instead of competing with startups and tech firms, a lot of mature organizations are integrating and partnering with them, to take advantage of their sector expertise and end-to-end capabilities. Apple CEO Tim Cook shares that he does not view social networks as competitors, as Apple has 'no plans to be in the social networking area,' but rather considers them partners. He says: 'We partner with both Facebook and Twitter, and we have integrated both of them into the operating system...we work closely with both of them so that our customers can get access in a different and unique way to their services' (CIO).

Santander Chairman Ana Botín highlights the impact of 'digital natives' on the industry, stating that the bank 'must deal with the challenge...of 'too big to fail' while competing with startups that have not caught the eye of the regulators.' She adds that 'there are...many startups offering slick payments, peer-to-peer lending, low-cost currency transactions' and, as a result, banks must 'change how [they] operate internally...[and] learn how to partner with the best financial technology firms on the planet,' suggesting that the disruptive influence of startups on traditional banks should not be overlooked, and banks should partner with them to remain competitive (Huffington Post).

'...banks must 'change how [they] operate internally...[and] learn how to partner with the best financial technology firms on the planet.'

Ana Botín, Santander Chairman

Do you have a clearly defined, unified digital strategy?



Digital by default

Digital strategy should not be viewed as a bolt-on to business strategy. As Capital One CEO Richard Fairbank attests, digital must be at the center of the bank's strategy: 'To win in the digital world, we can't simply bolt...channels on to the side of our business or [transfer] analogue banking services to digital channels' (FT). Moreover, digital transformation is more than just system integration, according to Iain Patterson, CTO of DVLA. Patterson is among the IT and business leaders who suggest that, today, corporates should be 'digital by default'. This means that 'digital should be the preferred channel of choice for citizens because it's so user-friendly...efficient and convenient. The DVLA...has a self-sufficient team of people who...deliver 'digital by default' (FT).

Changing digital strategy is not just about IT – CDO of Hampshire County Council Jos Creese says that digital transformation requires changing 'leadership, culture and skills and not simply trying to improve IT, as "bolted on new IT only gives partial value, because nothing really changes. It's just a marginal productivity boost.' He adds that for 'true digital maturity' the 'organization needs to...become truly digital by default. That will almost certainly result in business change enabled...and not minimized by IT' (Computing). So, what does it take for an organization to be truly 'digital by default'?

'But changing digital strategy is not just about IT...digital transformation requires changing leadership, culture and skills and not simply trying to improve IT, as "bolted on new IT only gives partial value, because nothing really changes. It's just a marginal productivity boost".'

Jos Creese, Hampshire County Council CDO

Don't do technology for technology's sake!

IT and business decision makers acknowledge that digital strategy must have a clear purpose, and companies should not just 'do technology for technology's sake.' As Jon Rudoe, Digital & Technology Director at Sainsbury's, explains, laying technology into the service of a business is 'not just thinking about it as being systems with lights on, but about technology that makes a business impact' (Computer Weekly). Mike Sackman, IT Director at Argos, adds that 'it is important to focus on technology that supports what the customer wants and needs when shopping digitally, rather than introduce technology for technology's sake,' highlighting the role of customer experience in influencing digital strategy (CIO). In line with this, Chris Popple, Digital MD at RBS says that Barclays' contactless payments bracelet is an example of technology 'for technology's sake.' He says: 'our true north is – is it good for customers? And we use that lens first. We might end up at similar destinations...[but] we will end up with better customer service...And that's a journey that takes time' (Marketing). John Lyons, Head of Strategy & Commercial Services at RBS explains how legacy IT and a lack of a clear strategy can blur organizational goals. 'Some large organizations have failed to make progress and move their architecture on because they are in a piecemeal way trying to justify disparate investments,' he says. 'That's how you can end up with 142 systems and nobody holding a route map for what you're working towards' (Computer Weekly).

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Chris Popple, Barclays Digital MD





Business and technology strategies: aligned, not separated

When discussing business and technology strategies in the media, IT and business leaders say that the two should be developed together, to ensure that they are aligned. For instance, First Utility CIO Bill Wilkins positions his IT department as a help, rather than a hindrance, to business growth. He states that 'there is a true partnership between technology and business... it's rare for a business stakeholder to come to us and say they need a...technology requirement fulfilled as that dialogue will have already been going on.' Despite some 'head-butting...between the two,' he says 'a partnership approach is really key' in order to overcome these challenges (Computer Weekly). This partnership approach entails developing business and technology strategies together, as one strategy, which is what IT Director, Mike Sackman, says that Argos does. 'Technology has a role to play from the customer-facing end – mobile phones and tablets – all the way through to the distribution line,' he says, highlighting the role of technology in all business processes. 'It's an end-to-end technology strategy that covers the whole business' (Computer Weekly).

