# Closing the Innovation Gap

## a 'C' Suite Imperative

# Contents

# Innovation isn't working

Despite the accelerating pace of technology developments and the exploding number of digital natives emerging in virtually every sector, large incumbents appear to be slow in responding to such existential threats. Digital leaders such as CIOs, CTOs and CDOs are making every effort to mobilise innovation initiatives within their respective organisations. Equally, the CEO community is under increasing pressure to demonstrate how it can generate billions of dollars of new value through genuinely innovative activities. Despite these valiant efforts, the FTSE100 in the UK remains at similar levels to 1999.

> **❝** *Growth in the incumbent space is just not happening.* **❞**

There is a possible answer to this apparent roadblock. Our survey of twenty large incumbents in 2019, see **Box 1**, and an equivalent number in the USA, reveals an ever-widening gap between what CEOs and their technology executives mean by innovation and how best to implement successful innovation programmes. There are numerous examples of innovation activities amongst incumbent organisations, be they incubators, accelerators, joint ventures or start-ups. But none have shifted the revenue or profit dials significantly over the last two decades. Only 5% of S&P500 companies have surpassed annual growth rates of 5% in the years between 2009 and 2014.[1]

The purpose of this paper is to create a common language around the word 'innovation' and offer effective mechanisms that enable technology leaders such as CIOs, CDOs and CTOs to be productive innovation partners to the CEO and other members of the 'C' suite. This requires a clear CEO vision, 'C' level empowerment and an appropriate set of resources to make serious innovation happen. In the paper we describe the 'what', the 'why' and the 'how' to innovate as perceived by the executives we interviewed. We also describe the main barriers to innovation such as legacy debt and short termism. We offer a check list of the conditions necessary to achieve effective innovation at scale.

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[1] HBR article: How the growth outliers do it (January 2012)

**Box 1** – Organisations participating in the research programme

ALLEN & OVERY

A.S. Watson Group

BOURNE LEISURE

Boots

Capita

4

dunnhumby

dyson

GROSVENOR

JAGUAR

LAND ROVER

JUST.

kpn

Landsec

Marshall

RS

M&GPRUDENTIAL

ROYAL LONDON

Telefónica

UNIPART

Unilever

*The conclusion of the survey is that although innovation can have limited application in the modernisation of existing business operations, genuine break throughs are mostly likely to occur in the 'White space' beyond the boundaries of 'core' business activity. Digital leaders seeking to innovate should look beyond the 'core' to new ventures fuelled by emerging technologies and digital business models. Early experience in these rapid growth areas could be an ideal preparation for future leadership across the entire business enterprise.*

# 2020 – the changing business context

Just over a decade ago a survey of FTSE100 CEOs and Chairs conducted by the Judge Business School at Cambridge University[2] indicated that innovation was high on the corporate agenda. However, in the words of the then CEO of British Telecom *"Innovation is our lifeblood, but we are incapable of innovating".* Given the tough market conditions that prevailed post the 2008 financial crash, such sentiments were understandable. But today's situation is entirely different.

Looking back over the last twenty years we see a revolution in the way commerce is taking place with the advent of online transactions of every kind. Most incumbents have adopted what we refer to as *'Wave One'* technologies such as Social media, Mobile, data Analytics and Cloud (SMAC). This has benefited the consumer by providing speed and convenience for shopping, banking and other personal activities. However, it has done little to benefit incumbent businesses as judged by the sluggish growth in profits, revenues and stock market valuations (as per the FTSE100).

We are about to witness further developments with *'Wave Two'* technologies such as 5G mobile, Blockchain, 3D printing, robotic process automation (RPA), artificial intelligence (AI) and the Internet of Things (IoT). These will help to transform today's supply chains as illustrated by companies such as Ocado in the UK who have automated distribution, and construction companies such as Lang O'Rourke who have built huge 3D printing factories. Our recent work on 5G and IoT at the University of Surrey[3] suggests that entire sectors such as Utilities, Agriculture, Automotive and Logistics will be disrupted by machine-to-machine interactions.

At the same time, digital natives have taken the 'innovation' high ground. The Facebooks, Amazons, Apples, Netflix, and Googles (FAANG) companies now represent a quarter of S&P500 shareholder value. Within a decade it is projected that such digital natives will represent over 50% of S&P500 valuations – and many of today's large incumbents will be out of business. Like no other time, the coming decade of the 2020's will be pivotal for leading incumbents based on their ability to innovate.

> **"** *The likelihood, in our opinion, is that many large incumbents will vanish without trace.* **"**

# How should CEOs and digital leaders think about innovation?

Before getting into the detail of the what, why and how to innovate, our survey confirms a fundamental principal associated with innovation. This helps readers to make sense of the subsequent sections of our paper.

According to our USA and European research, innovation falls into two distinct camps:

- **Innovation at the *'core'* of today's business** This contributes to short term gains in revenue and profit. McKinsey describes such innovations as working within Horizon One (1-2 years' timeframes)[4]. Typically, these incremental innovations are funded out of current cashflow. Improvements impact quarterly or annual earnings

- **Innovation at the *'edge'* of today's organisations** Such 'edge' innovations employ new business models and are designed to produce tomorrow's corporate 'unicorns' (market value exceeding $1billion). Edge activities produce results over much longer time frames and rely on venture funding from the group centre. McKinsey refers to such innovations as Horizons Two & Three, extending over 3-10 years

Our interviews suggest that innovation activities vary significantly according to where they take place (business unit or group centre); the means of financing the innovation (current cashflow or venture capital) and the methods and tools deployed (e.g. process optimisation or the adoption of entirely new business models). Management at all levels needs to be clear about this distinction if beneficial results are to be forthcoming.

