



## WHY DIGITAL DISRUPTION CAN FUEL BUSINESS PROFITABILITY

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Risk management is shooting up the boardroom agenda. It is evident in conversations with the board directors of Fortune 100 companies that there are concerns about the growing complexity and interconnectivity of today's risks - with [cyber](#) at the top of the list.

In previous, less complex business eras, corporates were lucky enough to operate more or less in silos where they could get on with the business of building shareholder value. Those days are a far cry from the business environment of 2017, and beyond, in which individuals and corporates are all connected and speaking with everyone else in a world of disruptive digital transformation.

It is the core integration of new technologies that change the rules of the game, especially as far as knowledge is concerned. Knowledge is losing its relationship with individual specialisms - chemists, physicists, biologists, mathematicians all operate in a connected world. In other words, knowledge is no longer domain specific but is becoming integrated.

#### **Knowledge is Integrated**

In the past there were many independent, specialized knowledge structures, rather than one cohesive knowledge structure. Thus, training, research or learning in one domain may not have directly impacted another independent domain but that has all changed with the extreme connectivity brought in by the internet.

Driving transformation is a different definition of knowledge. In isolation, a lot of potentially transformative concepts are not known. In the 1990s we were talking about A.I., for example, but what has changed is that previous independent knowledge hubs are coalescing rapidly and that is new. Knowledge has changed its categorisation. Knowledge as a platform has a wider reach since everything in the digital dimension is faster and connected.

To achieve first mover advantage in the digital age you need to move out of the blocks like Usain Bolt! The pace of change is much higher. In this new terrain the two game changers are the full integration of knowledge hubs and the pace of change.

#### **Pace of Change is Faster**

The question for corporate risk managers and business is how do we cope with full integration and blurring of the boundaries as well as the new pace of change?

In today's connected environment we are approaching an inflexion point in business laws. What does this inflexion point look like? That is the first point of this paper.

The second point is that 21st Century digital innovation will be driven by the integration of current technological capabilities. Some companies push technological innovation but digital

innovation operates at a global, holistic scale that cannot be managed by a single enterprise – it is about taking those innovations and connecting them to create something new.

What does this digital innovation landscape look like? By 2030, 80% of the world will be connected, while we create billions of devices and trillions of sensors. The prediction is that there will be 35 zettabytes of data by 2020. When billions of these devices are connected and full integration takes place can we even begin to imagine what can be shared in terms of innovation?

## Blockchain Innovation

We live increasingly in an asymmetric world where individuals look set to play a greater role than ever in the development of innovation. Blockchain, for example, is basically a one man innovation, one person using digitisation, automation, to develop distributed ledgers, and a new technology protocol.

The technology that powers driverless cars, for example, combines automation, robotics, machine learning, and digital connectivity. In the past we could track technology roadmaps, we knew, more or less, the likely path of a major corporation because their scope for transformation was limited. It is now much more difficult to predict how enterprises will change themselves or be changed by external factors because technologies are connected, creating fast moving variables that are difficult to model.

Digital innovation and new business models will emerge not only at the intersection of this new core technological connectivity but also at the intersection of what we call legacy industries, for example. One of the most fruitful intersections will be between software and biology.

Sequencing the human genome began in 1994, and 10 years of work were necessary in order to provide a nearly complete sequence. Nowadays, NGS technologies allow sequencing of a whole human genome in a few days. This deluge of data challenges scientists in many ways, as they are faced with data management issues and analysis and visualization drawbacks due to the limitations of current bioinformatics tools.

## The Lean Start up v Mega Corp?

Politicians often drape the mantle of progression over their shoulders. Progressive is good, going back is bad. In this connected world, however, it is not always clear – if ever it was – what progress is or means for businesses. Is progress big or small, is it lean or fatty, flexible or rigid? Entrepreneurs are often praised for their contribution to society but mega corporations are criticised for obstructing innovation. Intuitively, one might expect

entrepreneurs and lean starts to prosper in today's fluid e-business world and Fortune 100 companies to falter, but is that the reality?

The [lean start up concept](#) provides a scientific approach to creating and managing start ups and creates outcomes to get a desired product to customers' hands faster. The Lean Start up method teaches you how to drive a start up, how to steer, when to turn, and when to persevere-and grow a business with maximum acceleration. It is a principled approach to new product development.

The theory is that things will be cheaper because the cloud makes things much cheaper than the past so theoretically entrepreneurship should be fuelled.

A lean start up from not so long ago ended up creating Alphabet, which is the parent company of Google. This now vast conglomerate is attempting to create an ecosystem that pushes innovation in different part of its subsidiary business and then create a mechanism to integrate all this innovation.

Nest Lab, Google Capital - basically an innovation VC fund, Google Fiber, Google X, [Deep Mind Technologies and the rest](#) were all born to produce super fast connectivity. Do all these business look like they are related? What is the point of these different companies?

## New Value Proposition

The previously lithe and agile Google that has grown into the muscular and agile entity it is today has understood that innovation will come through recombination and that sustainable companies will have to recombine their resources at the holding company level. Alphabet does the job of connecting the different 'bits' to create a new value proposition.