Technology strategy requires the right leadership in order to function efficiently, and benefit the entire company. In organizations that have 'a lot of management, but not a lot of technical leadership,' some policies and processes may only make sense within the technology department, as Christopher Wroath, IT Director of NHS Education for Scotland, explains. In such cases, 'technologists...are wrapped in a world of technology, but...not necessarily wrapped in a world of service delivery,' suggesting misalignment between technology and business (Diginomica).

'...there is a true partnership between technology and business...it's rare for a business stakeholder to come to us and say they need a technology requirement fulfilled as that dialogue will have already been going on.'

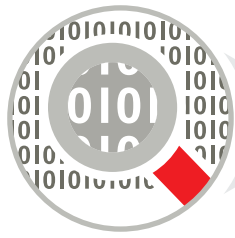
Bill Wilkins, First Utility CIO

Who is responsible for digital strategy?

Following from the notion that digital and business strategies should be developed together, digital strategy must be supported not only by IT decision makers, but by line of business decision makers as well. According to Lubomira Rochet, CDO of L'Oréal, 'Digital is really transformative in the way companies operate today. It has a big impact on business...but you have to have the full support of the executive committee and of the CEO.' (Telegraph). The idea of engaging the CEO in digital strategy is supported by Mike Bracken, ex-CDO of the Government Digital Service, who says the civil service hasn't seen 'the disruption at boardroom level that there has been in the private sector' and adds that, to this end, GDS is 'developing an executive course at CEO level...[on] value chain mapping and agile, how you actually change your business, not your technology' (Computer Weekly). Despite efforts to get IT and business to work together, ING CIO Johan Kestens says that miscommunication between the two can lead to tension. 'If something is late, the business blames IT – but the IT department says the supplier was delayed... [which] leads to a lack of trust,' he says, suggesting that communication is key for relationship-building between IT and business (CIO).



Is your organizational culture digitized?



Investing in your IT team

IT and business decision makers recognize that digital transformation requires having the right people and the right skillset in the IT department, which can be a challenge, especially as it may require structural change. However, this challenge must be faced, according to Mark Hutchinson, CIO of South Manchester NHS, who says that 'as part of the business case to implement the EPR (electronic patient record), the organization recognized that we need to be investing in people' (Computer Weekly). Similarly, Kevin Cunnington, Director General of Digital Transformation at the Department for Work and Pensions, says recruitment and training for the necessary in-house skills are challenges, stating that 'One of the biggest challenges has been building understanding of the role for digital, alongside the role for IT, change, and developing skills. The whole story has to fit together' (Computer Weekly). However, recruitment is not the only thing that will have an impact on digital transformation efforts, and Doug Gardiner, CIO of retailer River Island says that digital transformation is 'more than just hiring a few new people or buying a bit of technology – it's about changing the organization quite fundamentally.' He also stresses the importance of how the technology department is organized: 'We're bringing the front-end development guys closer to the core IT team, and the back-end guys closer to the brand and customers...It's a more agile and connected way of working' (Computer Weekly). On that note, organizations must not only invest in the right people and skills, but must position them in a way that fosters collaboration.

'... digital transformation is more than just hiring a few new people or buying a bit of technology – it's about changing the organization quite fundamentally.'

Doug Gardiner, River Island CIO

'...the key to digital transformation is 'to nurture trusting collaborative relationships across the organization...this ensures the technology team play a central role influencing the content of the strategy and...creating a seamless experience for the customer.'

Mike Sackman, Argos IT Director

The rise of the cross-functional team

Digital transformation efforts have seen the rise of cross-functional teams, and embedding digital across an organization's functions. Standard Life is an example of a company that has undergone these structural changes as part of digital transformation. Mary Harper, Head of Customer & Digital Marketing, says the savings and investment business 'radicalised the way we worked and became small cross-functional teams. We had an overarching vision for our digital business but chopped it up and brought different parts of the company together to achieve it' (Econsultancy).

