DIGITAL TRANSFORMATION REVIEW

N° 07 FEBRUARY 2015

Strategies for the Age of Digital Disruption

Capgemini Consulting

#DTR7

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Strategies for the Age of Digital Disruption

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Introduction By Capgemini Consulting's Editorial Board

These are uncertain and challenging times for traditional organizations across every industry. The digital economy is turning the traditional rules of the game upside down, as a scan of business press headlines illustrates. "Since 2000, 52% of companies in the Fortune 500 have either gone bankrupt, been acquired or ceased to exist[i]". "Uber Valued at $40 Billion in $1.2 Billion Equity Funding[ii]." "Is Silicon Valley the Future of Finance?[iii]" "How Bitcoin can and will disrupt the financial system[iv]." This small sample of recent press headlines reveals why the leaders of traditional organizations might feel a strong sense of disquiet.

Disruption can happen at any time, in any sector, and its effect on traditional organizations can be fundamental. Against this backdrop, this seventh edition of the Digital Transformation Review is dedicated to three themes:

- Understanding more about the nature and context of digital disruption, from assessing where disruptors gain their competitive advantage to the emerging disruptors of the coming years.
- Examining how collaboration and engagement can help both incumbents and disruptors.
- Assessing the most effective strategic response to existing disruptions with an analysis by Capgemini Consulting of incumbents' winning strategies.

Digital Disruptions – Making Sense of It All

Working with a global panel of industry leaders, venture capitalists and academics (see Figure 1), we have built a detailed picture of the digital disruption phenomenon, probing the key questions that organizations need answers to:

- How can we plan for the emergence of disruptors?
- Why are we seeing so many disruptions?
- What shape are these disruptions taking?
- Which startups are likely to emerge to disrupt sector value chains over the coming years?

How can we plan for the emergence of disruptors?

We open the Review with **Rita Gunther McGrath**, a professor at **Columbia Business School**, who is a globally recognized expert on strategy in uncertain and volatile environments. "It is important to understand that most digital disruptions don't happen suddenly. They take place over time," she explains. "Most companies often get so caught up in everyday operations that they don't take a step back to think about what the future might hold."

Why are we seeing so many disruptions?

Philippe Lemoine, who recently authored a report for the French government on the digital transformation of the country's economy, outlines three factors driving disruption: automation, dematerialization (substitution of physical products and processes with digital alternatives) and changes to the value chain.

i Forbes, "Ray Wang: Cloud Is The 'Foundation For Digital Transformation'", December 2014
ii Bloomberg, "Uber Valued at $40 Billion in $1.2 Billion Equity Funding", December 2014
iii NY Mag, "Is Silicon Valley the Future of Finance?", June 2014
iv Visual Capitalist, "How Bitcoin can and will disrupt the financial system", July 2014

Figure 1: Guest Contributors to the Digital Transformation Review N°07

What shape are these disruptions taking?

Rachel Botsman is a global thought leader on one of the emerging business models of the disruptive segment: the collaborative economy. "The collaborative economy drives a shift from centralized asset-heavy organizations to decentralized asset-light networks and marketplaces," she explains. "It typically does this by creating business models that enable underutilized assets - from spaces to skills to "stuff" - to be used more efficiently." She believes there are five key drivers of disruption – wastage of resources, redundancy, complexity, limited access and broken trust. Each of these areas creates new opportunities for startups and incumbents alike.

Which startups are likely to emerge to disrupt sector value chains over the coming years?

Brian Solis is a digital analyst, anthropologist, and futurist at **Altimeter Group**. He studies the effects of disruptive technology on business and society. He identifies a select set of startups that he believes will start hitting the headlines in 2015. The eclectic list spans companies from the sharing economy, virtual reality, 3D Printing and more.

Collaboration Redefined – Engaging with Potential Disruptors

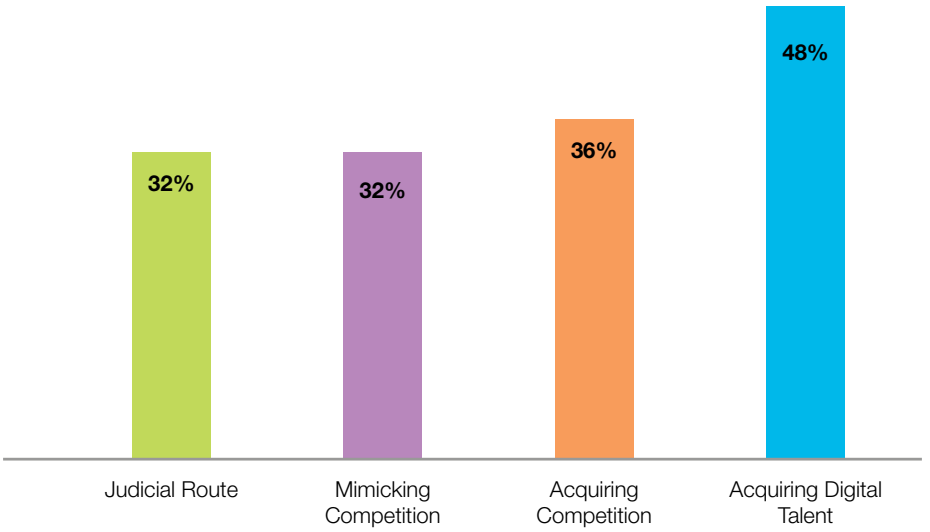
Understanding the nature and context of disruption is the first step. Crafting a response is the second, and collaboration and engagement are important approaches that many large firms are often ignoring. There are, however, some traditional incumbents that understand that they do not have all the answers and are partnering with startups across sectors. We spoke to two individuals who are closely associated with startups to understand how incumbents can engage with startups at an early stage of their lifecycle. This allows the incumbent and potential future disruptor to cooperate rather than simply compete.

David Cohen is the founder, Managing Partner, and CEO of startup accelerator **Techstars**. The Techstars network has so far funded 484 companies and it works with large corporates to run mutually valuable mentoring initiatives. "Techstars runs the program and is also the investor. The corporates don't take direct equity in the startup; they don't take rights to

follow on or acquire the startup or anything like that," he explains. "They simply provide mentors and access to their technologies." By doing so, these corporates secure new insights into how third-parties can use their APIs and data in innovative ways.

Saul Klein is a Partner with **Index Ventures**, an early-stage venture capital firm with €3 billion under management and a portfolio of 140 companies across 20 countries in almost all sectors. Saul Klein believes that traditional incumbents need to respond to 'big-bang' disruption by really engaging with smaller companies, not in the least because the smaller firms are often driving the technology innovation. Instead, he argues, big companies focus on buying from big companies and fail to engage with small companies. He says: "Big companies will truly engage with the startup ecosystem when they spend between 5% and 25% of their tech and innovation budget with a small company."

Figure 2: Response Tactics of Successful Incumbents



N = 84

Note: Figures refer to percentage of companies adopting a particular approach. Multiple responses per company

Source: Capgemini Consulting Analysis

Winning Digital Disruptions

Responding to digital disruption is now a critical weapon that all organizations need to have in their strategic armory. The story of the **Financial Times's** response to the digital disruption of the media industry is a salutary example. **Caspar de Bono**, Managing Director, B2B at the FT, outlines the organization's response and how it has turned digital disruption to its advantage, with digital subscriptions now constituting nearly two-thirds of the FT's total paying audience. "Technology helped us establish a direct relationship with customers," he explains. "This was very disruptive and the FT has significantly benefited from this disruption."

A key response to digital disruption is to constantly innovate business models. **Serguei Netessine**, professor at **INSEAD** in Singapore, believes that most companies do not focus enough on their business models and that is a major handicap when they are faced with disruption. His research has revealed that only 5% of companies practice business model innovation and he proposes an alternative framework to improve performance.

We close this seventh edition of the **Digital Transformation Review** with **Capgemini Consulting's view on how organizations can respond when digital disruptions strike**. Our research, involving over 100 companies, draws on the lessons learned from incumbents that have successfully tackled disruption and outlines the key strategic responses. Our analysis shows that successful companies have a relatively even spread across different tactics (see Figure 2): they have acquired competition, hired digital talent and gone down the legal route too.

We hope this edition of the Digital Transformation Review has helped increase understanding of the disruptive and challenging times we live in. Digital disruption is a fact of life and a sweeping force for business change. Senior executives therefore need to be confident in their abilities to assess and respond to exactly this kind of disruption. We hope this Review has helped in that regard and please do contact us if you would like to discuss any of these issues further.

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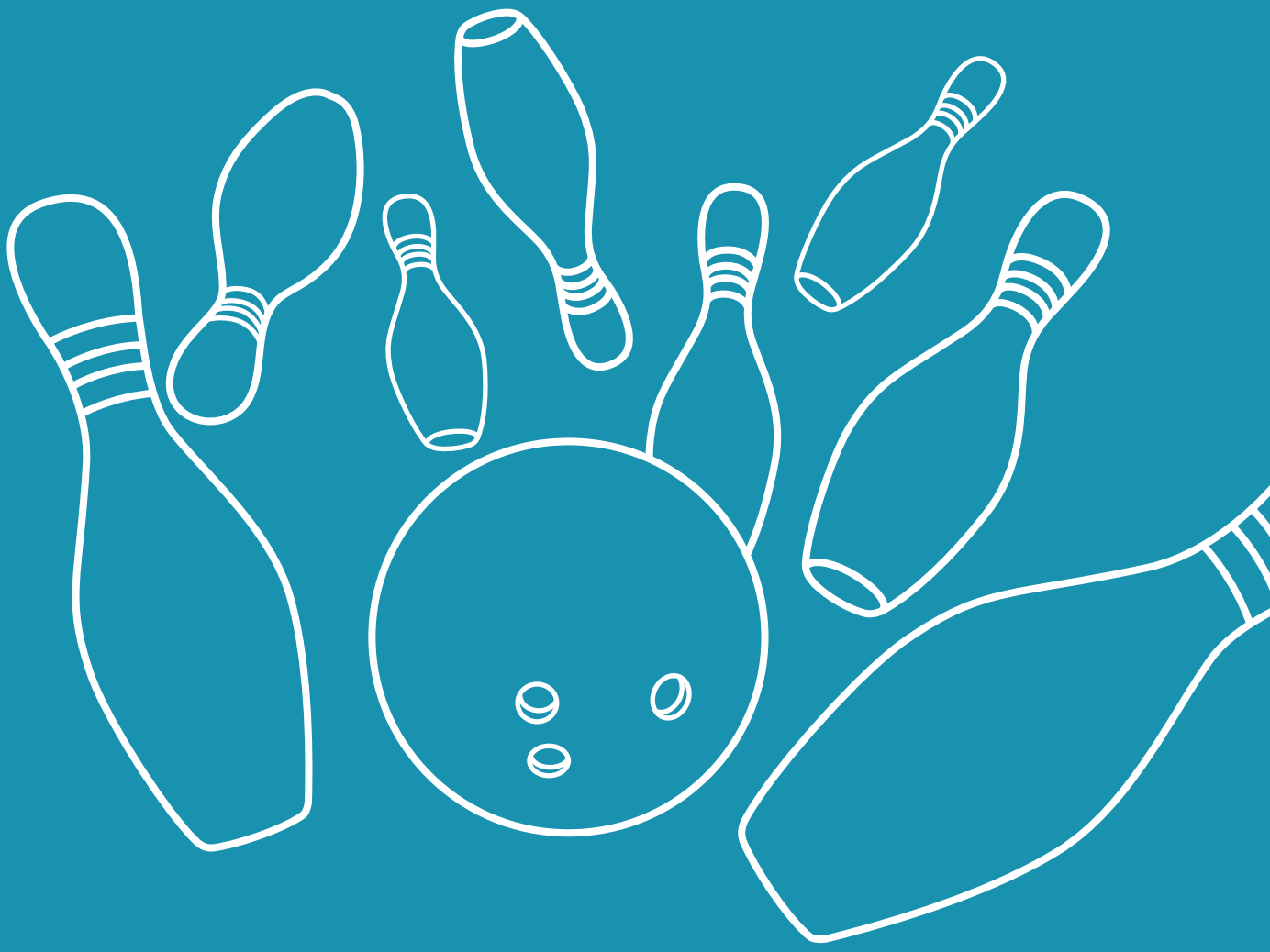
Digital Disruptions: Making Sense of it All



Fast Thinking: Reinventing Strategy for a Digitally-Disrupted World

Interview with Rita McGrath

– Professor at Columbia Business School
@rgmcgrath

Rita Gunther McGrath, a Professor at Columbia Business School, is a globally recognized expert on strategy in uncertain and volatile environments. She is a popular instructor, a sought-after speaker, and a consultant to various senior leadership teams. She was chosen as one of the top10 global management thinkers in the 2013 Thinkers50 awards, and won the strategy category. In her latest book – "The End of Competitive Advantage: How to Keep Your Strategy Moving as Fast As Your Business" – she outlines a new approach to strategy in an economy defined by transient advantage. Capgemini Consulting interviewed Rita McGrath to understand how companies can steer themselves around digital disruptions.