The likely scenario for major incumbents is that, under intense competition from digital natives, *'core'* activities will gradually wind down whilst producing attractive dividends for shareholders. *'Edge'* activities will need to wind up to guarantee a future for the organisation in an increasingly digital world. The *'edge'* activities will leverage customer data and digital platforms to generate new sources of value at scale. We think that core and edge could co-exist for a further decade, but by 2030 only activities at the edge will survive. See **Figure 1** below.
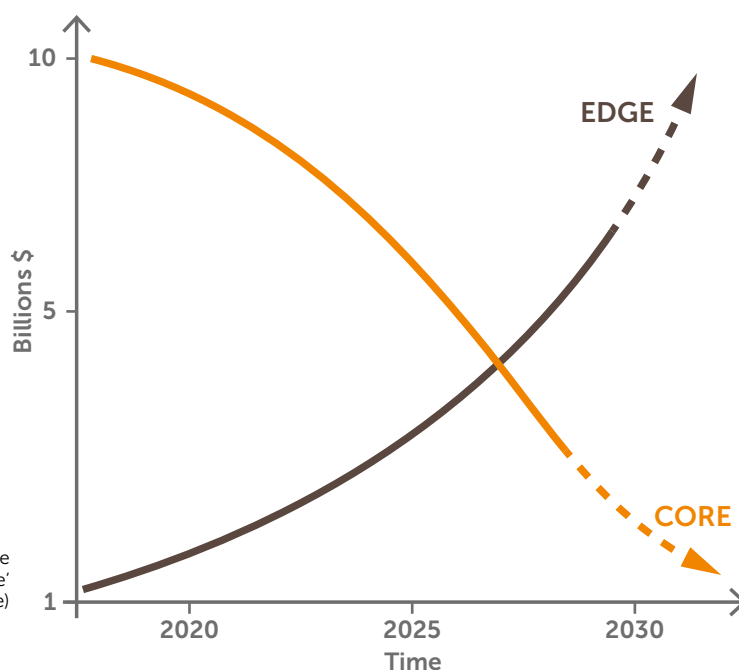


**Figure 1** – Comparative trends at the 'core' and out at the 'edge' (revenue versus time)

In the next three sections we summarise conversations with senior executives on a common meaning for innovation, or the 'what'; the primary drivers that promote innovation, or the 'why'; and the ways in which effective innovation can take place, or the 'how'.

# What does management mean by the word 'innovation'?

The official description of innovation is the process of translating an idea or invention into a good or service that creates value and for which customers will pay. To be called an 'innovation', an idea must be replicable at an economic cost and must satisfy a specific market need. This contrasts with 'invention' that absorbs investment to create a flow of new ideas (e.g. R&D).

> **❝** *Innovation is all about solving problems.* **❞**

Our survey confirms that innovation can take place both at the 'core' and out at the 'edge' of today's businesses. A common denominator between core and edge is the use of 'problem-solving' techniques that are illustrated by the examples below:

- In the words of James Dyson *'we solve problems that others ignore'*. Many such problems arise when consumer focused companies examine gaps in today's lifestyle needs such as wellness, fitness and financial security for life

- Anticipating customer needs ahead of time is a technique frequently adopted in the business to business sector where suppliers co-develop solutions with their key prospects to avoid a like-for-like bidding war where margins are undermined.

- Using data to identify new sources of customer value can help generate entirely new business models and ventures. According to the CIO of Superdrug, his company is applying artificial intelligence techniques to identify emerging lifestyle needs.
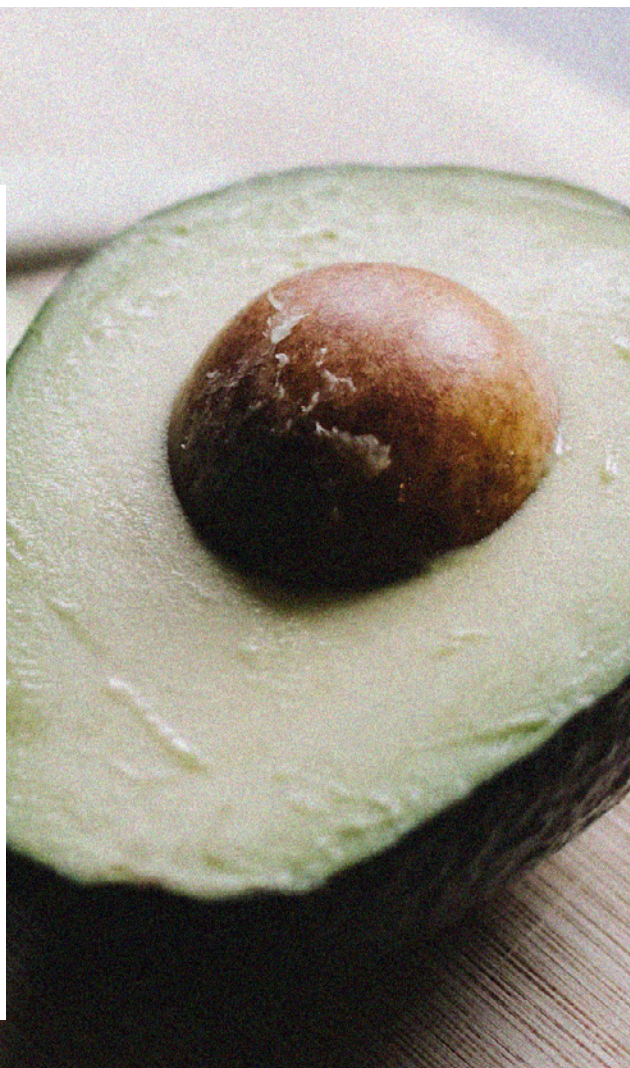
## Using innovation to improve operations at the 'Core'