Cross-functional teams are not limited to the financial sector; a strategy document published by HMRC reveals that its digital strategy will require a new 'culture and mindset' and 'an increasing number of cross-functional service delivery teams' (Computer Weekly). At Argos, teams 'from across the business...combine...in-house and external expertise and are integrated...across digital, marketing, commercial and supply chain functions,' IT Director Mike Sackman says, adding that the key to digital transformation is 'to nurture trusting collaborative relationships across the organization...this ensures the technology team play a central role influencing the content of the strategy and...creating a seamless experience for the customer' (CIO). Embedding digital across the organization is also important, and L'Oréal CDO Lubomira Rochet says that positioning the CDO in the executive committee is 'a good way to...accelerate [digital] transformation and to embed digital in all the visions, brands...and...functions in L'Oréal' (Telegraph).



Cross-department collaboration and the roles of IT and business leaders

IT and business leaders are also encouraging increased cross-department collaboration and communication. According to Mike Bracken, ex-CDO of GDS, 'You've got to get...departments to collaborate, and that isn't an easy job.' He suggests creating joint digital projects for IT and business, using a shared platform. He says 'there's strong appetite in departments to embrace transformation using digital technologies. It's a business transformation where you bring tech and business together, and the conversation has to be about business process, user need and technology, discussed at the same time' (Computer Weekly).

Many corporates use social media to increase inter-departmental communication. Simon McNamara, Chief Administrative Officer at RBS, says their partnership with Facebook at Work has 'been so useful – allowing me to exchange information and ideas quickly and securely with all my team...I'm excited about how bringing people together from all across the bank...can help our employees do their job better' (Computer Weekly). Increased cross-department collaboration also means that the roles of IT and business leaders have changed. 'The role of IT and marketing leaders is changing rapidly,' as Police Mutual CIO David Loughenbury states. The two 'departments were heavily siloed, with a low awareness of the other team...we needed to change our approach...to remain competitive.' Merging the CIO and CMO roles led to 'strategic conversations about...improving customer experience, with technology...as the enabler. When the CIO and CMO work...together...technology and sales are on the same page' (Computing).

Uniting the customer and colleague journeys

Employees and customers are also increasingly connected through digital, and corporates are working to enhance these connections. In a group statement, Carrefour says: 'In our hypermarket of the future, everything will revolve even more around the customer. Carrefour Belgium wants to connect customers, partners and employees' (Retail Detail). Myron Hrycyk, CIO of Severn Trent advocates enabling customer-employee communication through mobile apps. He says, 'when you look at [customer] journeys, you...see how you can re-engineer your business using digital technology by having customer and colleague journeys that integrate with each other' (Computer Weekly). Using data to be more responsive to customers enhances customer-employee communication, according to Christian Nelissen, The Data Guy at RBS, who is in charge of 'data-driven customer communications.' He says that the IT department reflects on customer feedback and makes changes to their website accordingly (Computing).

'The role of IT and marketing leaders is changing rapidly... The two 'departments were heavily siloed, with a low awareness of the other team... we needed to change our approach...to remain competitive'

David Loughenbury, Police Mutual CIO

Are you using shadow IT and data for business advantage?

'...the biggest problem with government is it works in silos, and the more you can break down these silos and work across departments the better things are.'

Ed Vaizey, Minister for the Digital Economy

Data locked in IT silos as a result of shadow IT

The IT silos created by shadow IT can lead to locked data and fragmented user experiences, as well as contribute to the lack of a clear, joined-up strategy within an organization. NHS Education for Scotland's IT Director, Christopher Wroath, illustrates this. He says: 'As with most organizations there are verticals, silos, which are quite rigid inside NES...Information systems support their processes and...deliverables, but they're not joined up.' As a result, 'data [is] locked inside the information systems.' NES was advised to take on a 'digital transformation...a single unified vision...[and] technical leadership,' and is now using an 'Amazon-style push technology' data model (Diginomica). Many IT and business leaders support the idea that the best way to approach these silos is to break them down. Minister for the digital economy Ed Vaizey says 'the biggest problem with government is it works in silos, and the more you can break down these silos and work across departments the better things are' (Computer Weekly).

'UK Power Networks Business Transformation Programme's aims are "improving, simplifying and reducing the...processes and systems that you use on a daily basis."'