Staying Tuned to Digital Disruptions

How can companies identify technologies or startups that are truly disruptive?

It is difficult for companies to distinguish the truly disruptive startups from the hype. This is because most startups never really achieve critical mass. However, I think what companies can do is pay attention to where startups have identified and are addressing a customer pain point. They should ask themselves: "Where are some of these digital startups solving a problem for my customers where I'm doing less of a good job? What are the areas where my business model is making our customers unhappy?" Companies that fail to do this, and have dissatisfied customers, leave themselves vulnerable to digital disruption.

A great example of this is the cable television industry in America. In a digital world, consumers have grown accustomed to on-demand services. But US cable television companies still force their customers to pay for expensive packages rather than giving them the option to pay only for what they want to watch. US cable companies are illustrative of a class of incumbents that has a lot to worry about from digital disruptions.

> Companies should pay attention to areas where startups are identifying and addressing a customer pain point.

Is there a way in which companies can anticipate potential future disruptions?

Yes, companies can spot the early warning signs of disruption by looking at the right data. There are three categories of data – I call these lagging, current and leading indicators. Lagging indicators are often highly accurate and precise but they only reflect past events that can't be changed. Most financial information, including profitability, is a lagging indicator. A company's profits today are a function of what it did for customers and how it responded to competition in the past. Current indicators, on the other hand, are data about where a company stands at the moment. Examples of current indicators include inventory levels or the pipeline of opportunities. Finally, leading indicators provide information on where a company might be headed. They are often subjective and are hard to get a consensus around because people frequently disagree about their meaning. As a result, they are often overlooked. An example of a leading indicator could be data that shows a new product from an unconventional competitor gaining popularity with customers. This could be an early warning sign of disruption.

Companies that only look at lagging indicators tend to systematically under-invest in the things that will drive profitability in the future. It is important to understand that most digital disruptions don't happen suddenly. They take place over time. So, I always recommend that companies really think hard about leading indicators. But in many companies, the processes for detecting leading indicators are incredibly weak. Most companies often get so caught up in everyday operations that they don't take a step back to think about what the future might hold.

Could you give us an example of a company or an industry that failed to anticipate digital disruptions?

Yes, the print news media business is an example of an entire industry that overlooked digital disruption because it was too focused on routine issues. A person from the industry that I spoke with had a very interesting observation on this. She said: "If you were a news company executive in days

gone by, you weren't worried about the news or necessarily the revenue. You were worried about things like unionized workers striking, the price of fuel, and the distribution and cost of the paper. These were the things on your mind. You weren't thinking about who was going to buy ads if consumers shifted to digital." I thought that was very interesting. If you're worried about issues like union contracts, then your line of sight to what could fundamentally undermine your revenue flows is very weak.

Responding to Digital Disruptions: Success Lies in Openness to Change

How do large companies typically react when faced with disruptions?

The reaction occurs in stages. The first stage is denial. For instance, a company might say: "Oh, that's just a two-person startup, how could it possibly hurt us?" This kind of denial is a problem. It results in companies not classifying a disruption as a threat. Then, there's the stage where companies get alarmed and realize that the disruption could indeed have a significant impact. And the third stage is when companies try to deal with the disruption by trying to stamp it out. For instance, many large companies end up acquiring a would-be disruptor just to weed out potential competition. They put the disruptor's technology on ice and continue to do what they're doing. There are some exceptions to this, like Avis. It saw ZipCar as a viable business model and has continued to support it even after acquiring the company.

> "Denial is a problem because it results in companies not classifying a disruption as a threat.

What are the main challenges that companies face in reacting to disruptions?

Technology is seldom the problem. The big issues tend to be political. Resources get locked into divisions, because senior executives want to hold on to their resources and not let go. You have cases where powerful political players feel threatened by innovation and try and bury it so that it never sees the light of day. You also have situations where coalitions build up in companies, and groups of executives decide to work against a disruptive new innovation because none of them

want it to happen. Unfortunately, the right path is ignored when companies get into these political situations.

> Companies often find it very hard to acknowledge that their old business model does not work anymore.

The other reason why companies are unable to deal with disruptions fast enough is due to a phenomenon that can be called "nostalgia as business strategy". By this I mean that companies often find it very hard to acknowledge that their old business model does not work anymore. They find themselves unable to conceive of a new reality. Take the leaders at RIM (now BlackBerry), for example. They had never experienced a serious setback so the thought that their business could evaporate was inconceivable to them. They were so confident about their hold over the business user segment that it didn't even dawn on them that the iPhone or the Android devices could become legitimate threats. They saw the onslaught coming but more or less ignored it.

In your opinion, why was Sony not as successful as Apple in the digital music business, despite having all the technology for it?

Sony is a classic example of a company that ceded its entire dominance of a market because it tried too hard to preserve the status quo. Sony actually increased its investment in its Walkman division when it faced the disruption of digital music players. So, despite having all the technology for digital music players – including the hardware, software and the content – Sony failed to capitalize on the opportunity. Sony also faltered in its ability to get all its different teams to collaborate and work together on digital music players. The teams had conflicting visions for Sony. The hardware team wanted to charge for hardware and give away software for free. The content team, on the other hand, wanted to charge for content and give away hardware for free. There was no one who mediated the differences between the different teams. At Apple, on the other hand, Steve Jobs played the role of a centralizing function. He was able to bring the different warring parts of the company together and ensure that they all worked towards the same vision.

> At Apple, Steve Jobs was able to bring the different warring parts of the company together and ensure that they all worked towards the same vision.

How has Fuji been so successful in reinventing its business model, where players like Kodak were unable to do so?

The CEO of Fuji brought in a different mindset to the organization. This helped it withstand digital disruptions much better than others, like Kodak, which went bankrupt. He was prepared to throw the full weight of the company behind doing things differently. He commissioned a study of Fuji's administrative overheads and even though they were doing much better than their Japanese peers, he said: "It's not good enough." He decided that Fuji needed to do away with consensus decision-making, be more proactive and take tougher decisions. I think this ultimately led to Fuji's success.

Fast Thinking: Reinventing Strategy for a Digitally-Disrupted World

Staying Tuned to Digital Disruptions

Pay attention to where startups are addressing a customer pain point

Think hard about leading indicators

E.g. data that shows a new product from an unconventional competitor gaining popularity with customers.

> **Most companies often get so caught up in everyday operations that they don't take a step back to think about what the future might hold.**
>
> - Professor Rita McGrath

Building Resilient Organizational Structures

Establish a **common** set of **values** and shared beliefs to break down organizational silos

Give more **autonomy** to employees, while maintaining a strong central framework

Develop the ability to continually **reallocate resources** and **reorganize rapidly**

Look for opportunities **outside** of industry **boundaries**

The payment industry is witnessing a lot of disruptions due to startups. If you were the CEO of MasterCard, how would you respond to these disruptions?

As CEO, I would first of all look at business practices that are making our customers unhappy. For instance, companies like Visa and MasterCard tend to charge merchants very high interchange fees. I would look at this very seriously because I think what they're doing is not sustainable. There is bound to be a customer backlash at some point. I would also watch the startups and new entrants operating in this space very closely to see how MasterCard could reinvent itself for the digital world, rather than defend its existing way of doing business. Mobile payment startups like LevelUp have already begun to put pressure on the existing model. When customers use LevelUp's mobile app to make purchases, merchants need to pay only a fraction of the interchange charges that traditional cards cost them. LevelUp makes this possible by aggregating a large number of transactions through the day before hitting the interchange system once. This could be potentially very disruptive for the payments industry. Interestingly, Apple's payments model is hurting the banks more than it is hurting the major card companies, even though it is claiming revenues from financial services businesses for itself. It remains to be seen how they will compete when and if their business makes serious inroads into payment behaviour.

Would you consider Airbnb to be a threat to the hotel industry?

I think there are two ways to look at this. In some ways, we could say that Airbnb has not necessarily been a direct threat to large hotel chains because it has primarily targeted a different customer segment. This is a segment that was not travelling earlier because it could not afford hotel stays. So, in that sense, Airbnb may have extended the size of the overall market without taking away that much business from the large hotel chains.

But in the future, Airbnb is likely to be much more of a direct threat to large hotels. We are now starting to see Airbnb break into a market that has long been the staple of large hotels – the business traveller segment. Airbnb offers novelty to business travellers, for whom staying constantly in hotels often becomes an unexciting experience. It is now making it possible for business travellers to get Airbnb stays reimbursed through their corporate accounts. If business travellers start using Airbnb more frequently, I think it could be very disruptive to the existing hotel business.

If you were the CEO of a major hotel chain, how would you react to the disruption caused by Airbnb?

I would think of ways in which we could become more competitive in comparison to players like Airbnb. So, I would evaluate what makes Airbnb attractive to people besides a lower price. For instance, some people prefer the authentic experience, having a local host, and the personal atmosphere of a private accommodation. And then I would try to see if I could potentially add those attributes to my offer.

For example, some hotels are now focusing increasingly on millennials. Millennial business travellers tend to differ from their baby boomer counterparts in how they like to spend time at a hotel. While baby boomers prefer to remain in their room at the end of a long day, millennials like to be in a

more communal and shared environment. So, some hotels are starting to reshape their physical plants to create such environments for Millennials.

In your view, how should companies time their shift to new business models?

It's really hard to get the timing right. Companies need to simultaneously disengage from an existing business model while engaging with a new one, which is very tricky. It has to be done very systematically. Companies should start with the early adopters among their customers, shifting them first to a new business model, and then gradually shift more mainstream customers to it. The sequence is important because not all customers will be ready for a new business model at the same time.

Netflix, for example, understood that it needed to transition from DVDs to streaming video, but it did not manage the transition correctly. Many of Netflix's reconfiguration moves infuriated customers. For example, Netflix lost a large number of customers when it decided to split its streaming and DVD businesses into two separate companies. The split meant that each service would have its own separate website and management. While Netflix was convinced that customers would prefer streaming to DVDs, customers were actually very unhappy with this move because it meant that they needed to store their content on both websites if they wanted to continue to access both formats. Further, since DVDs offered more movie choices at that point, it also meant that customers would need to look in both places if they wanted to find what they were looking for. In trying to force the transition on customers who were not ready for it, Netflix made a major strategic mistake.

> "Being stable at the core enables companies to take the right decisions at the right time.

