03
The Disruptive Technologies Issue

01
The challenge of disruptive technology

Every established business today is feeling the heat. Changing customer attitudes and new ways of doing business create an ever shifting scenario of fresh challenges. Often existential in nature, they threaten the very basis of existing business.

Typically, technology-enabled new entrants are the agile predators. They nimbly pick off the low hanging fruit, leaving established players with costly infrastructures and a heavily pruned share of customers, revenues and profits. And, if you need an example of this aggressive opportunism, look no further than your local high street bank...

Retail Banking

Nowhere is change more keenly felt than in the retail banking sector. Banks exist to make money from money. To achieve this goal they offer three fundamental services: they look after our money... they lend us money... and they help us move money around. Everything else they do is built upon these three core activities.

That is the ground that all banks must defend and hold if they are to survive the threat of FinTech challengers.

To fight back, established banks are adopting a multi-layered strategy – they are:

- Investing in FinTech firms
- Acquiring them
- Competing with them
- Providing them with infrastructure and services
- Appealing to regulatory authorities to rein them in.

The recent news that several major banks are joining forces to buy blockchain technology is a prime example: "we hope this won't replace what we do – but, if it does, we want to be the ones doing it".

But being a pioneer is no panacea. Established businesses must be very aware when developing new technologies because they have a nasty habit of biting back...

Consider IBM and the personal computer. In the early 1980's, IBM was the most profitable company in the world and a leading developer of the personal computer. However, it totally misjudged the importance of the technology they had conceived. IBM's global domination had been built on massive global revenues from mainframe computer sales – and they confidently believed this gravy train would run forever. But in 1993, it dramatically hit the buffers. The bottom fell out of the mainframe market and 'Big Blue' posted devastating losses. And the product that derailed the company was the personal computer – IBM's brainchild had bitten back.

The days of traditional high street bank are numbered

Technology-enabled new entrants are the agile predators

Kodak is an even more dramatic case study. In 1975, Kodak (the world's largest film-maker) invented the digital camera. This truth astonishes many people. Admittedly, as our picture reveals, the technology was pretty primitive. But, in truth, Kodak could have refined this thinking and become the dominant force in digital. They didn't.

With classic corporate myopia, management simply failed to see the digital dream. Other canny senior managers also feared, with some justification, that a shift to digital might cannibalise the company's core film-making business. So they buried the idea and the digital camera buried Kodak.

This is the fundamental challenge every business faces. How do you embrace the new and simultaneously defend the old? What's more, this management dilemma is compounded by two undeniable realities:

1. **Disruptive technology will not go away** – so there's no escaping its impact.

2. **Disruptive technology will increase the speed of change.** Cycle times are rapidly decreasing and this will have consequences. These cutting-edge technologies will accelerate a new entrant's ability to undermine traditional products and business processes.

But that prospect is not a cause for concern – let us explain why...

Management failed to see the digital dream...
so they buried the idea and the digital camera buried Kodak.

02
Understand why you're in business

Faced with the inevitability of disruption, companies need to adopt a new mindset. And that starts with a fundamental question that well-established companies often forget to ask: why am I in business?

It's a question Kodak never asked...

A big part of what Kodak got wrong was confusing what they did with why they did it.

They were so preoccupied with what they were doing - making photographic film – that they failed to ask themselves: why are we doing it?

Kodak were the world leaders in helping people to take pictures, to record things that were important to them and to share these precious memories with friends. If Kodak had focused more on the why, they might have embraced their own digital invention.

Kodak could have been the leader rather than the victim of change.

When companies understand why they are in business, they invariably become more receptive to new thinking and technology. They recognize how it can dramatically change the way they meet customers' needs and expectations. Most importantly, when they see that bigger picture they become less defensive and blindly protective. Suddenly it makes sense to exchange large parts of the current operation in favour of new, more streamlined approaches.

But how do the most successful companies identify these opportunities?