Improving the efficiency of current business operations has long been a primary goal of management in the historic era of 'operational excellence'. Much effort has been focused on improving the processes that deliver value such as customer acquisition and retention and order fulfilment. Business Process Redesign (BPR), Reengineering and Lean techniques have been deployed for decades to generate a stream of incremental improvements. Examples quoted in our survey include:

- Making services more convenient for the customer such as the introduction of online repeat prescriptions and 'click and collect' as piloted by Boots in the UK

- Looking for new sources of revenue and growth within existing customer segments such as the introduction of equity release products for retirees

- Employing new techniques such as robotic process automation (RPA) to streamline processes across Customer Service as practiced by the Royal London Group



## Achieving break-through developments out at the 'Edge'

Driving current business processes and related models harder can produce attractive short-term results but is unlikely to fend off newcomers who work in entirely different ways – especially digital natives who are data driven and employ digital platforms at scale such as Amazon, Google and Netflix.

Edge-focused innovations require companies to explore entirely new business opportunities, or what are commonly referred to as 'White space' initiatives. These are often prompted by new technologies as well as changes in customer behaviours. Examples from our interviews include:

- By recognising that the millennium generation of consumers has different needs and consumption patterns, leading property companies such as Grosvenor Estates are exploring new retail, office and domestic formats for their future developments

- Responding to digital streaming techniques, established broadcasters have created new business at the edge such as BBC's iPlayer and Channel 4's 'All 4' to compete with digital newcomers such as Netflix.

- Telecommunication operators are applying new business models to capture additional revenue streams, as demonstrated by Telefonica's group-based accelerator, Wayra, and the local UK initiative, GiffGaff.

Our evidence of incumbent-led innovations suggests slow progress relative to digital natives. Radical efforts to improve the 'core' typically fail more times than they succeed as witnessed by the era of business reengineering where increased value was proven in only 30% of all cases. Experimentation at the 'edge' is equally prone to difficulty with just one in five new initiatives achieving profitable longevity (as per venture capital start-ups).

Our conclusion is that genuine innovation best occurs out at the 'edge' where emerging technologies and digital business models can be deployed to create genuine new sources of revenue and shareholder value.

*Modernising the 'core' typically postpones the inevitable revenue decline but has the advantage of sustaining valuable dividends for some years (often decades).*

# Why is innovation so important today?

Traditional businesses have evolved gradually over decades to serve markets that have been relatively stable and predictable. According to Treacy and Wiersma in their seminal work 'the disciplines of market leaders'[5], such businesses adopt an 'operational excellence' approach as their prime mantra (as opposed to 'product innovation' or 'customer intimacy').

In this context companies designed around 'operational excellence' are unable to excite either their customers or shareholders as demonstrated by flat growth of revenues and profits since 2008. Nor can they compete effectively with digital natives who have adopted entirely new business models designed for agility and speed. **Table 1** illustrates just how profound such changes could be when the global economy transitions from 'analogue' to 'digital'. In these circumstances, incumbents need to pay closer attention to all aspects of change, not just technological, if they wish to survive and flourish in the coming decade.

*In today's world where many different factors from politics and the social agenda to economics and technology are in a state of rapid flux, stability and predictability are all but dead*

**Table 1** – Tectonic shifts in business practice: before and after digital

|  | Before Digital | After Digital |
|---|---|---|
| Competitive mega-trends | Hardware, Products, Transactions | Software, Services<br>Lifetime customer value |
| Performance optimisation | Operational excellence<br>Consistency and reliability<br>Low cost | Adaptability at scale<br>Continuous experimentation<br>Speed and agility |
| Organisational Structures | Monolithic, Hierarchical<br>Management intuition | Matrixed service teams<br>Data driven decision making |
| Innovation | Projects<br>Stage Gates | Continuous improvement<br>Automated testing |

**Source**: MAXOS Group[6]

Here is a brief summary of how digital executives included in our survey foresee future developments that demand genuine and sustained innovation. These cover changes in customer needs, new breeds of digital competitors, emerging technology developments and other external forces. No company can ignore such a powerful combination of change factors if they wish to survive through the next decade.

## Changes in consumer needs

The millennium generation has very different needs to baby boomers. Such needs have been fashioned from birth by the advent of 'hyper-connectivity' and associated digital experiences. Today some three billion consumers are connected via smart phone devices. Within ten years some fifty billion machines will be inter-connected via the Internet of Things (IoT) leading to an era of smart cars, homes and cities.