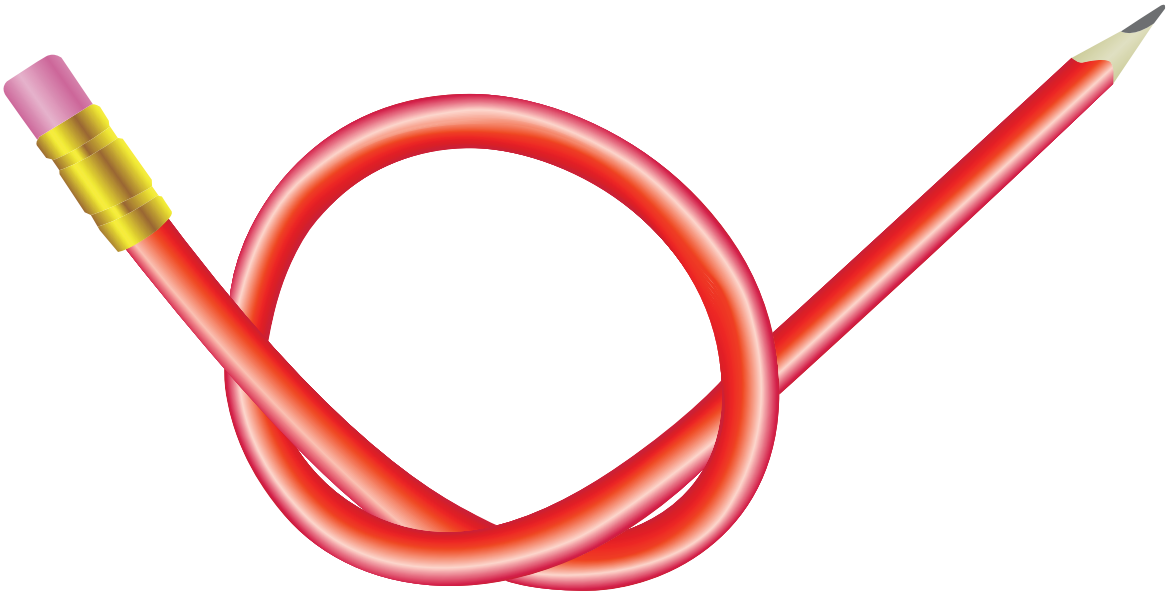
Building Resilient Organizational Structures

How can companies build an organization that is resilient to disruptions?

During the research for my book, I found that stability is the key to creating an organization that is resilient to disruption. Being stable at the core enables companies to take the right decisions at the right time. To achieve this stability, companies need to reduce the uncertainty associated with business model transitions. Companies that have been able to survive disruptions successfully have crafted social structures that reduce this uncertainty. In these companies, employees tend to worry less about organizational roles and structures than in less successful companies.

> "Giving more autonomy to employees is a big part of creating a resilient organization.

In order to create stability, companies should establish a common set of values and shared beliefs. These help break down silos across the organization. Take the US-based electricity distributor Atmos Energy. It has an HR department whose main goal is to implement these common values. When everyone knows all the ground rules, you have this thread of stability that



runs at the core of how the business operates. And then it becomes much easier to take action quickly and adapt to situations.

Should companies give more autonomy to employees to enable a resilient organization?

Yes, giving more autonomy to employees is a big part of creating a resilient organization. It is almost impossible for a company to move as fast as some markets are evolving if it operates with a hierarchy that is too rigid. That being said, there is still the need for a strong central framework. A good example here is Ford Motor Company. When Alan Mulally took over as CEO of Ford, the senior team operated in silos and weren't brilliant at working together. Mulally imposed a centralized structure in which senior executives were required to meet on a weekly basis to go through their business plans and also to hear what was going on in the rest of the company. This brought together people who had different lines of sight on the early warnings of disruption, and leveraged the talent in the top team to help resolve problems. At the same time, it did not take away from the autonomy of the executives to operate in their own business activities.

Can you tell us about the continuous reconfiguration process that you suggest companies should follow?

Continuous reconfiguration implies that companies should develop the ability to continually reallocate resources and reorganize themselves rapidly. I have found that firms that deliver consistent performance over time do this instead of resorting to wrenching restructurings. Continuous reconfiguration provides both stability as well as dynamism, unlike a strategy that is based on the notion of sustained competitive advantage. It encourages companies to disengage from exhausted opportunities and repurpose valuable resources, rather than vainly defending existing competitive advantages.

> Industry boundaries are fading and every company should be looking for opportunities outside their own industries.

How can large organizations be disruptors themselves?

I think large organizations have enormous potential to be disruptors themselves. For example, Google is potentially disrupting the healthcare and automotive segments. The critical criteria for a large organization seeking to be a disruptor is that they have to have appropriate business models and financial structures for the markets they are going after – generally, they won't succeed if they go into new markets with the same structures they used for existing ones. I have said this for years – industry boundaries are fading and every company should be looking for opportunities outside their own industries.

> Continuous reconfiguration provides both stability as well as dynamism, unlike a strategy that is based on the notion of sustained competitive advantage.

HOW TO ANTICIPATE DIGITAL DISRUPTIONS AND IDENTIFY DISRUPTIVE STARTUPS?

"I look for instances where there are really interesting and abundant forms of supply and when a company is either tapping into existing demand or creating demand in ways that would change consumer behavior."

- Rachel Botsman

"Companies need to look for symptoms of inefficiencies in their business model by trying to see if there is a mismatch between what the customer wants and what they deliver."

- Serguei Netessine

"Companies can spot the early warning signs of disruption by looking at the right data categories – I call these lagging, current and leading indicators."

- Rita McGrath

"Spotting disruption is like finding a black swan. If it were that easy, everyone would be able to do it."

- Saul Klein

A New French Revolution? Building a National Economy for the Digital Age

Interview with Philippe Lemoine

– Chairman of the Fing (Next Generation Internet Foundation)

Philippe Lemoine is Chairman of the Fing (Next Generation Internet Foundation), the author of numerous reports and books on information technology, a former Co-President of French department store Galeries Lafayette Group and CEO of consumer finance group LaSer. He also serves on several boards. In early 2014, he was asked to lead a government-backed initiative into the digital transformation of the French economy. Drawing on nine months of effort, and the input of over 500 people, the resulting report – "The new grammar of success – The digital transformation of the French economy" – was released in November 2014. Capgemini Consulting spoke with Philippe Lemoine to understand the drivers of digital disruption and the new rules of success that France needs to master in order to thrive in the digital age.

Understanding the Impact of Digital Disruption

While technological transformation has been occurring continually over the last several decades, what sets the digital age apart and makes it so disruptive?

To my mind, we entered a new phase in the evolution of technology in 2008 – the year when Apple began marketing the iPhone. What's new about this phase – characterized by the word "digital" – is that the technology race is no longer driven by large organizations, but by people. People today are equipped with technology to a huge degree and are constantly using new digital tools. And they have found new ways to communicate, invent, consume and share.

In your opinion, what are the sources of the digital disruption that we are seeing in almost every sector?

The intensifying impact of technology in the digital age is linked with three factors: automation, dematerialization and changes to the value chain.

Increasing automation, driven by digital technologies, is amplifying labor productivity and enhancing efficiency in the use of raw materials and energy.

"What's new about this phase – characterized by the word "digital" – is that the technology race is no longer driven by large organizations, but by people.

Dematerialization, which refers to the substitution of physical products and processes with digital alternatives, has its own distinct effects. First, it has led to the emergence of new online channels of communication and distribution that have replaced or transformed physical channels. Second, dematerialization has lowered the marginal cost of production. In a digital economy, the majority of production costs – which include the cost of designing, prototyping and testing – accrue when the first copy of the product is created. The cost of reproduction is virtually zero. Third, dematerialization has lowered transaction costs by facilitating more open relationships between internal and external stakeholders in an organization. This has been accompanied by an increase in co-opetition and inter-sectoral competition.

Finally, the digital economy has given rise to new actors that are stepping in as intermediaries between traditional businesses and their customers. These new actors are reinventing established business models, which is resulting in the reorganization of traditional value chains. There are two key effects of this reorganization – we see consumers playing new roles and data emerging as an increasingly valuable resource. Companies have found a way to create value, using data as an asset.

"The intensifying impact of technology in the digital age is linked with three factors: automation, dematerialization and changes in the value chain.

There is a lot of talk about the potential negative impact of digital on employment, for example. What are the risks of digital disruption, not only for companies, but for society in general?

It is a fact that digital technologies have had a major impact on employment. According to the MIT, 47% of jobs in America will either disappear or be fundamentally transformed by digital technologies. In Europe, 54% of jobs are estimated to be similarly affected. I personally think that digital technologies will create as many as jobs as those that will disappear due to it. The problem, however, is that the institutions that are responsible for making the employment market function are not always effective. For example, they are not organized to put digital at the forefront of permanent professional training, which is extremely important. The concept of professional training itself needs to evolve – training needs to be provided throughout an individual's career. There is also the need for an evolution in the structure and nomenclature of existing jobs, and even in the concept of employment, which is constantly changing due to the diversification of working patterns. On the employment front, the major risk lies in not making the necessary efforts in enhancing training and in understanding what constitutes new employment opportunities in the digital age.

> On the employment front, the major risk lies in not making the necessary efforts towards enhancing training and in understanding what constitutes new employment opportunities in the digital age.

What are the biggest challenges that organizations face in responding to digital disruption?

There are three main challenges. First, organizations need to adapt to a whole new "open" culture. They need to increasingly rely on external partners rather than on internal teams alone. Second, organizations need to be able to transform existing jobs to suit the needs of the digital age. The third challenge is the most important. Over the last 20 to 25 years, organizations have functioned according to the notion that they should innovate in line with their DNA and within the bounds of their core business. But, the digital age requires a different approach. Organizations need to let go and innovate freely rather than limiting themselves to mastery within their core business. They need to understand that the rhythm of digital transformation is determined by the customer. As a result, everything must be designed and developed based on the customer's needs and priorities.

> The digital age requires that organizations follow a scheme of letting go and innovating freely, rather than limiting themselves to attaining mastery within their core business.

How should incumbents react to startups that are disrupting their industries? For example, we see a lot of conflict between incumbent taxi service providers and new players like Uber. Should the taxi industry use regulations to counter Uber?

I think that the taxi industry is reacting just like any business that feels endangered. But it is dangerous for a profession to survive only because of regulation. There are many incumbents in highly regulated sectors, such as the banking industry who believe that they are protected from technological disruptions by existing regulations. I believe that's a very big mistake that they are making. Sometimes, organizations that are protected by regulations lag in innovation. The worst thing that companies in highly regulated sectors can do is to completely ignore the fact that technology is offering new solutions and making consumers more demanding. You cannot break the progress of technology to maintain an old way of working – you must adapt and transform.

> There are many incumbents in highly regulated sectors who believe that they are protected from technological disruptions by existing regulations.

Crafting a New Digital Future for France and Europe

In your view, how do France and Europe compare with the US when it comes to leveraging the opportunities of the digital age?

There is an interesting indicator that illustrates the difference between France, Europe and the US in how they are adapting to technological disruptions. If you take the top 100 companies that are less than 30 years old in France, Europe and the US, you see a very striking trend. France has only 1 such company in its

top 100, Europe has 9, and the US has 63. This is a very important statistic when you consider that businesses should be creating new markets or new ways of consuming in the digital age. It helps us understand how well a society is adapting to digital innovation.

> Digital transformation has its own "grammar of success" – there are new rules to be followed.

Why do you think France and Europe have not produced as many digital leaders as the US?

I would put it down to the lack of real competition. Take the retail industry for example. In the US, Walmart has implemented huge digital transformation efforts in order to try and compete with, and even beat, Amazon. In the UK as well, companies like Tesco are doing some wonderful things with digital to compete with pure-play digital actors. In France, however, you don't have many companies that are truly digital, so there isn't the same intensity of competition. I think that there is a sort of shift that has not taken place in France.

What should France do to adapt to digital transformation?

Digital transformation has its own "grammar of success" – there are new rules to be followed. France will need to master these new rules and adapt to the competition of the 21st century. For too long now, France has not been able to unite a realistic view of the future with a bold, utopian one. It is true that France has been traumatized by the bursting of the Internet bubble ten years ago. It is therefore afraid to look naïve again. But we must understand that the context is different now and France must adapt. Great entrepreneurs have a capacity to envision utopia. In France today, large companies, as well as public powers, are quite far from being able to do that. We must change that.

How can France emulate new startup ecosystems such as Finland or Israel?

I think that we need to distinguish between two things. On the one hand, we need to learn from them and adapt ourselves. But on the other hand, we also need to innovate based on our own values. For example, we should focus on building an egalitarian peer-to-peer Internet architecture – one that creates new rights and new digital freedoms. This message has strong links to the values of Liberty, Equality and Fraternity, which are at the core of the French system.

> For too long now, France has not been able to unite a realistic view of the future with a bold, utopian one.

SURVIVING & WINNING DIGITAL DISRUPTIONS

"Companies that only look at lagging indicators tend to systematically under-invest in the things that will drive profitability in the future… I always recommend that companies really think hard about leading indicators."

- Rita McGrath

"The digital age requires that organizations follow a scheme of letting go and innovating freely, rather than limiting themselves to attaining mastery within their core business."