Anyone that attends a conference – certainly in the financial services sector – will be told repeatedly that their business model is old hat and that they are about to be eaten by a new form of digital entrepreneurship.

The reality is that major corporates are [doing very well in the new digital economy](#). The overall revenues of Fortune 500 companies have risen from 58 percent of nominal GDP in 1994 to 73 percent in 2013. The Fortune 100, or the 100 companies with the highest revenue, have seen their proportion of nominal GDP rise from about 33 percent in 1994 to 46 percent in 2013. As a share of all Fortune 500 revenues, revenues for these top 100 companies were up to 63 percent in 2013 from 57 percent in 1994.

What does that mean? It means that we have a perception that entrepreneurship is being fuelled by digitisation; the reality is not so clear though. If

anything, looking at these stats it seems to indicate a push to consolidation at the highest corporate levels.

### Legacy is Progression

Counter intuitively it seems that legacy companies are better positioned to do the innovation job of recombining their core capabilities in the market. Global trade [has exploded](#) in the last two decades. And these giant businesses might just be leveraging their already large scale to grow further in overseas markets.

The expectation is that start-ups will be new, shiny, aggressively sexy predatory nymphets that eat tweedy legacy businesses for breakfast! Must people think that tens of thousands of eager beaver noughty start-ups will want to embrace digital innovation and destroy 20 Century brands but that is not necessarily the case.

In fact, innovation will come, but it will come in lower at a lower price point than the incumbent companies. Better? Maybe. Cheaper? Certainly. The probability is that the new technology will come in at a lower performance point. This does mean that from a legacy company standpoint it can make it very difficult to recognise new cheaper disruptors. Good enough and cheaper, however, is often exactly what digital innovation will bring about.

### Disruptive Innovation

According to a report by [Harvard](#), the goal is for dominant companies to prosper by making a good product and keeping their customer base by using sustaining technologies to continue improving it. The products get ever better—but the downside is that at some point their quality overshoots the level of performance that even the high end of the market needs. Typically, this is when a disruptive innovation lands in the marketplace at a lower price and relatively poor level of performance—but it's a level adequate for what the lower end of the market seeks. The disruptive technology starts to attract customers, and is on its way to overturning the industry's giants.

As the Harvard report notes, examples abound. "Small off-road motorcycles from Honda, Kawasaki, and Yamaha disrupted the hegemony of large, powerful bikes from Harley-Davidson and BMW. Transistors overthrew vacuum tubes. Discount retailing and home centres savaged the dominance of Sears. Online courses are barging into higher education. Drones challenge manned fighters and bombers. Nurse practitioners under-price medical doctors. Digital photography eclipsed film, and mobile telephones are replacing landline service. Outpatient clinics and in-home care pull revenue away from general hospitals.

"Consider the hegemony of Detroit's Big Three—

General Motors, Ford, and Chrysler. At one time, they dominated the auto industry, producing bigger, faster, safer, more comfortable cars with more and more features. But these improving products also "create a vacuum underneath them," the report says, "and disruptive innovators suck customers in with fewer features and a cheaper price."

Toyota, Honda, and Nissan disrupted the Big Three's marketplace by introducing smaller, lighter, less safe, and less comfortable but reliable cars that needed few repairs and got good gas mileage—at a significantly lower price. Within a few years, they had garnered a large share of the market. "The leaders get killed from below."

### Good Enough but Cheaper

Good enough but significant cheaper is what digital innovation will bring about. Disruptive often means getting into the field from a lower level of performance. This is very difficult to spot. The future will be shaped by this innovation.

We appear to live in gloomy times but perhaps we should be starting to think that the global economic cup is half full? Mature economies have the potential to experience significant GDP gains over the next 15 years as the Internet of Things adds \$14.2 trillion to the global economy by 2030, according to a new paper by Accenture.

According to [Accenture's](#) report called "[Winning with the Industrial Internet of Things](#)", "As the world struggles to emerge from a phase of weak productivity growth, fragile employment and pockets of inadequate demand, the IoT offers a chance to redefine many sectors and accelerate economic and employment growth."

This is a massive transformation but what does it mean for enterprise wide strategy and how we define its scope? Let's define strategy. First of all, we assume there is a market and then strategy is about how we create value for clients and all stakeholders, not just shareholders. It is about value creation and value capture.

### Capturing Value

Value creation is not enough. You need to create value in a way that allows you to capture value. How do you capture value? The way a company the size of GE, for example, [imagines the future is that digital](#) and physical will not be in addition but will be fully integrated.

So the end of this transformation is not a physical business adding a digital channel, it is not, say, a Hermes adding a digital distribution channel, or Sainsbury's selling online, that is not adding. It's not even subtracting or retreating from the high street and being fully digital: we are talking about



# THE FUTURE

a full integration of digital and physical, and that is what the end of the journey looks like.