At the same time business to business solutions need to become more agile to deal with rapidly changing market conditions. Long term outsourcing contracts are in rapid decline in areas such as Information Technology due to inherent rigidity. In their place customers prefer to 'mix and match' public cloud services to increase flexibility and reduce costs. The new era of 'Service Integration and Management' (SIAM) requires businesses to radically re-equip technology organisations to exploit the flexibility and ubiquity of public cloud.

In every case, participants in our survey recognise that such shifts in customer attitudes and buying behaviours require very different operating models. The melt-down of the high-street is a visible sign of how consumer patterns favour a virtual world of e-commerce and experiences-on-demand.

## Emerging technologies open new possibilities

'Wave One' technologies such as social media, cloud, mobile and data analytics have enabled many of the incumbents to emulate digital natives by supplementing traditional channels to the customer (e.g. high street) with online platforms (e.g. mobile apps). Developments in data analytics such as machine learning and AI will help to extend Wave One technologies, for example in the case of the legal profession it could improve a firm's ability to exploit its intellectual property to generate new sources of revenue.

However, 'Wave Two' technologies such as 5G, IoT, 3D printing, Blockchain and AI could threaten corporate structures by disrupting entire supply chains. Many companies are experimenting with such new techniques to evaluate their potential. RPA offers early returns within the core business. 3D printing, Blockchain, 5G and IoT are still embryonic in their exploitation due in part to the cost of large-scale deployment. However, we expect to see dramatic changes due to Wave Two technologies over the coming decade in areas such as agriculture, manufacturing, logistics, finance, distribution, construction and utilities.

Here are some pointers provided by survey participants on how to innovate in a fast-changing economic environment.

# Successful innovation
## 1. Changing the customer conversation

Innovation should be about changing the customer conversation. Digital natives have exploited online channels (fixed and mobile) to increase customer intimacy and to constantly test out new products and services in near real-time. Advances in natural language recognition and wearables continue to advance levels of such intimacy. Amazon's Alexa can now listen to every conversation around the home, helping to improve the accuracy of product placement. The Apple watch can detect irregular heartbeats that can signal the onset of life-threatening illnesses.

Mechanisms vary between business to business and business to consumer, but both merit a heightened level of interaction during any commercial transaction and throughout the product or service lifecycle.

In the words of Alan Brown, Professor of Innovation and Entrepreneurship at Exeter University *"value is no longer just about product in manufacture, but more about product in service"*.

## Consumer-led conversations

There are some useful survey examples of how organisations are changing the conversation in the business to consumer space:

- 'Connected product'. In the case of *Dyson and Jaguar Land Rover* emphasis is being placed on how product-in-service data can deliver greater value to each consumer

- 'Customer journey'. Understanding how a consumer uses a product or service gives valuable insight into where new sources of value can be generated for the future

- 'Collaborative design'. Bringing the consumer into the design process makes a product more relevant to changing lifestyle needs

## Business-led conversations

For companies operating in the business to business space, early stage customer engagement can be the difference between winning or losing a major contract or building a profitable relationship:

- Decline in outsourcing revenues has required System Integrators such as Capita to focus on service integration and management as well as migration to cloud

- Future revenue growth will depend on co-developing new solutions with customers. Consultancy helps suppliers gain closer understanding of the client context

# Successful innovation
## 2. Improving organisational speed and agility

Traditional manufacturers have increasing difficulty in coping with the fast-moving consumer agenda. They need to become more agile and responsive to market sentiment which constantly evolves and changes. Physical supply chains are often too slow and cumbersome to respond to a consumer's instant need for fulfilment. They need to exploit new technologies and ways of working to keep up with the marketplace.

In the words of a UK retail executive, *"Competition is less about the instore experience today and more about speed of fulfilment"*.

Ultimately, survival of major incumbents will require fundamental changes in underlying business models, requiring new developments out at the 'edge'. In the meantime, there are concrete steps that organisations are taking to improve speed and agility:

- Intelligent automation of work processes can cut out manual interventions and speed up workflow. RPA has benefits in dealing with legal cases and insurance claims as practiced by Royal London Group

- Breaking down organisational silos across pools of capability can help organisations solve more complex problems. This is the way that Marshalls Aerospace and Defence's CEO is modernising a 100-year-old organisation

- Adopting automated design and 3D printing techniques can speed up product development and manufacture. RS Components has designed a kiosk to print its products on site

# Successful innovation
## 3. Adopting a formal innovation process

In the words of the CIO of AS Watson, one of the world's largest pharmacy companies, *"Formal and robust processes lead to repeatable and efficient solutions"*.

Many organisations have empowered their business units to conduct local innovations through a variety of mechanisms. This can lead to fragmentation of effort and a lack of consistent results. Leading innovators are introducing formal processes to maximise impact across large organisations.

The first step here is to set stretching targets that provides a context for innovation. This helps to create an innovation culture. Thereafter, organisations can select from a variety of innovation methods and tools that embrace design thinking, agile development and scaling. Central to these is the notion of a Minimum Viable Product (MVP) that can be tested and scaled at speed.

# Successful innovation

## 4. Establishing incubation activities

Perhaps the most popular approach within the context of 'edge' innovation is the creation of incubators and accelerators. Such units enable organisations to conduct experiments, often with external partners, to test out new products and ways of working. Placing such initiatives at group level enables dedicated resources (money and skills) to be applied over longer periods than would be possible at business unit level (Horizons two and three). It can however create friction with the operating companies who compete for such scarce resources.