- Philippe Lemoine

"The rhythm of digital transformation is determined by the customer. As a result, everything must be designed and developed based on the customer's needs and priorities."

- Philippe Lemoine

"The key lesson we learnt from FT's transformation was about asking the fundamental question of why the business exists and what purpose it serves."

- Caspar De Bono

"Executives need to recognize the speed at which their industries are getting disrupted by new models."

- Rachel Botsman

"Giving more autonomy to employees is a big part of creating a resilient organization."

- Rita McGrath

"It's important for big companies to think about what their core values are and then think about how new emerging technologies could be incorporated to their strategic advantage."

- Saul Klein

The Power of Sharing: How Collaborative Business Models are Shaping a New Economy

Interview with Rachel Botsman

– Global Thought Leader
@rachelbotsman

Rachel Botsman is a global thought leader on collaboration and sharing using digital technologies to transform the way we live, work and consume. She has inspired a new consumer economy with her influential book "What's Mine is Yours: How Collaborative Consumption Is Changing The Way We Live". Rachel was recently named a 2013 Young Global Leader by the World Economic Forum, which recognizes individuals for their commitment to improving the state of the world. In 2014, she was named by Fast Company as one of the 'Most Creative People in Business.' Capgemini Consulting spoke with Rachel to understand how companies should adapt their business models for this new collaborative economy.

Collaborative Business Models are Disrupting the Economy

What makes the collaborative economy such a disruptive force?

The collaborative economy is disruptive for three key reasons. First, it drives a shift from centralized asset-heavy organizations to decentralized asset-light networks and marketplaces. It typically does this by creating business models that enable underutilized assets from spaces to skills to 'stuff' to be used more efficiently. Take Airbnb and Hilton Hotels. Unlike Hilton Hotels, Airbnb doesn't actually own accommodation. Instead, it facilitates access to existing spare rooms, holiday houses, treehouses, castles etc. all around the world. On-demand ride-sharing services such as Lyft and Uber are similar examples from the taxi industry. They don't own the cars or employ the drivers, but facilitate access to an existing inventory and allow assets be used more efficiently.

Second, technology is making it easier for us to trust strangers and to interact, exchange and share in ways that were not possible before. This is giving rise to different forms of peer-to-peer commerce that bypass traditional institutions.

> In the digital age, consumers no longer necessarily need to own assets; they can instead pay to access benefits through different service models.

The third reason relates to the shift in consumer behavior from physical ownership of assets to on-demand access. In the digital age, consumers no longer necessarily need to own assets; they can instead pay to access benefits through different service models. We are seeing this emerging from Spotify and Netflix in media, to Zipcar and bike share schemes in transportation, to rental services from Solar City to Rent the Runway.

When you consider these three factors, they are all disrupting different industries – from travel to transportation to financial services – in a profound way.

There are multiple definitions of the sharing or collaborative economy; what is your definition?

I define the sharing economy and collaborative economy differently. The sharing economy is an economic model based on sharing underutilized assets – including skills, spaces and intellectual property – for monetary or non-monetary benefits. In my view, the sharing economy is the first wave of the bigger collaborative economy.

> The sharing economy is the first wave of the bigger collaborative economy.

The collaborative economy is a larger concept based on the shift from centralized hierarchical institutions to decentralized networks and communities. It includes 'sharing' ventures but also new learning models such as Massive Open Online Courses; decentralized forms of production such as 3D Printing and Makerspaces and many forms of finance such as crowdfunding and peer-to-peer lending. The Collaborative

Economy transforms how we can produce, consume, finance, and learn. It may or may not involve asset sharing and includes other behaviors such as renting, lending, bartering, swapping and selling.

What is the economic weight of the collaborative economy?

Company valuation is probably the most accurate indicator that you can rely on right now to estimate the size of the collaborative economy. Startups like Lending Club, Uber, and Airbnb have multi-billion dollar valuations. So, the market is big and it is getting bigger.

> It took Hilton Hotels 93 years to build an inventory of over 600,000 rooms; Airbnb got there in just 4 years, and they now have close to 900,000 rooms.

To get a better idea of the potential of the collaborative economy, let us look at individual examples. It took Hilton Hotels 93 years to build an inventory of over 600,000 rooms; Airbnb got there in just four years, and they now have close to 900,000 rooms. More importantly, they are at a point from where they can scale up incredibly fast. Another interesting example is BlaBlaCar, which is a true ride-sharing platform. They now transport more than two million people every month, which is more than the Eurostar.

Changing Consumer Behavior is Giving Rise to Collaborative Models

In what ways is changing consumer behavior, especially among millennials, driving the collaborative economy?

There are three factors that are distinctly shaping the behavior of millennials, and driving the collaborative economy. First, millennials are growing up with a different attitude towards sharing and interacting with strangers. These attitudes and behaviors are now dispersing into different areas of their lives. Thus, millennials are more inclined to think about say sharing cars in the same way that they think about sharing photos. The second thing is that millennials view technology differently. For older generations, mobile phones are a tool for digital communication and content, whereas for millennials, they are remote controls to the physical world. Millennials look at their phones to provide them with access to whatever they need, whenever they need it. This "on-demand, instant gratification" culture fits in perfectly with models of access as opposed to those of ownership. The third factor is a backlash against consumerism. If you think of the 80s, the 90s and the early 2000s, you had a generation that defined themselves by how much they consumed. It was an economy built around "I, me and myself". Today, there is a resurgence of "we" – a revival in the belief of community. We are seeing an entire generation that wants to be a part of brands and experiences that are bigger than the individual self.

> Millennials treat mobile phones as remote controls to the physical world.

How can companies identify opportunities in the collaborative space?

I have developed a framework to help companies identify opportunities in the collaborative economy. To build the framework, I looked at the real problems that collaborative startups were solving and found five key drivers of disruption.

The first driver is **waste**. Smart entrepreneurs identify an unused asset, create efficiency around it and unlock new forms of value. Airbnb is a great example. Airbnb recognizes that there is unutilized capacity – from holiday homes to spare rooms to tree houses to boats – that they can now make liquid.

> Millennials think about sharing cars in the same way that they think about sharing photos.

The second driver is **redundancy** – when there are layers of redundant people or processes that can easily be bypassed using technology. A good example of this would be peer-to-peer currency transfer. Companies like TransferWise or CurrencyFair are becoming popular because they allow you to save as much as 95% on transfer fees.

The third driver is **complexity**. Many collaborative startups find ways to simplify complex and frustrating customer experiences. For example, Uber and Lyft have simplified an otherwise complex and unreliable experience for customers of taxi services.

The fourth driver is **limited access**. For example, many luxury products are out of reach for most people. So we see startups developing systems that enable shared access to such products. Take the case of BMW-on-Demand where you are not required to have full ownership of the car, but you get shared access to it and are charged by the minute meaning you only pay for usage.

The last driver is **broken trust**. This comes into the picture when trust in big institutions is broken, and people who want to trust their peers can interact with them directly. An example is the massive rise of peer-to-peer lending, provided by platforms like Funding Circle and Zopa.

> Today, there is a resurgence of "we" – a revival in the belief of community. We are seeing an entire generation that wants to be a part of brands and experiences which are bigger than the individual self.

Collaborative Business Models: Shaping a New Economy

Collaborative Business Models are Disrupting the Economy

It took **Hilton Hotels** **93 years** to build an inventory of over **600,000 rooms**

Airbnb got there in just **4 years**, and now has close to **900,000 rooms**

BlaBlaCar, a ride sharing platform, now transports more than **2 million people** every month

This is **more than** the number of people **transported by** **Eurostar** every month

> Consumers no longer need to necessarily own assets; they can instead access benefits through different service models. - Rachel Botsman

Transforming Consumer Pain Point into Disruption Opportunity

Consumer Pain Point	Disruption Opportunity
Waste	Airbnb provides access to private accommodation
Redundant Intermediaries	TransferWise enables peer-to-peer currency transfer
Complexity	Uber gives a simplified, hassle-free experience to riders
Limited Access	BMW-on-Demand enables people to ride luxury BMW cars at a much lower cost
Broken Trust	Funding Circle facilitates peer-to-peer lending

Can you give us some examples of companies that are adapting their business model and joining the collaborative economy?

Let us start with the automotive sector. Many of the major brands are realizing that the future of their business is probably not in selling cars, but in providing mobility services. Thus, Volkswagen has launched a car-sharing service called Volkswagen Quicar. Similarly, BMW, Daimler and other major brands have either launched or acquired car-sharing services. If we look at sectors like hospitality, Marriott has partnered with LiquidSpace to give people access to workspace on-demand within their hotels. Another interesting angle is to think of idle assets in the form of intellectual property. For example, GE has partnered with Quirky to open up unused patents to innovators to start building products and solutions.

> GE has partnered with Quirky to open up unused patents to innovators to start building products and solutions.

There are examples in the B2B space too. The idea of an unutilized asset being made liquid applies strongly to B2B markets. For example, Getable is a startup that provides a rental marketplace for tools and construction equipment, allowing tons of unutilized capacity to be opened up. Without a doubt, though there are currently fewer examples, the B2B space will be the goldmine of the collaborative economy.

> The B2B space will be the goldmine of the collaborative economy.

Bigger Companies Need to Adapt to the New Rules of the Game

How do you convince CXOs to launch collaborative business models that can look quite marginal compared with the rest of their business?

Executives need to recognize the speed at which their industries are getting disrupted by these new models. Companies like Airbnb and Uber are examples of how fast disruptions are happening. Also, executives are starting to realize that besides value destruction, where these companies could take away their margins, there is also scope for a lot of value creation. They can reach new audiences and create value from existing assets in various innovative ways.

> Music majors spent 10 years fighting Napster, and while they were doing so, iTunes, Spotify and Pandora emerged.

How do you think incumbents respond to disruptive innovation? Are they doing it right?

I have seen traditional incumbents respond to disruptive innovation in three ways; ostriches, fighters or pioneers. 'Ostriches' are when the organization tends to dismiss disruption as a short-term trend that will go away, and is not really a threat. 'Fighters' are when an incumbent acknowledges that the threat is not going to go away, and decides to fight it with the law or regulatory battles. The third and most progressive response is where an incumbent chooses to be a 'pioneer' and embraces the change.

If you were the CEO of a big hotel chain, how would you try to counter the threat of Airbnb?

I think that Airbnb will transform the entire ecosystem of travel. From the perspective of a hotel, the biggest threat of Airbnb is the hyper-personalization that it can offer. You know, when I check into a hotel, I do not remember the person at the reception. But I do remember my Airbnb hosts. Thus, hotels need to see how they actually compete with the level of customization and personalization that is embedded into the brand of Airbnb. I would also pay close attention to One Fine Stay who I think will crack the super luxury end of the market. They are providing the services of a five star hotel in multi-million dollar homes.

> "Executives are starting to realize that besides value destruction, where these companies could take away their margins, there is also scope for a lot of value creation.

Peeking into the Crystal Ball

Going forward, what are the sectors that are most likely to be disrupted by the collaborative economy?

Financial services without a doubt, because if you think of the five drivers that we discussed earlier, they are strongly applicable to financial services. Healthcare is another – there may be very little activity in this sector at present, but we will see a lot of it over the next couple of years. The utilities sector also has a lot of potential. For example, there is an interesting platform called Vandebron based in the Netherlands that connects renewable energy providers directly with customers. For example, one wind turbine can power about two hundred households – think of a scenario where customers and providers can find one another and form contracts in less than five minutes. It is a peer-to-peer marketplace and a classic case of disintermediation.

These are highly regulated industries, but this is where I think there will be shifts in the business model, and established brands will start to do interesting things that could be difficult for startups to achieve.

How do you identify disruptive startups?

It involves an assessment of multiple factors. One way is to see the value of the unutilized asset that the startup is trying to unlock or make liquid. Another way is to look at the magnitude and importance of the problem that it is trying to solve. I also look at opportunities where supply and demand are broken and 'providers' and customers both want to interact in new ways.

In short, I look for instances where there are really interesting and abundant forms of supply and when a company is either tapping into existing demand or creating demand in ways that would change consumer behavior.

Beyond the collaborative economy, we are seeing many new technologies emerging. What are the key technologies that are going to transform our economies over the next few years?