03
Listen to your customers
and identify their frustrations

Listen to your customers and understand their frustrations – that is the winning mantra of new innovators. This discipline will surface the opportunities on which disruptive technology can breed…

Uber

Uber has used technology to disrupt the mini-cab and taxi market in London – but this success has been built upon a deep understanding of consumer frustrations…

The unreliability of mini-cab bookings and the random unpredictability of hailing a black-cab were the breeding ground of dissatisfaction. But consumer research also surfaced some previously unvoiced frustrations – such as the hassle of having to pay cash in an age of credit and mobile payment.

The hidebound taxi industry was its own worst enemy. It could have embraced systems, such as Hailo, which enable customers to use black-cabs in precisely the same way as Uber. It could have seized the first-adopter advantage and totally disrupted the market for Uber. But it didn't and now it is paying the price.

The take-home message is clear. In the race to reinvent service models there are clear victors and victims. Business managers who are reluctant to seize the initiative are very often the losers. They are marginalised and out-performed by first adopters who deploy disruptive technologies to rewrite the rules of consumer engagement.

But how exactly do innovators seize the initiative, surface customer frustrations and reinvent service models?

Interestingly, these are the very questions that drove one of our Clustre member firms to develop a unique set of analytical tools. For the first time, visionary business leaders now have the ability to find and quantify the next areas of deep consumer frustration. Simultaneously, they can also identify future areas of consumer excitement across all major markets.

Make no mistake, these tools are transforming service models – but they still leave one critical question unanswered. Having identified these unmet needs and frustrations, how do you create innovative, disruptive technology solutions to address them?
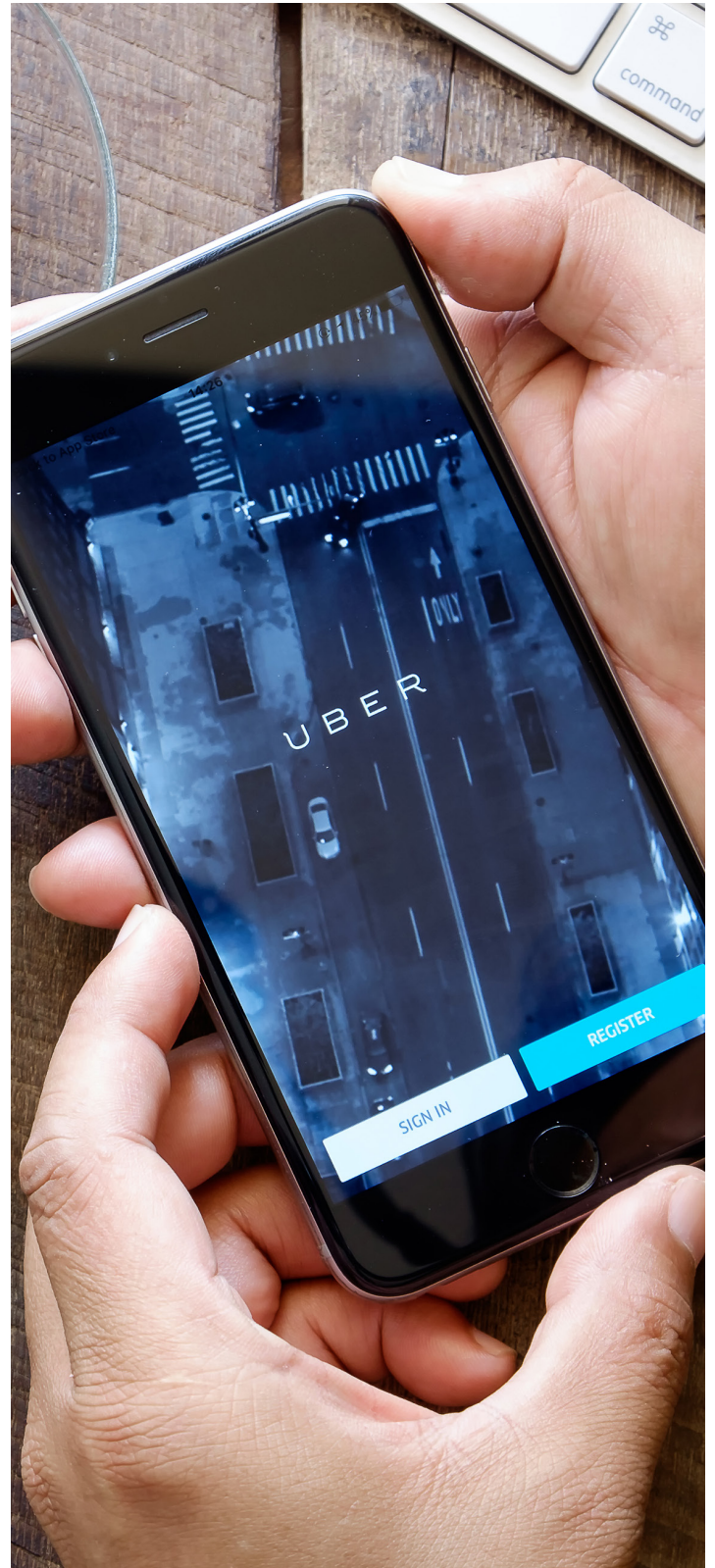
First adopters deploy disruptive technologies to rewrite the rules of consumer engagement