A typical approach to creating an incubator might be:

- Establish a group funded lab with dedicated resources and methods (such as design thinking)

- Undertake visits to innovation hot spots such as Silicon Valley where possible start-up affiliations can be initiated

- Create a venture fund and set of governance principles at the group level to seed new businesses

- Implant innovation teams within the main business units, with support of the group centre

Of significance here is the opportunity to establish external partnerships. External agents such as digital natives can infuse energy and ambition into traditional organisations. For example, Google and Microsoft are working with companies such as dunnhumby to find new ways to exploit consumer data. Cloud operators such as Amazon's AWS and Microsoft's AZURE can provide digital platforms to accelerate growth of new businesses.

With the rise of innovation hubs such as FinTech in London (the leading centre worldwide), incubators can co-reside with start-ups in shared workspaces such as Level 39 in Canary Wharf. This helps to invigorate staff and generate new working relationships. A close association with leading venture groups can help bring a 'beginners-mind' to traditional firms. Companies such as BP have created venture funds at the group centre. In all such cases it is important to apply the appropriate financial measures to assess performance.

# Successful innovation
## 5. Adopting new business models

Incubators can generate compelling new business ideas and associated products and services, but they have difficulty scaling these to levels that will impact overall business performance. Taking the next step can require a new business operating model that emulates that of digital competitors. The characteristics of such business models as exemplified by FAANG companies are:

- Small product teams (two pizza size of 6-8 people) that interface directly to the consumer and have full P/L accountability

- A set of micro-service components that enable each product team to assemble a fully-fledged business unit able to serve a specific consumer segment

- Automated testing that continuously enhances consumer facing services on a minute by minute basis

- A digital platform that can support agile development and scaling of the end-product to reach global markets

This implies different commercial skills as well as new IT techniques. The role of the IT organisation becomes critical in such 'edge' based activities – as well as supporting innovation at the core.

# Successful innovation

## 6. Group-led initiatives

Several of the companies interviewed have established group-level initiatives to create new businesses based on all-digital formats. These require different funding mechanisms given the lengthy time cycles to achieve profitability – years or decades rather than weeks or months. They typically employ a range of creative techniques such as design thinking, hackathons, sprints, and agile development. Scaling is frequently achieved using digital (cloud) platforms such as Amazon's AWS, Microsoft's AZURE and Google Cloud.

Some of the techniques applied here include:

- Appointing a dedicated team of digital leaders tasked with creating entirely new digital business ventures. Grosvenor Estates is pursuing such an approach

- Acquiring or taking equity positions in relevant start-ups that accelerate the journey into 'White space' domains, such as Legal & General's venture into healthcare

- Establishing a corporate venture fund with external VC partners to build a portfolio of new businesses as per BP Ventures

We believe that such an approach represents the most innovative way to generate value over a five to ten-year period. However, experience amongst the VC community suggests that only a small fraction of these start-ups will flourish (at best one in five). AXA Next is an example of how this might work. See **Box 2** below.

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**Box 2** – Case study of a group funded innovation: AXA Next

- AXA Insurance Group has consolidated innovation activities into a single group entity "AXA Next", with a separate P/L, reporting directly to group CEO Thomas Buberl in Paris

- The context is that AXA sees a huge strategic threat to its traditional business in areas such as domestic, automotive and life insurance

- The Group M&A team has a budget of €1B/year to conduct acquisitions globally. AXA Next has a $550M separate fund

- Employees of AXA Next are offered a 20% equity stake for running with new ideas.  Employees must resign from their day jobs and there is no safety net or job if the start-up doesn't succeed

- The start-ups are based on five technology pillars: mobility, cyber/digital, healthcare, SMB & platforms

- Their stated goal is to build several new $1B businesses in this entity, and not to reintegrate them into the core business once successfully up and running

- The parent views AXA Next as the future growth engine of the entire enterprise

- Offices in Paris, San Francisco and Shanghai already staffed by 140 people

> **❝** *Growth in the incumbent space is just not happening.* **❞**

# How can CIOs contribute to successful innovation?

Although often unnoticed by the 'C' suite, developments in the technology (or IT) supply sector through the advent of cloud-based services have been highly disruptive. Many CIOs and CTOs have had to devote a disproportionate amount of time to consolidating legacy applications, aggregating data resources and reshaping their supplier arrangements. Most have adopted a 'cloud first' strategy, but few have completed the cloud journey. Disruptive supply-side activities have often distracted the technology organisation from contributing to business innovation. It may explain the appearance of the CDO whose mandate has often been to fill the technology-business gap.

Having begun to solve the supply-side issues, CIOs and CTOs are now in a much stronger position to support business-led innovations both at the core and out at the edge. In this respect we see the CIO role morphing away from technology-based operations (with an efficiency focused) towards innovation (supporting revenue growth). However, the challenge of creating cloud-based services is significant.

In the words of an industrial CIO *'We are facing an existential threat – either we engage with the businesses or we will become irrelevant'*.