Andrew Bilecki, UK Power Networks CIO

Preventing the challenges of shadow IT

Many IT and business leaders are creating digital transformation programmes to replace legacy infrastructure and overcome the challenges arising from shadow IT. Paul Coby, IT Director at John Lewis, says the retailer's new programmes 'completely replace the legacy IT which...for many years served each siloed directorate, with a modern SOA-integrated enterprise IT set of platforms that support[s] the new omnichannel business model.' On the topic of shadow IT, he says that 'John Lewis IT is responsible for all the IT in John Lewis' and the board ensures 'new systems are consistent with...standards and strategic direction, and are...integrated...with our technology stacks' (CIO). Similarly, the UK Power Networks Business Transformation Programme's aims are 'improving, simplifying and reducing the...processes and systems that you use on a daily basis,' according to CIO Andrew Bilecki. He says that the 'end-to-end transformation' programme is 'an opportunity to converge a set of shadow IT' (CIO).

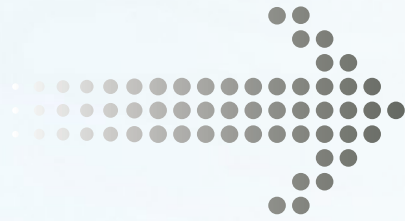
'Although I'm not a fan of the term shadow IT as I also view it as a positive thing, I also think it can...go too far.'

Paul Clarke, Ocado CIO

The positive side of shadow IT

However, not all IT and business leaders view shadow IT as a negative thing, and argue that firms should bring end users into development instead of locking them out. For example, Eli Lilly is 'trying to shift from a negative connotation of shadow IT to a positive connotation of citizen developer.' However, companies may risk giving citizen developers too much control over IT, as Ocado CIO Paul Clarke suggests. He says: 'Although I'm not a fan of the term shadow IT as I also view it as a positive thing, I also think it can...go too far.' Clarke says the challenge of hiring graduate citizen developers is that 'building something that does what you want it to do under normal conditions is the...easy part. Making it deal with real users and not break at 3am is the hard part' (V3). So, there is risk associated with getting end users involved in development, as well as risk in having data locked up in silos.





Making the most of data

Data is a challenge, especially when locked in silos, or when collected but not utilized efficiently. However, with the right platforms and capabilities in place, data can be used to transform businesses and understand customers better. Ian Cohen, CIO of JLT highlights the importance of data and that using data is a major issue for most businesses. He says: 'Data is the lifeblood of our business. Lots of organizations build these huge monoliths of data then try to work out what to do with them. For a large number of organizations, 80-90% of the data you need to transform your business, you've already got. You need a 'big find' solution, not more data' (Computing). So, the problem often does not lie in collecting data, but leveraging and making sense of it. Mary Harper, Head of Customer & Digital Marketing at Standard Life agrees that this is a major issue. She says: 'Data was a huge challenge. We had a lot of functional data about our customers, but nothing...procedural or transactional, so we spent a lot of time trying to understand our customers through our data.' She says 'a cultural shift' was needed to do this.

'Our aim is to achieve a segment of one... going down the personalization route and digital techniques and data are helping us achieve that' (Econsultancy).

'Data is the lifeblood of our business. Lots of organizations build these huge monoliths of data then try to work out what to do with them...you need a "big find" solution, not more data.'

Ian Cohen, JLT CIO



The new customer journey

Understanding customers has also become increasingly difficult, as customer journeys and demands have changed. M&S Head of Operations Benjy Meyer says a challenge for retailers is that customer journeys have transformed from linear to 'circular and messy,' involving mobile technology, online research and social interaction (Essential Retail). On that note organizations must keep up with the changing customer in order to stay competitive. Nationwide CIO Debra Bailey demonstrates that she is thinking along these lines, stating that 'in the age of always-on connectivity and mobile banking, customers expect 24-hour access and value-added services from their financial institution. To keep and attract new customers, we are creating a world-class IT function that can better handle these changing demands' (Computer Weekly).

While the topic of digital transformation goes beyond the customer experience, IT and business leaders recognize that user experience is a critical cog in the digital transformation machine, and should be taken into consideration when creating your digital strategy.

'In the age of always-on connectivity and mobile banking, customers expect 24-hour access and value-added services from their financial institution.'

Debra Bailey, Nationwide CIO

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