04
Understand the potential of emerging technologies such as AI and IoT

In 1999, the 'hype' word was convergence. Two rapidly evolving technologies – the internet and the mobile phone – were beginning to merge and pundits predicted that amazing synergies would result.

One of the fascinating aspects of this much-anticipated convergence was that the full potential of neither technology was fully understood. Each represented a brave new world of technological possibilities but the answers to 'how?' and 'what?' remained firmly rooted in speculation.

Of course, today, we know that the internet's impact has far exceeded the early promise of eCommerce. Delivery over mobile networks is now the norm rather than the exception. In fact, a worrying proportion of us are glued to our mobile devices 24/7 and almost every area of our lives seems to revolve around them. But, back in 1999, we could only begin to imagine the combined impact of these converging technologies.

We stand at a similar tipping point today with the convergence of another two emerging technologies: The Internet of Things (IoT) and Artificial Intelligence (AI).
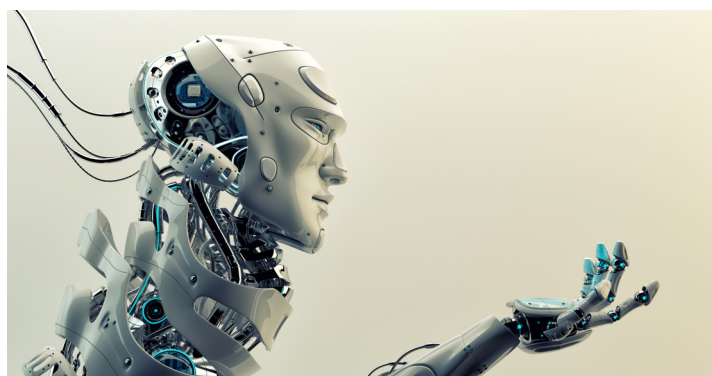
Robotic personal assistants will run our lives – freeing up our time and making us even more productive

The IoT, of course, is not so much a single, definable technology as a wave of connectedness. Much has been written about the commercial impact this will have in the business-to-business arena and our manufacturing industries. Even more importantly, it will come to touch us all in a myriad ways as it is built into the things we buy, use and rely upon in our daily lives.

But connecting things to the internet is the easy part. The real challenge comes in writing the software that will make these things useful – adding value to every environment with which they interface...

This is where Artificial Intelligence comes into its own. AI is a technology that's suddenly come of age. Indeed, it is now widely predicted that up to two-thirds of us will be replaced by some form of AI-enabled machine within the next ten years!

Curiously, we don't share this somewhat alarmist vision. Indeed, we genuinely believe that AI will improve our total quality of life. In our view, AI is handing us a new way of writing the software that will control everything around us. Everything that makes our lives richer and more enjoyable...

Instead of facing the grid-locked commuter crawl to work, the thinking car will chauffeur us effortlessly to our destination. The Google Self-drive car is fast making that a virtual reality. And many of us keenly anticipate the day when robotic personal assistants will run our lives – freeing up our time and making us even more productive.