Technologies related to identity, such as cross-platform identity and reputation systems are going to emerge in a big way. Related technologies such as geo location, payments and data privacy are also going to get a boost. Biometrics and nanotechnology are two other spaces that I think are really interesting.

15 Companies to Watch in 2015: A Personal View from the Valley

Brian Solis

– Altimeter Group
@briansolis

"This is a perspective that originates in Silicon Valley, but is certainly not limited to it. Innovation can happen anywhere, by anyone, at any time. As a digital analyst, it's my job to track disruptive technology and its impact on business and consumer markets. As a digital anthropologist, I also study how new technology affects consumer behavior and expectations. In this list of 15 companies to watch this year, there is a wide range of companies that are disrupting existing markets or creating new ones. But this elite group is hardly complete. It's merely a conversation starter and a call for you and your business to start to think and act like a startup so that you become the disruptor in your space rather than the disrupted."

UBER

With a valuation of $41 billion at the time of this writing, it's not the newest startup on the list. However, this company is going (or maybe has gone by the time you read this) public. In a story that ran on CNN at the end of 2014, Uber was listed as the "Alibaba of 2015." The company is using current investments to expand markets around the world. At the same time, there isn't enough money in Uber's bank account nor enough influence to simply walk into new markets without political resistance. But make no mistake, if and when Uber IPOs, the transportation industry will get Uberized and every other market where startups refer to themselves as "the Uber of..." will be further encouraged to disrupt their respective markets. www.uber.com

SKULLY HELMETS

As a motorcycle rider, I'm instantly drawn to this company. In 2015, Skully is going to introduce a smart helmet that merges the real and augmented world for drivers. The company's AR-1 is by far the most advanced motorcycle helmet ever developed. At the center of the user experience is a heads up display (HUD) that provides an intuitive Google Glass-like view inside the helmet. Add to that a rear-facing 180-degree camera, bluetooth connectivity, embedded battery and speakers among many other features, and the AR-1 starts to take shape. More so, it's what hasn't been debuted or invented yet that truly holds the promise for the future of riding and transportation in general. Imagine embedded sensors that talk to "smart" cars on the road to prevent drivers from swiping, clipping or intercepting riders. Essentially, the helmet becomes a platform for innovation on the bike, surrounding cars and also in traffic engineering. www.skullysystems.com

BlaBlaCar

I love the vibe of this little French company. While Uber and AirBnB are the most well known representatives of the so-called sharing economy, BlaBlaCar is solving the underserved market for people looking to carpool to long-distance locations. Whereas someone might take the train, bus or fly, there are always others willing to drive. With BlaBlaCar, drivers and passengers can connect to offset expenses and also make new friends, all while making the trip a bit more interesting. I expect this service to take off around the world in 2015 while also spawning potential competitors in each country. www.blablacar.com

Andela

Founder Jeremy Johnson is introducing an incredible new paradigm for education, but with a twist. He believes that Africa as a continent and economic power, is grossly underestimated. He's willing to back up his belief with his time, money and resources. Andela is a unique program that unites qualified African students (regardless of age or income) with invaluable access to leading developers who teach them to code. More so, Andela pays students to learn so that they do not acquire debt as many students do in the United States, for instance. And, once students graduate, they become part of a workforce that serves a thriving roster of companies hiring in-demand developers for important projects. www.andela.co

> Innovation can happen anywhere, by anyone, at any time.

The world of virtual reality will finally become a reality in 2015. The Facebook-owned startup will ship public beta this year and it will transform the way consumers experience the digital world. You should also be prepared to take motion sickness medication if you're easily upset. But once you immerse yourself in these new worlds, coming back to reality will be a bit difficult. While initially aimed at the gaming world, the potential for virtual engagement spans exploration, entertainment and education across existing and not-yet-imagined applications. www.oculus.com

Silicon Valley is always in search of its unicorns: those companies destined to join the billion-dollar club. One of the companies stoking the imagination is Magic Leap, a company based in Florida that recently claimed notable science fiction author and game designer Neal Stephenson as its Chief Futurist. Stephensen revealed in a post that he was lured to Magic Leap after seeing a demonstration of the company's technology. "Magic Leap is mustering an arsenal of techniques...to produce a synthesized light field that falls upon the retina in the same way as light reflected from real objects in your environment," he shared. Like Oculus, it will cater to gamers as well as "readers, learners, scientists, and artists." www.magicleap.com

Makerbot is the darling of consumer-facing 3D printing. We can all appreciate that 3D printing is going to completely transform every industry and also supporting supply chains. But, at the same time, Makerbot is going to teach consumers, slowly at first but faster over time, how to think differently about products and parts. It's not unheard of to think about 3D printing something you might need rather than buying it. Or, you might order up a recipe from a particular manufacturer to print upgrades or replacement parts. This capability will only become more advanced. In mid-to-late 2015, MakerBot will create new composite filaments and supporting tech for its printers to enable consumers to print prototypes with bronze, maple wood, and iron-like materials. www.makerbot.com

On the subject of 3D printing, imagine owning hardware that could clone artifacts simply by rendering a 3D model on the fly. Fuel3D is the developer of SCANIFY, an affordable handled 3D-scanner that could do just that. The technology was originally designed for the medical imaging market. But now, with SCANIFY, consumers, businesses, and also industry professionals will have the ability to 3D-scan objects for a variety of applications. Partnered with Makerbot or other 3D printers, the possibilities are mind-boggling. www.fuel-3d.com

Everyone seems to be talking about Instacart. In December 2014, the company raised a whopping 100 million at a valuation of $2 billion to allow consumers to order groceries from their phone or desktop and have them delivered to their door in less than an hour. If you lived through Web 1.0 and the dotbomb bust like I did, you might automatically recall Webvan. But

the difference here is that Instacart employs a new generation of the on-demand freelance workforce. Watch this space though. Even if Instacart isn't the clear winner, Google's Shopping Express and AmazonFresh will collectively build-out an on-demand market for groceries. At the same time, they'll further condition consumers to expect and get whatever they want, when and how they want it. www.instacart.com

ELECTRIC OBJECTS

Everyone remembers the digital picture frames that adorned desks and walls everywhere. Just kidding. For some reason, the digital frame market never really materialized to push old school paper pictures and posters out of the mainstream. But, Electric Objects is taking a new approach to make digital art relevant in an analog world. The idea is to rethink what art could be and how it lives digitally, whether it's on a wall or on a desk. The company secured $1.7 million in funding in 2014 and then raised an additional $800,000 on Kickstarter later in the year. The company is introducing a digital frame that is controllable via a mobile or desktop app. It is also working with artists to commission a new genre of living digital art to bring these frames alive beyond static imagery. www.electricobjects.com

Yik Yak

Messaging is the new social media. And anonymous posting rooted in geo-location community forums is the new messaging according to Yik Yak. Consumers - mostly from the college and high school demographics - are flocking to it in droves. Yik Yak is an app that allows anyone to post anything without a username. In fact, you don't even need a password to log in. The timeline of Yik Yak looks like Twitter, operates like Whisper or Secret, and feels a lot like Reddit. The most interesting thing though is that all engagement is done without photos or handles. Since the app is localized, those users within 1.5 miles of the message can read it. www.yikyakapp.com

slack

As of October 2014, Slack was the fastest-growing workplace software ever. It's a pretty astounding feat considering that the company launched in 2014 and, just nine months later, announced $120 million in funding with a valuation of $1.12 billion. It's been called a fancy chat room. Instead, it brings unbundled conversations strewn across multiple apps back to one place. It is also a powerful repository of all company engagement tied to a powerful search platform. The pitch for Slack is that it makes you more productive by reducing the amount of time you spend on other productivity-related tasks. P.S. Slack is brought to you by Stewart Butterfield, co-founder of the now Yahoo-owned Flickr photo service.

In 2015, you will also see Facebook at Work rollout slowly at first and then at scale as time and the app age a bit. It is designed to help groups of users collaborate, share documents and manage projects in the workplace. My partner at Altimeter Group – Charlene Li – asked why Facebook

should or would venture down this path. Her answer was this, "Easy, they can." She pointed out that Facebook has been using this tool internally for the last four years, and think it's robust enough to launch for the general public. "We have a long history of successfully connecting people and connecting businesses," said Elisabeth Diana, corporate communications director at Facebook. "It's a worthwhile test to explore." As Charlene notes, enterprises could potentially have a hard time keeping employees on Chatter, Yammer, or other internal social networks when the Facebook interface is already so familiar and functional. www.slack.com

exitround

It's not a secret that Silicon Valley and any worthy tech epicenter around the world is burgeoning with new cash aimed at funding new startups. We all know, however, that most of the new startups, even those that are the most promising, are likely to fail. All hope is not lost. There are several possible exits beyond demise. Aquirehires are most prevalent of course. This is where Company "A" buys Company "B" for a generous sum, not because the company's assets are usable, but because the team is talented enough to apply to another more profitable effort.

Enter ExitRound. Founded by Jacob Mullins and Greg Dean, ExitRound is a private, anonymous marketplace for buyers and sellers of technology companies. It helps buyers find technology companies that fit squarely within their target. ExitRound also eliminates inbound chaos by automating prospecting. Essentially, buyers only speak to companies that fit their strategic interests. This also optimizes potential exits for startups. In the end, these types of deals come down to human relationships and people. The software, if you will, applies a sophisticated human algorithm that creates unmatched efficiency and desirable outcomes. While this is traditionally done through highly connected personal networks, there appeared to be an opportunity to add marketplace dynamics and algorithmic sophistication to gain a high level of scale in connecting buyers and sellers who may be a perfect match, but otherwise may not have met. www.exitround.com

WE ARE POP·UP

Brands are always looking for ways to capitalize on the latest trends. PopUp shops continue to cause a stir among connected consumers. We Are Pop Up is basically the AirBnB of temporary retail space, connecting landlords and temporary tenants with commercial grade space. The result is a creative, short-term use of space to engage customers, generate buzz and also test new ideas. www.wearepopup.com

Indoor Mapping

You caught me. There's no startup by this name. But, the space as a whole is one to watch this year. Google is, of course, a big investor in essentially making a version of Google Maps for the inside of spaces used by the public such as airports, malls, buildings, etc. Apple is too. There have been several recent acquisitions in fact, with major brands vying for a top spot. Last September, Baidu invested $10 million in Finnish mapping startup Indoor Atlas. The applications are great. From retail to real estate to general consumer navigation, indoor mapping is worthy of tracking this year and next.

WHERE WILL DISRUPTION HIT NEXT?

"All sectors that have been disrupted will be disrupted again because of mobile and social."

- Saul Klein

"In the long-term, crypto-currencies and crypto-equities could potentially disrupt the financial world."

- David Cohen

"In the near term, I think any sector that is based on a brokerage model will be vulnerable to disruption."

- David Cohen

"Financial Services without a doubt."