## Digital Fuels the Future

For all companies there may be a different weighing of the digital and physical strategies - 80:20, 60:40 etc. it doesn't matter about the model but it's about integrating ultimately and that is the evidence for how digital will "fuel" the future.

What actions should companies take in this digital transformation? We can be sure that they will put data at the centre of the business, they will have to reconfigure their business model, connect the digital and physical to create a successful business proposition which then has to be resilient. The Holy Grail is to leverage data, it is to connect, and reconfigure constituent legacy parts.

## New Risk Dimensions

To some extent, cyber is already the past. We know it exists, we know where it comes from, we still don't know exactly how to deal with it but it is a known driver of risk. In the past year, Russell Group has outlined its concept of dark risk matter, a new dimension of strategic and organisational risk over and above what we already know.

What are the engines that can drive the new dimension of strategic and organisational risk that will help us to know and drive resilience going forward? We believe that data will be at the core. Some use the phrase that data will be the oil of the 21st Century that fuels progress, but how do we transform data into monetised knowledge given that knowledge is fully pervasive and difficult to protect?

In this transformation many businesses will be

optimised, lean and efficient. If, say, you are an engineer, however, efficiency can create a condition of rigidity, which is not a good thing. We are creating the conditions for structurally efficient organisations but at the first change of the environment they do not know how to cope.

If technology and innovations are widely available, we can all automate, individuals and businesses alike can choose to digitise and so create efficiency but also competitive parity. In that environment how do I differentiate versus other competitors? The new dimensions of differentiation are not at all clear.

As mentioned previously, GE, for example, is becoming a content company rather than a distributor. In this blurring, physical and digital world, the engine of growth will be fuelled by physical capabilities that are mirrored and enhanced in the digital world. In the future, content will win against distribution.

The competitive outcome of this transformation is going to be dictated by business models that understand how to integrate their digital offering with their physical capability. We can slice the markets in different ways and find niches but the reality is that these integrated business model offerings will take, if not all, then most of the pie and the models that only understand the physical side, for example, will take the leftovers.

## Knowledge Integration Will Unlock Success

We often think that knowledge specialisation wins in the world business but the reality for the winners of this transformation will be knowledge integration. How do you build knowledge integration capabilities into your company?

Businesses will have to move from a supply chain to an eco system approach. Our brain is linear: suppliers > distribution > customers. That may be a slight generalisation but businesses continue to operate linearly - up and down. But an ecosystem is adaptive, organic, how do we build together, who do we befriend, what capabilities do we need? This is very different environment. In the new business ecosystem, we may have to build mechanisms based on reciprocity, social skills, not necessarily economic incentives and contracts.

## Merger of Digital and Physical

Google is moving into the physical world to leverage its digital advantage - drones, driverless cars. Amazon is doing the same. Paradoxically, digital may create a drive towards the physical world and success will revolve around identifying where the bottleneck will be.

These are some of the concepts that companies will have to deal with in this transformation towards fully integrated physical and digital. At the end of this transformation, the business model - who, what and how - will look completely different. A company's business model will be the system through which it will connect the who, what and how? Who is or isn't being served, what a company does or doesn't do and how it does or doesn't do things? The end of this transformation is going to be painful and companies will have to change their culture.

## A New Era of Institutional Risk

All this transformation is happening in an institutional risk vacuum, which means that regulation is playing a catch up game - even assuming in some instances that the rules have

been codified and that the participants on the field know that they are playing! Some regulation doesn't even know that it needs to exist! The assumption is that we know what the new institutional regulation environment looks like. Do we? We don't. So, coupled with massive business risk there is an even bigger institutional risk.

The failure of corporate governance and how it relates to institutional risk is another problem. In order to lead the digital transformation, it is very likely many businesses we will do things tomorrow that the regulator does not like. The result is massive unknown institutional risk in which a business's right to exist may be challenged not because it does not perform its business duties well but because it neglects the institutional risk.

We don't know where institutional risk is going. Political risk, which is highly unstable today, creates huge uncertainties, say, around data. A business might be pushing the boundaries a little bit, it may not be doing a lot wrong, but it maybe that a little bit wrong could lose the business, its licence to collate and use data to make money.

## The New Breed of Individuals

A lot of emerging risk can also be seen in the next generation of digitally literate individuals that don't see barriers to change. They only see opportunity so how do we mitigate the risk of these bold young chargers? Is there going to be a need for a different risk radar? How do we make data and knowledge more valuable? These are just some of the overarching questions that Russell Group will be asking in the run up to conference season this year. It should be an interesting journey of discovery.

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**Russell Group is a leading risk management software and service company that provides a truly integrated risk management platform for corporate risk managers and (re)insurance clients operating in an increasingly connected world.**

Connected risk refers to the growth in companies which are increasingly integrating across industrial sectors and geographies, and creating greater levels of risk. This exposes corporates and (re) insurers to a broader range of inter-related perils, which requires a risk management approach built upon deep business intelligence and analytics.

Russell through its trusted ALPS solution enables clients whether they are risk managers or underwriters to quantify exposure, manage risk and deliver superior return on equity.

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