The Google Self-drive car is fast making hands-free motoring a virtual reality

Today, the convergence of AI with the IoT holds a similar promise to the merging of the internet and the mobile phone back in 1999. Neither of these technologies has reached its full potential and, separately, each may deliver far more than we could possibly imagine. Together, though, their combined impact is certain to transform our world – for the better.

Technology is at its most powerful when it cannot be seen. When you step from your Uber cab, the payment is made automatically without any action or involvement on your part. When you turn the key (or merely press the keyless start button) in your modern car the engine purrs into life without drama – and without fail. Only twenty years ago, you would have had to wait for the fuel pump to kick into life... to set the choke... to pump the accelerator... and to curse when you flooded the engine. That was the misery that our parents accepted as part of daily life. And that shows you just how far technology has brought is in a very few years.

The potential is there for technology, especially the combination of AI and IoT, to remove your customers' frustrations (including those they don't even realise they have) and to make large parts of your existing customer service model invisible.

The question is: will you be the one to seize the initiative or will a competitor or perhaps a new entrant steal a march... and your market share?

05
Respond to the accelerating pace of innovation

There is an even bigger challenge in the accelerating pace of innovation. To bring home just how much the pace of change has increased and just how much of a challenge it is, consider the example of telephone banking here in the UK.

Telephone Banking

In 1989, First Direct was launched as the UK's first telephone bank. It was a revolutionary offering and a true innovation in customer service; hugely popular with early adopters and clearly a threat to the existing branch banking model. The established banks watched nervously to see if it would work and what, if anything, it might mean for them.

first direct
The unexpected bank

*First Direct was a revolutionary offering and a true innovation in customer service*

At that time, Barclays was probably the most nimble and innovative of the big high street banks. Indeed, it was Barclays who responded first. They moved quickly by the standards of the day: in less than a year they made the decision to launch their own telephone banking service and, just four years later (in 1994), they launched their own integrated telephone banking service: Barclaycall.

Imagine, taking five years to respond to a market-changing innovation today! When Apple Pay launched in the UK (in July 2015), Nationwide, Santander and NatWest were the first banks to provide the service –with other banks promising it later in the year. HSBC customers were unhappy they couldn't use it on day one and Barclays took a lot of flak for saying they wouldn't support it until early in the following year.

Today, we have only months, weeks, or sometimes days to respond to innovation. The imperative is not just to innovate but to innovate quickly and deliver very rapid results. And to prove that point and to explain more of our thinking, we have produced a special Point of View (PoV) paper on Agile. In a world where speed is the new and unstoppable business dynamic, this new PoV is widely regarded as essential senior management reading:

'Thanks to technology, a new business can be spawned and launched in a matter of months. In only a few years, that fledgling business can grow exponentially to become a dominant global power...

By contrast, traditional companies often take months just to mobilise a project team to study innovation opportunities. It can then take many years for anything to emerge from this cumbersome process. It's a classic hare and tortoise contest... only in this race, the tortoise always loses.'
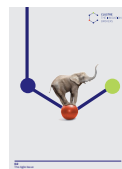
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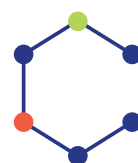
06
Practical First Steps

So, to recap, here are the practical first steps we recommend to address – and to exploit – the challenge of disruptive technology:

A. **Understand why you are in business:** Identify and focus on the core purpose of your business as it relates to your customers. Then separate this from the specifics of what you do today and how you do it.

B. **Identify your customers' frustrations:** Engage with your customers, listen to them and identify their frustrations – especially those that are hidden below the surface or just accepted as "the way things are done".

C. **Explore the potential of emerging technologies:** Understand the potential of technologies – such as AI and IoT – to address, remove or circumvent these frustrations. Ask yourself: How can I Uber-ise my business?

D. **Employ agile techniques to develop your ideas:** Embrace agile development techniques to rapidly develop and iterate your ideas. Think and act like your most nimble competitor. And make quite sure you are the first to market with any truly innovative offering. There are no prizes – or profits – for coming second.