- Rachel Botsman

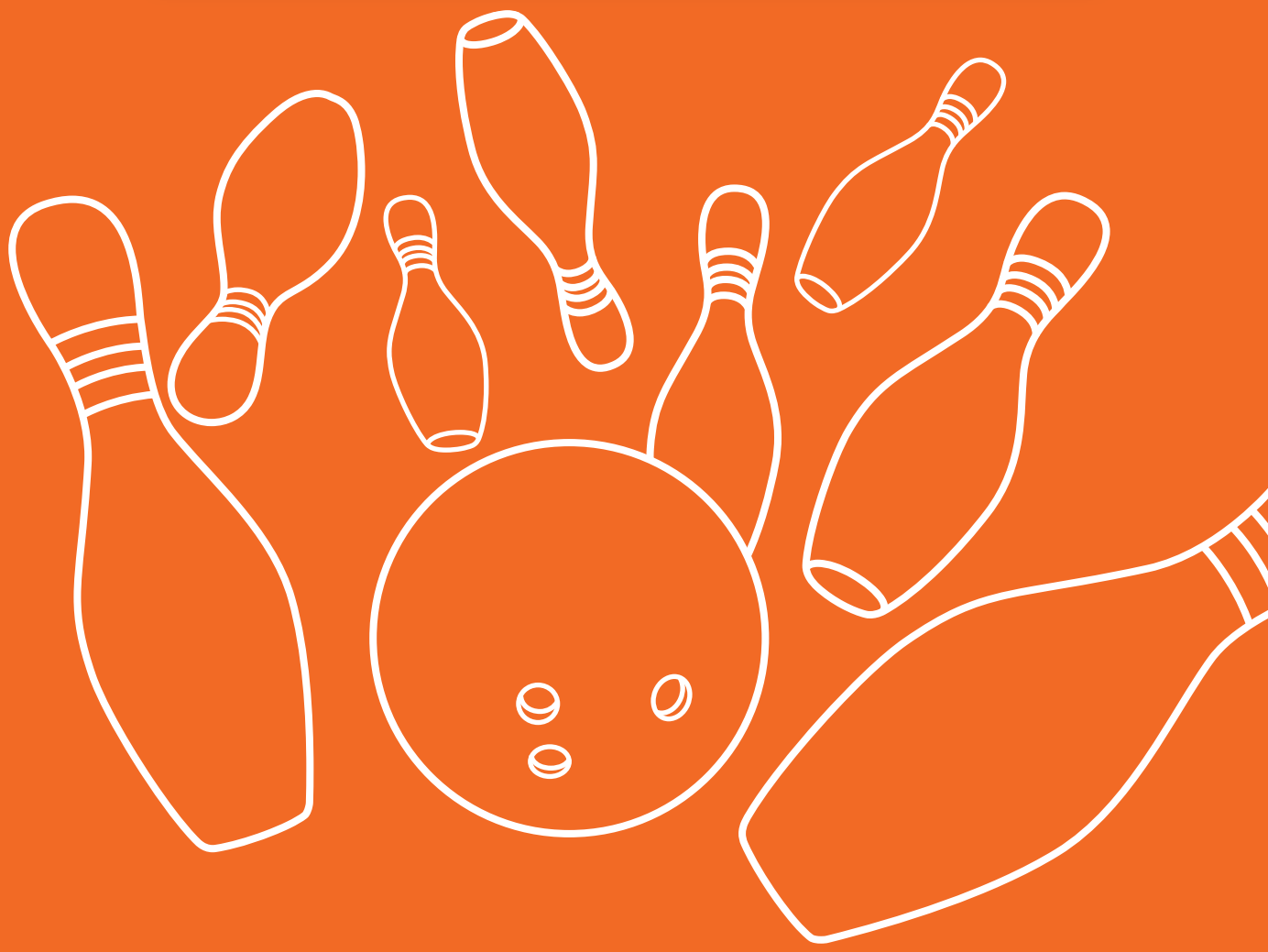
"Healthcare is another sector up for disruption – there may be very little activity in this sector at present, but we will see a lot of it over the next couple of years."

- Rachel Botsman

"The financial services sector has an enormous amount of potential for disruption."

- Saul Klein

Collaboration Redefined: Engaging with the Disruptor



The Silicon Network: How Big Corporates and Digital Startups Can Create a More Innovative World

Interview with David Cohen

– Founder, Managing Partner, and CEO - Techstars
@davidcohen

David Cohen is the founder, Managing Partner, and CEO of mentorship-driven startup accelerator Techstars. Techstars provides startups with seed funding, intensive mentorship, and a network of mentors and alumni. Previously, David was a founder of several software and web technology companies. He is an active startup advocate and technology advisor. He also serves as a member of the Entrepreneurial Advisory Board at the Silicon Flatirons Center for Law, Technology, and Entrepreneurship at the University of Colorado. Capgemini Consulting spoke with David Cohen to understand his views on disruptive startups and ways in which large organizations can engage with startups to cope with digital disruptions.

Nurturing Innovation: A Glimpse into Techstars

Can you give us an overview of how Techstars works?

Techstars provides startups with seed funding and mentorship. Every year we run 14 programs with 10 startups each. Our mentor pool is made up of 1,200 mentors who are among the most notable entrepreneurs in places like New York, Boston or London. Each company that is accepted into a Techstars program gets to engage with 10 mentors on an average.

So far we have funded 484 companies, 56 of which have been acquired through M&A transactions. About $1.1 billion in venture capital has flowed into these companies, and their combined market capitalization is over $3 billion.

We also run programs in partnership with large corporates. For instance, we have partners like Disney, Barclays, Sprint, Kaplan, and others for whom we run accelerator programs.

What is the secret to Techstars' success?

I would have to say it's the network around Techstars. The Techstars network has over 3,000 entrepreneurs, mentors, investors, and corporate partners. The network is a huge competitive advantage because it allows entrepreneurs to avoid the mistakes that others have made and also gives them access to introductions or business connections into practically anywhere in the world. But I think that most entrepreneurs undervalue the importance of a powerful network, especially early in their career.

> Our mentor pool is made up of 1,200 mentors who are among the most notable entrepreneurs in places like New York, Boston or London.

What are the criteria that Techstars uses to select startups for its accelerator program?

We receive about 1,000 applications for each of our 14 programs – so that's nearly 14,000 companies applying to us every year. Of these, we pick only about 1%. Since these are early stage startups, there's typically not a lot of revenue to look at. So we use other criteria. First, we look at the team running the startup. We put a lot of emphasis on who the founders are, and what their skills are. We really try to understand the source of their passion, and how they imagine the world differently. That gives us a sense of how disruptive the startup can be.

We then look at the market that the startup is trying to address. We look at whether that market is changing, growing or shrinking. Next, we look for some form of progress because we believe that entrepreneurs actually do things, rather than just talk about doing things. Finally, we look at the idea. We deliberately put that last, because we know that the idea often changes significantly.

> I think that most entrepreneurs undervalue the importance of a powerful network, especially early in their career.

> First, we look at the team running the startup. We put a lot of emphasis on who the founders are, and what their skills are.

Understanding Digital Disruptions: An Accelerator's Perspective

Why are we seeing so many disruptions in recent years?

I think the fundamental reason is that the Internet has become really accessible in the last 20 years. We are seeing more disruptions as the Internet matures, as Internet speeds get faster, and as the knowhow to develop systems on the Internet gets cheaper, faster, and better. In fact, the speed of innovation is just vastly different today than it was 20 years ago, because of the maturity of the Internet.

What makes startups like Airbnb and Uber truly disruptive?

I think Airbnb and Uber are quite similar. They are both operating in what I call "imbalanced marketplaces". These are markets where there is some sort of a broker that is controlling the flow of services or limiting the availability of inventory. In the taxi industry, for example, brokers were charging 50% to 60% of the fare, while the driver received just 40%. Both Airbnb and Uber saw a future where such imbalances are corrected and where resources are used more efficiently.

Uber, for instance, saw a future with fewer cars, where fewer people would have to own a second car, and where the world would be more efficient with its roads and transportation. I think that's the ingredient for true disruption – being able to vividly imagine the future with a 10-20 year horizon, in a way that impacts a large number of people. Both Airbnb and Uber were able to do that.

> Both Airbnb and Uber saw a future where imbalances are corrected and where resources are used more efficiently.

How should large companies respond to disruptions?

Large companies can either continue to focus on what they are doing and hope that they won't get disrupted or they can be proactive and participate in the disruption. By helping a startup be successful, for instance, they will be in a position to make that first offer to acquire it, invest in it or partner with it. If they do not engage with the startup community, they might be the last ones to know of a disruption. By then, it can also be too late.

Should you really engage with a disruptive startup that is planning to reduce your margins by 90%?

Yes. I think it's counterintuitive, but I think that's exactly right. So, if that's what they're planning, they're either going to be successful or they're going to fail. By investing in them or acquiring them, you can have a relationship that's symbiotic and beneficial to both parties. Being around the disruption at the early stages – and spotting it before others do – gives you a competitive advantage and you can help the startup grow at the same time.

There is another strategy, which is defensive acquisition: you acquire the startup and you kill it! This is not the best strategy but certainly an option if you want to gain some time. A better option is to grow the startup and create a barrier to the next person coming along and just doing the same thing.

If you were leading a major hotel chain, how would you respond to the Airbnb disruption?

I would want to engage with them very early on. Hotels have a large distribution network through their relationships with travel listing sites. I would say to Airbnb: "We have a relationship with Expedia and the other travel listing sites. Why don't we help get you on there?" By helping Airbnb with our distribution network, we might be able to engage with them through a revenue share agreement or as investors. That way we would get to be part of the disruption rather than have to compete with it.

> We've seen many corporate venture funds and incubators come and go. The reason is they don't have a long-term view. They're not purely focused on helping the startups.

Learning from Startups

Very often, we see large companies struggling to work with startups. In your view, what are the reasons for this?

We've seen many corporate venture funds and incubators come and go. The reason is they don't have a long-term view. They're not purely focused on helping the startups. It's all about, "How can we fund a company that helps us be successful?" That's not what startups care about. Startups care about their vision of the world and how they're going to achieve it.

How can large companies participate in accelerator programs such as Techstars?

At Techstars, we partner with corporates to run vertically focused programs. For example, we partner with Kaplan on education technology, with Barclays on financial technology, with Disney on entertainment technology, and so on. We filter the startups that we accept into our programs based on the vertical that is of interest to the partner. Techstars runs the program and is also the investor. The corporates don't take direct equity in the startup; they don't take rights to follow on or acquire the startup or anything like that. They simply provide mentors and access to their technologies. So it's a pure "give first" approach that they follow. I think that the corporates we work with have really figured out that it's not about what you can get. It's about being around the activity and seeing the innovation, assisting it, and building relationships with the entrepreneurs who really matter.

Could you give us a concrete example of how a large company has benefited from the Techstars program?

Nike is a good example. When Nike launched its NikeFuel APIs, we picked 10 startups run by very talented entrepreneurs that would be the first 10 companies in the world to ever experience those APIs. Nike executives were able to literally watch how the startups used their APIs. The feedback that they got from the entrepreneurs was very valuable and I think the APIs meaningfully improved because of that experience. Nike also struck business deals with several of the startups directly, and I think in one case even

acquired an interest in one of them. I remember the media headlines "Nike gets startups." Priceless for them.

What are the key lessons that large companies can take from startups?

I think a key lesson for large corporates is that they need to think and operate differently if they want to innovate. Unlike startups, large corporates have too many processes that really slow things down. To be innovative, they need to move away from their normal processes for budgeting, go-to-market, or marketing. They need to have a new way of doing things. But a lot of large corporations look at entrepreneurship and say, "It's hard for us to go back to those days." One way for them to create an innovation culture within the organization is to engage with the entrepreneur community and learn from startups.

> We look for startups that are finding new ways to interact with data and information.

Looking Ahead: Future Sources of Digital Disruption

What are the themes that your deal flow focuses on?

Our areas of focus include "imbalanced marketplaces". We believe that the day of the broker who takes a 50% cut is just gone; it's not going to work. So, we're looking at "imbalanced marketplaces" or unfair markets and at companies like Uber, Airbnb and PivotDesk that are trying to correct the imbalance by taking spare resources and allocating them more efficiently.

We focus a lot on human computer interaction. In a 20-year horizon, the way we interact with computers will be completely different. We look for startups that are finding new ways to interact with data and information. One example of a company in that space is Oblong, which we've invested in. If you remember the movie "Minority Report", this was literally those people. They're inventing new ways to interact with computers.

We're also really interested in vertical search engines. We still believe that it's too hard to find some things in the online world. Google is not the answer to everything. It's easier to find a flight because you have great vertical search engines for that. So, we've invested in vertical search firms like Mocavo and Next Big Sound.

In your view, what are the startups to watch in 2015?

I think PivotDesk is a really interesting company to watch. PivotDesk's model is working really well where it connects businesses that are looking to rent office space with companies that have space to spare. Businesses get to pay for office space on a month-by-month basis rather than having to commit to long-term leases. PivotDesk has recently expanded to overseas markets as well.

DigitalOcean is an interesting startup in the infrastructure space. It's a New York-based firm that provides a simple and easy-to-use web hosting service. Then there are companies like SendGrid. SendGrid is now delivering about 2% of the world's legitimate e-mail and growing really fast. It sounds really easy to deliver e-mail, but it's not. It turns out that 10% to 20% of legitimate corporate e-mail isn't received by the recipient. And it's really hard to scale your infrastructure to support so much outbound e-mail. SendGrid does that as a service.