- To meet both supply and demand-side disruptions, technology organisations are calling on external parties to provide 'digital' resources such as consultants and digital agencies. They are also hiring digital leaders and support staff (frequently millennials); promoting a more empowered and innovative culture; and giving their teams time and financial support for innovative activities

Regarding technology support for business-led innovation, our survey participants described several possible roles:

- Supporting customer-led innovation by developing direct channels to consumers and participating in major business to business bids

- Exploring new technologies that might serve the businesses in the future such as Blockchain, 3D printing, 5G, IoT and AI

- Sharing 'agile' and automated testing techniques that can accelerate product and service innovation

- Developing modern technology architectures such as cloud platforms and data lakes that deliver flexibility and speed to business partners

- Decommissioning legacy systems in favour of cloud-based infrastructures and applications

The survey suggests strongly that technology leaders now face a stark choice – either to help modernise legacy organisations or transfer to new business ventures frequently located at Group level (as per AXA Next). Our view is that innovation at the 'core' is largely incremental compared to edge-based innovation which is all about creating the new.

*Those CIOs and CTOs who are prepared to opt for new ventures outside the core may well find themselves qualifying for CEO positions as their organisations evolve into digital businesses.*

# So, what is impeding innovation efforts?

Our thesis that 'innovation is not working' is based on our recent interviews as well as related studies of Global 1000 companies conducted by USA-based 650labs. The main conclusion is that successful incumbents have evolved in the 'analogue' era of market stability favouring 'operational excellence'. Today, organisational agility and ability to scale at speed are the critical ingredients necessary to compete in a 'digital' world.

In the words of the Director of Enterprise and Data Architecture at M&G Prudential:

> **"** *Growth is about scale learning rather than scale efficiency.* **"**

There are six factors that inhibit successful innovation activities today:

## 1. Resistance by customers

Innovation is frequently about changing the customer conversation. But in many sectors customers can be as conservative as their suppliers. This was argued by Clayton Christianson in his seminal work 'The Innovator's Dilemma'[7]. Only when external parties disturb this cosy equilibrium do suppliers and customers alike begin to adjust to new patterns of behaviour. Tesla's launch of the electric car has caused a fundamental disruption of the internal combustion engine and the dominant manufacturers that support this technology.

## 2. Shareholders can impede innovation

Publicly quoted companies report to shareholders on a quarterly or annual basis. This often favours a short-term (H1) focus on financial results, especially earnings per share. Even those companies interviewed that were family owned or operated mutual structures need to satisfy external stakeholders. Institutions that control much of the equity markets rarely favour aggressive risk taking, as witnessed by the failure of Jeff Immelt to transform GE into a digital corporation. See **Box 3**

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**Box 3** – GE: A cautionary Tale

Jeff Immelt, former CEO of GE had a vision that his company would "Go to bed as an industrial company, and… wake up as a software company." He pursued an aggressive strategy to create a digital company:

- **'GE for GE':** Improving internal (supply chain) efficiencies through use of IoT and data analytics

- **'GE for Customers':** Offering end to end digital services that incorporate traditional products (e.g. GE Healthcare and MRI Scanning)

- **'GE for the World':** Developing hyper-scale platforms that can support entire industries

His next steps were to create an IoT based digital platform by acquiring ServiceMax for $950 million and opening a Software Center of Excellence. He adopted a new focus on 'Outcome-based' customer relationships and looked for $1 billion plus sources of new revenue.

Some of the experiments began to bear fruit such as GE Healthcare, but overall shareholders lost patience, the shares tanked, and Jeff was retired from the Board in December 2017.

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[7] Innovator's Dilemma – Clayton Christensen: when new technologies cause great companies to fail (1997)

## 3. Limitations of current strategic planning methods

Strategic planning has been conducted historically within a five-year horizon. In a VUCA world conditions can change dramatically during this period, as seen during the financial crash of 2007/8. Forward looking companies are now focusing on a longer-term vision, with an associated short-term operating plan, often months rather than years. Taking one step towards the vision whilst adopting an agile philosophy can help companies adjust to rapidly changing external conditions. This is the case for Guardian Media Group who have adopted an 'agile' organisation. Other factors mentioned during the survey include:

- Reducing product lifecycles to meet the rapidly evolving needs of today's consumers

- Introducing stretched business targets to provoke more radical thinking

- Paying down legacy debt to ensure that the business can move forward

- Introducing new financial measures to encourage developments at the 'edge'

## 4. Traditional structures can inhibit innovation

Most business models today are designed around 'operational excellence'. Such models seek to build and optimise stable organisational structures, processes and IT applications. They often employ large scale transaction systems that enable businesses to operate at scale but can prove difficult to modify, as per ERP. In the case of UK Banks and Government departments such transaction systems often date back to the seventies and would cost billions of dollars to replace.

In the words of a former COO of a leading UK Bank *'due to tight capital constraints we do not have the financial resources to modernise our core systems'*.

Structural factors that inhibit innovation include:

- Lack of Board level commitment to make radical changes to the current business model due to low risk tolerance and associated demographics

- Hierarchical structures that delay decision making even in the face of external disruptions

- Fragmented resources that reduce opportunities for collaboration around customer problems and opportunities

- Organisational friction caused by well-resourced teams working on 'edge' developments

## 5. People and skills issues

Many of the organisations interviewed recognise that most of their staff had been raised in an analogue business era and lack digital skills or awareness. This has led to conservatism both at management and employee levels, where stepping outside day-to-day boundaries is frequently discouraged. In several cases interviewees acknowledge that large scale recruitment will be required to shift the balance towards a digital workforce. Others see the need for digital education programmes across the entire organisation.