Building an Innovative World: When Corporates and Startups Work in Tandem

Fostering Innovation: How Techstars Works

14,000 applications a year, only about **1%** get picked

Nurtures a large network of **1200** mentors, most are notable entrepreneurs

Invests in startups and provides mentorship through **14 programs** with 10 startups each, every year

Accelerating Innovation: How Techstars Helps Large Enterprises Innovate

Techstars provides investment, staff and processes to run 'accelerator' programs in partnership with corporates

Enterprises provide mentors and access to their technologies

NIKE BARCLAYS

Nike and **Barclays** benefited from learning and partnering with startups through Techstars

Looking Forward: Potential Disruptors of the Future

Imbalanced marketplaces are ripe for disruption - companies like **Uber, Airbnb and PivotDesk** correct such imbalances

pivotdesk UBER airbnb

Startups like **Oblong** are working in the exciting domain of Human-Computer Interaction

OBLONG

Vertical search engines, such as Mocavo and Next Big Sound, allow focused search in a domain

Mocavo NEXT BIG SOUND

Startups working on crypto-equities and crypto-currencies

> In the near term, I think any sector that is based on a brokerage model will be vulnerable to disruption.

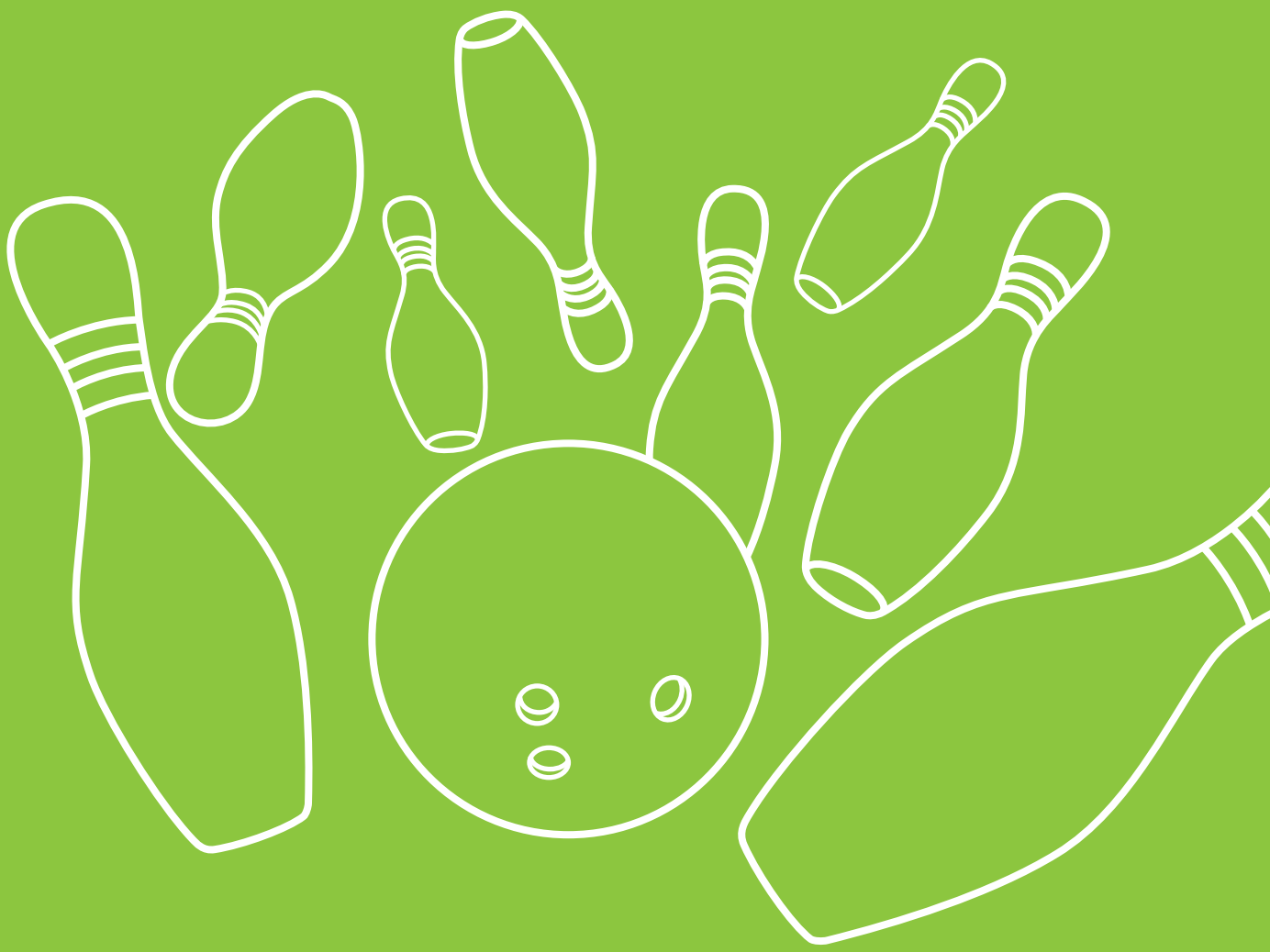
What are the sectors that will be disrupted the most over the next few years based on what you can see?

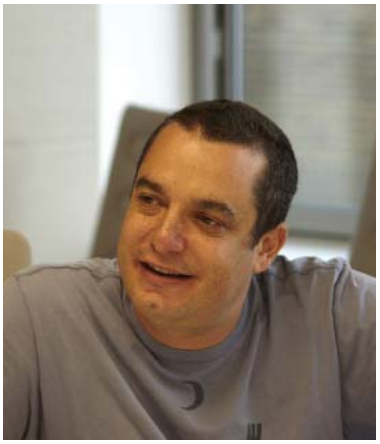
In the long-term, crypto-currencies and crypto-equities could potentially disrupt the financial world. We recently funded a crypto-equities startup that allows you to invest in a company without ever using traditional money. I think that this has the potential to disrupt the global economy and banking systems. It's still a use-case currently. But to me, it's a potential Internet-scale disruption that could change the way we transact.

In the near term, I think any sector that is based on a brokerage model will be vulnerable to disruption. Real-estate is an example of such a sector. Here in the US, you pay a 6% brokerage fee even if it takes just two days to sell a house after it's listed online. The market needs to be more flexible, and technology can help with that. So, I think you'll see startups that come in with transactional systems that address the inefficiencies in the brokerage model. We are working with one such startup that charges a brokerage fee commensurate with the effort involved in a sale.

We see more and more tech hubs across the world in countries such as Finland and Israel. Is Techstars planning to be present in tech hubs outside the UK or the US?

Yes, absolutely! People ask me all the time, "David, are you anti-Silicon Valley?" I say, "No, not at all!" It's not that we're anti-Silicon Valley. We're pro everywhere else. We believe that you can build Internet software companies just as well in Dublin, Tokyo or Tel-Aviv, and we want to be part of such up-and-coming startup communities around the world.





Black Swan Startups: Spotting Tomorrow's Big Digital Disruptors

Interview with Saul Klein

– Partner with Index Ventures @cape

Saul Klein is a Partner with Index Ventures, one of the largest venture capital firms specializing in technology investments. Saul has 20 years of experience in building tech companies in both the US and Europe. He is the co-founder of Kano and Seedcamp; he also co-founded and was the original CEO of Lovefilm International, which was acquired by Amazon; and part of the original executive team at Skype, which was acquired by eBay. Capgemini Consulting spoke to Saul Klein to examine the disruptive impacts of startups and their implications for traditional incumbents.

The Rise of Big Bang Disruptions

Could you give us an overview of Index Ventures?

Index Ventures is an early-stage venture capital firm, founded in 1996 with €3 billion under management across various funds. We have a portfolio of 140 companies across 20 countries and 39 cities, in almost all sectors where technology is a disruptive force. The combined revenues of these companies amount to around €6.5 billion, with an average growth rate of circa 117%, and employing 25,000 people. Over just the last 12 months, we have had 10 companies that have gone public or exited at more than a billion dollars. They include King, Criteo, Just Eat, Arista, Climate Corporation and Supercell. Many of our companies reach the 100 million mark in revenue in less than five years. Some of them are generating billions in revenue in less than three years.

How do you assess the disruptive potential of startups?

Well, there is never one specific thing. Spotting disruption is like finding a black swan. If it were that easy, everyone would be able to do it. However, the things that we look out for are: market opportunity, strong leadership, and a product that fundamentally changes the customer experience within that sector. The market and leadership team are relatively easy to ascertain, but the product or customer experience are more difficult. In sector after sector, we are looking for businesses that are delivering a product that serves a real need. But the mode of delivering that need should change the dynamics of the industry in a way that it becomes hard for incumbents to compete.

> Spotting disruption is like finding a black swan. If it were that easy, everyone would be able to do it.

You recently argued that it takes less and less time to create $10 billion in value today. Does it mean that we are now seeing more big bang disruptions?

Yes, absolutely, we will see more and more big bang disruptions. Let's be clear on one point – the Internet changes everything. There are three billion people connected to the Internet with smart phones, which is going to increase to nearly six billion in the next five years. Until 10 years ago, the Internet was only used by 300 million people, mainly in the U.S. and Western Europe. With the growing addressable market, the opportunities are 10x, 20x, or 50x bigger on the consumer side than 10 years ago. On the enterprise side, it used to take six to twelve months to land a $1 million annual contract. Today, you can get to 10,000 customers with virtually no sales force. Also, until a few years back, the customer base of cloud computing and SaaS was the Fortune 500. Today, it's the Fortune 5 Million. Businesses are witnessing customer growth and revenue growth at extraordinary speeds.

The emergence of a new entrepreneurial culture is certainly accentuating this new wave of disruptions. We recently conducted research and found that, on Facebook, there are 55 million people interested

in entrepreneurship. This is a huge number and not far from the amount of people who are interested in celebrities like Beyoncé or Ronaldo. People starting their own businesses has become a mainstream phenomenon. Becoming an entrepreneur is also much more accessible: the tools of production are now incredibly low-cost; the distribution platforms – app stores and social media – are often free; and the ability to access capital through platforms like crowdfunding is widely and globally available.

Big Companies Reacting to Digital Disruptions

Why do you think big companies are not well equipped to combat disruption from startups?

I think there are a number of different levels. Firstly, startups have a cost base – OpEx and CapEx – that is radically different from the incumbent. Incumbents have high legacy cost in everything from infrastructure to IT. Trying to compete with someone who has a lightweight or a cloud-based cost base is difficult. Secondly, very few incumbents have boards or C-suites that are equipped with the right digital skills compared to the strong digital skills that startups have. Finally, incumbents have profit pools that they are perpetually trying to protect, restricting their capacity for risk taking. All these factors together put the incumbent in a tough spot. Incumbents have huge assets in terms of their balance sheets, distribution channels and human capital. However, unless they are prepared to be aggressive and take risks, it is very hard to compete.

> "Very few incumbents have boards or CXO suites that are equipped with the right digital skills.

Do you believe that big businesses are not tech-savvy enough?

It is not that big companies do not take tech seriously. Most big companies spend over a billion dollars a year on IT. Whether they spend it wisely or not is a completely different matter. Big companies do not get enough exposure to the truly innovative technology and business models that start-ups are involved with. This is because big companies focus on buying from big companies, and not really engaging with small companies. But before you know it, these small companies are actually pretty big, driving most of the technology changes.

You also need a C-suite that really understands technology. What companies need is a board or a C-suite that really challenges and critiques the company's IT/technology investments. This is a board that would point to the results achieved by startups and question why their company cannot emulate them. For example, they might point to Adyen – a payments technology firm – that can process billions of transactions in 130 countries at much lower cost. Or Instagram, which built a global network of 400 million people with 30 developers.

How do you think big companies should react to disruption from smaller, newer players?

It's important for big companies to think about what their core values are and then think about how emerging technologies – robotics, virtual reality, AI, etc – could be incorporated to their strategic advantage. One of the reasons that big companies have been in business for a long time is because they have a set of values that has been successful over time. Companies like GE or Marks & Spencer – which have been in business for over a hundred years – have been successful because they are consistent with their values. Companies succeed best when they are true to who they are, not when they try and be something that they are not.

Is acquiring the disruptor a good approach to fight back?