Culture was a key discussion point during the interviews. Digital natives have grown up with a culture based on innovation and change. This is difficult to implement in a traditional organisation without decisive leadership and adequate investment. Internal re-branding exercises can help to shift cultures into new digital spaces.

## 6. Paying down legacy debt

Outmoded skills, processes and systems are major obstacles to achieving the transition to a digital structure.

In the words of a Ford executive *'software is the new rust'*.

Some of the most apparent legacy issues mentioned in the survey include:

- Rigid supplier contracts that extend over multiple years and have penal change penalties. These are most common in outsourcing and offshoring situations

- Large scale and bespoke transaction systems that were designed many decades ago and require specialist maintenance skills that are in short supply

- Development methods such as 'Waterfall' that introduce lengthy work cycles and become increasingly outmoded in today's fast-moving marketplaces

- Functional structures that appear inflexible in support of 'edge' developments that require speed, agility and higher tolerance to risk

# Critical success factors to help close the innovation gap

As highlighted throughout this paper the option to maintain the status quo is no longer viable. Traditional structures based on 'operational excellence' may continue to deliver profit for years to come but will be faced with gradual extinction as new digital players enter their territories.

*Incumbent structures need to evolve away from 'operational excellence' based on discipline and incremental progression to 'accelerated innovation' achieved through speed and agility. This implies a culture of rapid experimentation and testing, with a high tolerance for failure.*

There are four factors that can improve the odds in favour of success with respect to innovation programmes:

## 1. CEO commitment to innovation

The CEO must be committed to fundamental change. This implies that innovation becomes the top enterprise priority. Most CEOs that we speak to are frustrated with current innovation programmes that appear to tinker with the status quo rather than deliver genuine transformation. We believe that as with any major change programme, CEOs need to take big risks, accept failures when they occur and lead in the application of new technologies. As we saw with Jeff Immelt and GE's notorious failure to implement a truly digital organisation, timing is critical as well as resilience to setbacks.

To send a clear message that change is on its way, CEOs should set stretched business targets and communicate repeatedly to drive an innovation culture. The Board will need to establish a senior level steering committee that can oversee direction. All functions, especially HR, finance and IT, should support the innovation programme. Broader stakeholder involvement needs to be achieved through extensive communications programmes. Any senior executives who stand in the way of progress should be moved sideways or dismissed.

## 2. Scalable learning rather than scalable efficiency

With a pedigree in practicing 'operational excellence' over decades, large incumbents continue to pursue relentless standardisation to reduce the possibility of failure. Real exponential learning cannot occur without accepting failures as well as successes. Scalable learning is essential if organisations want to operate at the 'edge' against digital natives.

LiveOps is a good example of a call centre company that no longer operates out of an office. Instead it has 20,000 agents working from home, all of whom have access to real time dashboards of individual performance, and built-in incentives to help other agents. This has created a powerful peer-to-peer learning environment that was conceived within the gaming industry (as per World of Warcraft)

## 3. Changes to the organisational model

The task for most organisations is to transition from 'analogue' structures based on stable processes and systems to 'digital' structures that are designed for agility and speed. The latter are often characterised by small customer facing teams, micro-service components and digital platforms as demonstrated by digital natives such as Amazon and Google. Such a transition might be possible within the core of today's businesses but is more likely to succeed out at the edge through the adoption of new business models and associated technologies.

A dedicated executive at Senior VP level should lead innovation activities on behalf of the entire organisation. He or she should be supported by a small team that has access to a substantial budget necessary to fund developments. Performance should be tracked and reported to the CEO on a regular basis (once a month). The innovation team should involve customers as well as trade partners in all its activities. Legacy issues should be addressed at the outset with enough funding to remove such obstacles.

## 4. A new role for the CIO

The new CIO's role is all about embedding technology-enabled change into all the company's products and services. For this reason, the CIO may prefer to adopt the title of chief technology officer.

Traditional IT is frequently tasked with running the 'Back Office' of the organisation, delivering projects on time, and innovating if there is any spare budget left. For those CIOs who are serious about role change, they will need to ring-fence such operations so that they can concentrate on business innovation. This may require strong external partnerships.

The CIO should review the current IT organisation to ensure that it can deliver agile solutions at scale to its business partners and enterprise customers. This implies new skills and infrastructural facilities that could be generated internally or bought in. Successful migration to cloud will be important in delivering such digital IT capability. Equally, the CIO should seek to evaluate and test emerging technologies to keep the business ahead of the technology curve.

Our view is that in a growing number of situations the CIO may opt to join a new ventures team at Group level to focus entirely on break-through innovations. This will help avoid organisational inertia back in the 'core'.

# A case for action

This report highlights the growing gap between expectations and realities amongst large incumbents relating to business innovation and their desire to continue prosper in a digital world. Too many organisations today play around with small scale innovation activities that cannot move the growth needle significantly. Failures in the retail sector are good examples of how many high-street retailers were too slow to recognise the power of e-commerce (as demonstrated by Amazon's One-click approach). The same is true in the IT sector where cloud is marginalising many traditional players.

Only the CEO can close the innovation gap. Change is all about vision, leadership and the ability to gain consensus. However, the IT community has an important role in bringing new developments and possibilities to the attention of the CEO and laying the foundations on which successful innovation can take place. It is our profound hope that amongst the 7,000 digital leaders within the CIONET community this message will resonate and create the necessary collective case for action.

# About the authors and contributors to the research



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A pioneer of today's Internet as an ARPA research fellow at MIT in the seventies, Roger has spent over forty five years helping corporations harness the power of new technologies such as cloud, mobile communications, e-commerce, voice recognition and satellite. He was a partner at EY responsible for e-commerce during the dot.com boom. He is a graduate of Cambridge University and MIT, and a visiting professor at the University of Surrey. See **www.rogercamrass.com** for further information.

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*"Few if any incumbent organisations can avoid the destructive forces of digital over the coming decade. Developing an effective innovation strategy, be it defensive or offensive, is the primary duty of the CEO and the 'C' Suite."*
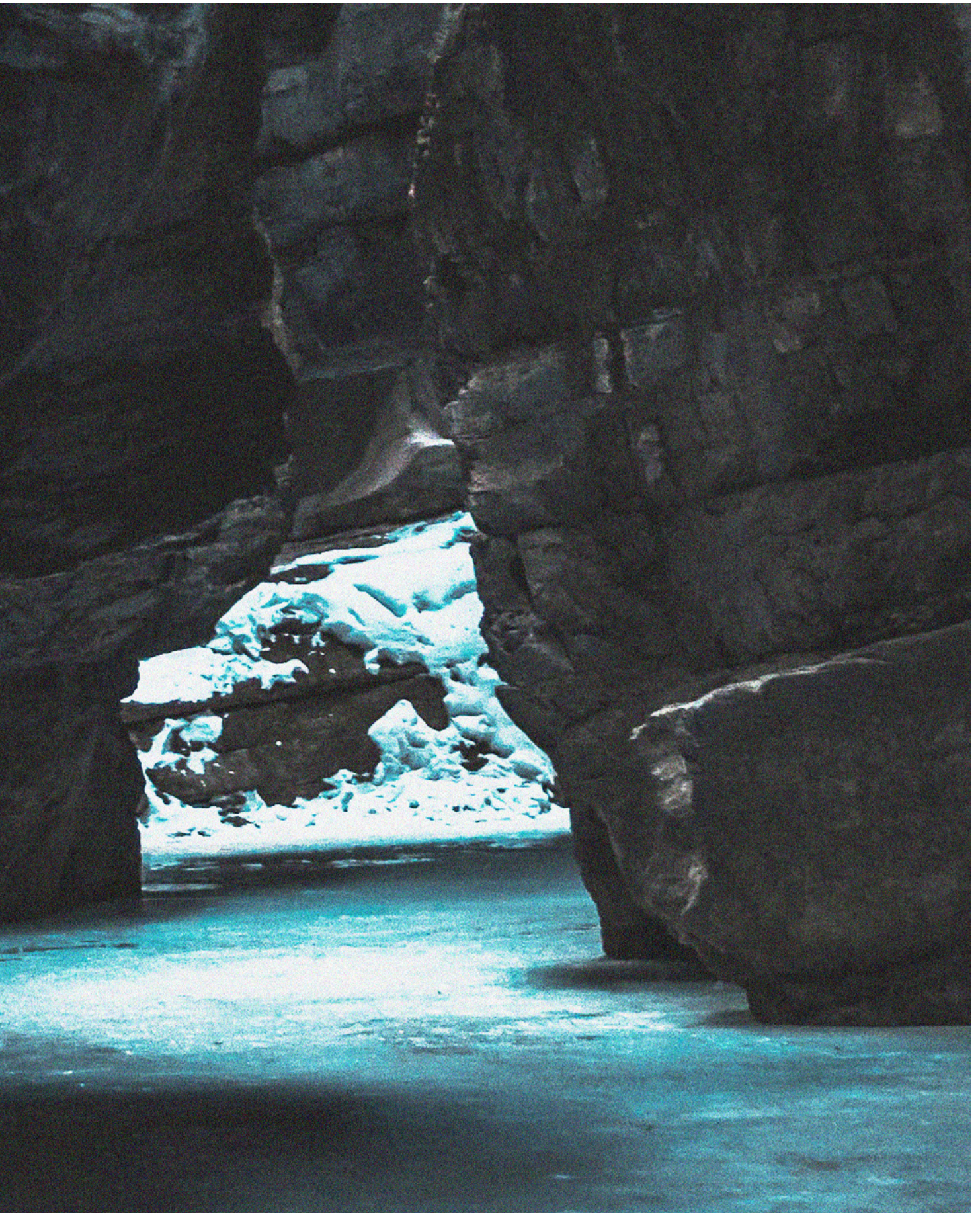
## About CIONET

CIONET is the leading community of IT executives in Europe and LATAM. With a membership of over 7000 CIOs, CTOs and IT Directors, CIONET has the mission to help IT executives achieve their aspirations. CIONET opens up a universe of new opportunities in IT management by developing, managing and moderating an integrated array of both offline and online tools and services designed to provide real support for IT executives, so they can do more than just keep up with change but ultimately define it. See **www.cionet.com**.

## About Savannah Group

Savannah Group is a global executive search and interim management firm specialising in board appointments, functional C-Suite appointments and key-sectors. We understand the transformation that digital technologies allow businesses to achieve. And even more, we understand and can evaluate the new types of executive leadership capabilities that those organisations need to be successful.

Wherever businesses are on their transformation journey, we empower business leadership teams by helping them acquire proven leaders that enable and deliver short-term and long-term transformation.

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