I think it absolutely needs to be a part of the toolkit. However, companies have not been great at doing that. When you look at innovation, 80 to 90% of risky innovation fails, but it is the 10 to 20% that succeed that create 40% of your profit pool. In the venture business, 62% of the capital that you invest returns 1x or below. So, let's apply that thinking to M&A. The wrong way to think about M&A is that every acquisition I make is going to succeed. The right way to think of M&A is that some will succeed and some will fail. I will significantly overpay on some companies and I will massively underpay on others. If Google bought YouTube today, it would be $50 to 100 billion. They bought it at 1.6, and everyone thought they were insane.

We see many big companies investing in accelerators and acquiring incubators. Do you believe this is the right approach to engage with the startup ecosystem?

Big companies will truly engage with the startup ecosystem when they spend between 5% and 25% of their tech and innovation budget with a small company. Accelerators are nothing but Corporate Social Responsibility. They help big companies participate in the ecosystem and gain visibility. However, it means nothing until there is commercial engagement that happens through procurements and purchase orders.

Europe as a Startup Hub

Is Europe catching up with the US on the startup front?

It is clear that billion-dollar companies now come from anywhere in the world and not just from Silicon Valley. However, it is much easier to be an enterprise company in the Bay Area because big companies in the Bay Area are earlier adopters of new technology.

> The right way to think of M&A is some will succeed and some will fail. I will significantly overpay on some companies and I will massively underpay on others.

> We will see more and more big bang disruptions.

Spotting the Digital Disruptors of Tomorrow

Nurturing the Innovators: An Overview of Index Ventures

Portfolio of **140 companies** across **20 countries** **39 cities**

Combined **revenues** of **€6.5 billion,** average **growth rate** of **117%,** **25,000** employees

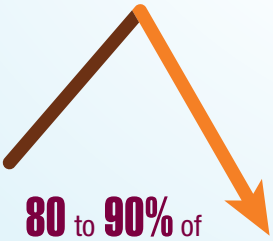
Many companies reach **100 million** in **revenues** in less than five years

How Should Big Companies React to Disruptions?

Digitally equip your C-suite

Embrace technology, but stick to your core values

Acquire Startups, but be Prepared for Failures



80 to **90%** of risky innovation fails

The **10** to **20%** that succeeds

creates **40%** of your profit pool

Apply the **same mindset** to acquisitions

What can Europe learn from countries like Israel regarding startups and the tech ecosystem?

There are a lot of successful tech ecosystems now in Europe. London is probably the biggest, but you have great ecosystems building in Berlin, Stockholm, Dublin and Paris. However, Israel is unique as it is almost akin to a Silicon Valley to the rest of the world. You have a diverse technology ecosystem and strong infrastructure. Within the space of an hour's drive, you can see the cutting-edge, including ad:tech, cleantech, cybersecurity, cloud computing, storage, networking, semiconductors, e-commerce, and consumer mobile. The density of the Israeli ecosystem is unique when you compare it with other markets and locations beyond Silicon Valley. To create an ecosystem, you need to look at the specific attributes of the geographical location. You want to see small businesses, venture capital, universities, governments, and big companies. These are the five dimensions of an ecosystem you need for fruitful cross-pollination. Europe always had great micro-centers of innovation, but they were never effectively connected. This is starting to change.

Looking Ahead

Which are the key startups to watch for in 2015?

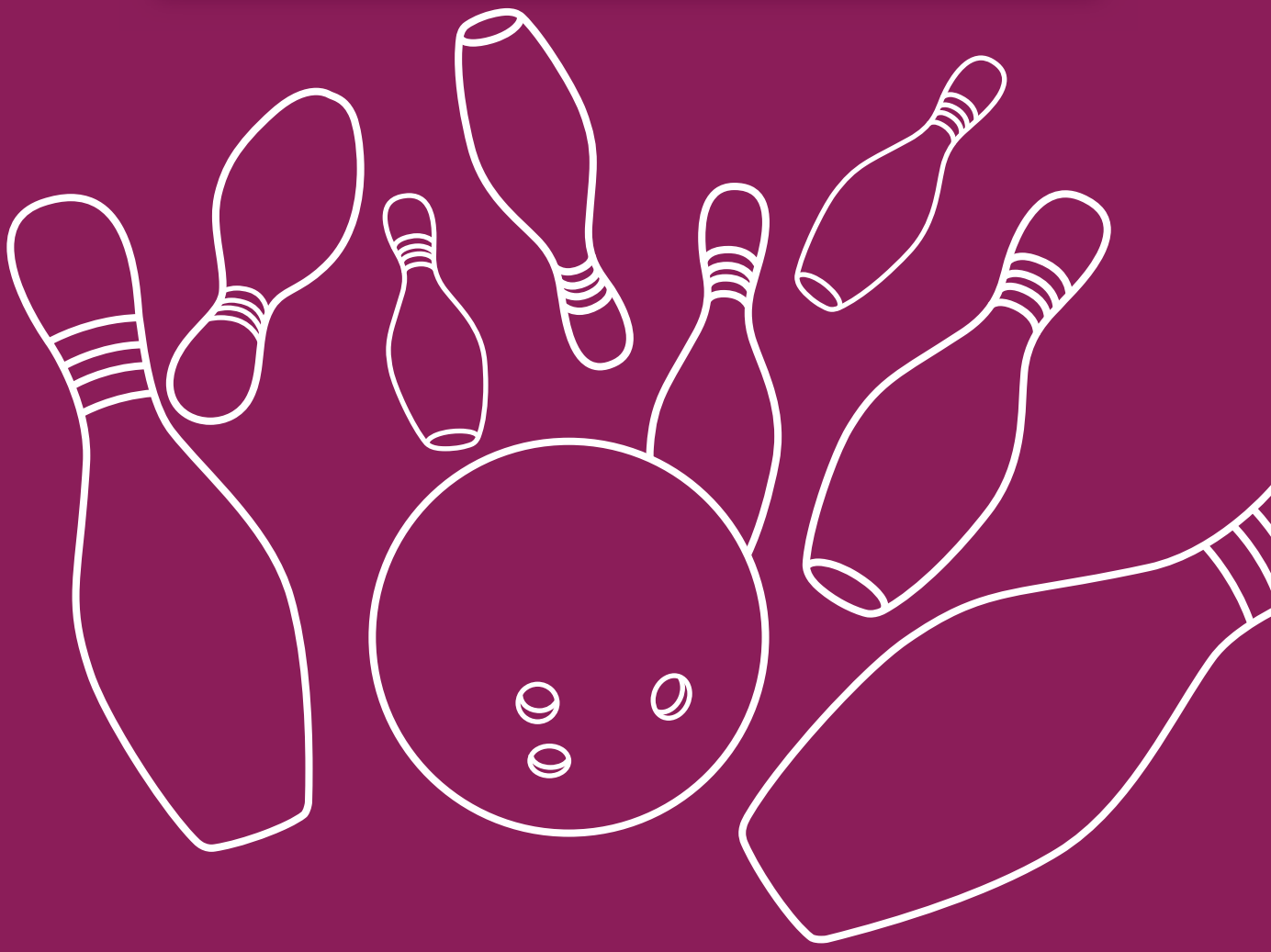
On the enterprise side you have companies like Hortonworks in Big Data, Pure Storage in the storage sector or Dropbox in cloud computing, Adyen in financial services, and LookOut in mobile security. Then you have some really interesting consumer businesses, like BlaBlaCar, Etsy and SoundCloud. The list is endless. In every sector and geography there are 5 or 10 companies that are poised to break out and go mainstream.

In terms of sectors, which ones are going to suffer most from disruption in the next year?

All sectors that have been disrupted will be disrupted again because of mobile and social. Media & entertainment, retail and travel have been disrupted once, and they are going to get repeatedly disrupted again. The financial services sector also has an enormous amount of potential for disruption. No one will be exempt!

> The financial services sector has an enormous amount of potential for disruption.

Winning Digital Disruptions



Riding the Wave of Digital Disruption: Scripting a New Digital Future, the FT Way

Interview with Caspar de Bono

– Managing Director, B2B at the Financial Times

The Financial Times (FT) is one of the world's leading business news organizations, providing news, comment, data and analysis for the global business community. In 2014, the FT's total circulation reached an all-time high with 700,000 subscriptions and sales across print and online. Significantly, digital subscriptions increased 23% year-on-year and now constitute nearly two-thirds of the FT's total paying audience. Further, the FT has seen sustained mobile growth - mobile now accounts for almost 50% of the FT's total traffic and 20% of new digital subscriptions. In an industry that has been swept by digital disruptions in the last decade, the FT stands out as one of the few incumbents that have successfully managed these disruptions. Capgemini Consulting spoke with Caspar de Bono, Managing Director, B2B at the FT, to discuss the impact of digital on the news media industry and the response of the organization to that tidal wave of change.

> In 2000, the US newspaper industry was generating $60 billion in print advertising. Ten years later, print advertising revenues dropped to $20 billion.

Responding in a News Industry Hit Hard by Digital

What disruptions have you faced since the 1990s?

We used to be almost entirely funded by our advertisers, so 80% of our revenues in the late 1990s came from print advertising. As both reader and advertiser demand shifted to digital, the whole economics of advertising changed as well. The oversupply of advertising inventory online meant that advertising rates fell substantially. This has had a very significant impact on the newspaper industry's revenues. To put that into perspective, take the United States as an example. In 2000, the US newspaper industry was generating $60 billion in print advertising. Ten years later, print advertising revenues dropped to $20 billion and the same newspapers were only generating $1.3 billion in online advertising.

Did you anticipate the strength and the speed of the disruptions you were facing?

We knew that the prices we were getting for the same audience online were a fraction of the prices in print. People were hoping that it was just a matter of time before online audiences would be so massive that everything would resolve itself. But I think where we differed from many of our competitors was in our realism. We realized early on that this hope was too optimistic to be credible, and that we needed to get busy changing our source of revenue. The benefit of being a specialist provider of information is that we know from our readers that what we produce is valuable. We put that to the test by asking people to pay for accessing our journalism digitally. We started doing that in 2001, and we've been experimenting and scaling what works ever since.

> We realized early on that we needed to get busy changing our source of revenue.

> We introduced a metered model in 2007 where we began to use demand to help us price.

Experimenting with Digital to Build a New Content Universe

As part of your response, you launched a range of initiatives and experiments. Can you tell us more about your response?

In 2001, we made the decision that we were going to ask readers to subscribe and pay for access to our journalism. We tried a binary solution, where some content was always free and some content was always paid for. We found that while that worked initially, it plateaued, so we ended up with about 90,000 subscribers and then it didn't grow much beyond that point.

FINANCIAL TIMES: Riding the Wave of Digital Disruption

FT Stands Apart in a News Industry Hit Hard by Digital

The US newspaper industry lost **$40 billion** in print advertising revenues in 10 years since 2000

Online advertising revenues stood at just **$1.3 billion** in 2010

SUBSCRIBE

In 2014, **FT subscriptions and sales** reached an all time high of **700,000**

Digital subscribers accounted for **two-thirds** of the FT's total paying audience

50%

Mobile accounts for 50% of the **FT's total traffic**

Continually Experimenting with Digital to Build a New Content Universe

BUY

2001 – Began charging readers for access to publications

2007 – Introduced a metered charging model, using consumer demand to price content

2007 – Established direct **contractual relationships** with content aggregators

Organizational Changes

Built **direct sales, marketing, and customer support** capabilities, which did not exist before

Acquired a **software company**, which later became **FT Labs**

Resource Allocation

More than **doubled print prices** in the last ten years to make print profitable in its own right

Investments in Technology

Focused on **data analytics** to enable targeted advertising that guarantees **"attention time"**

Upgrading Skill Levels

Regularly organizes **"Digital Learning Week"** to familiarize employees with digital technologies

That's why we introduced a metered model in 2007 where we began to use demand to help us price. We were saying "let's not have the FT decide what content is worth paying for and what should be free, let demand decide that." So, we let customers register to access a limited number of free articles of their choosing. We realized that if a customer had never come across the FT before, they would want to read a little and to decide whether our content was relevant to them and worth paying for. Once they had exhausted their free articles, we invited customers to purchase a subscription.

This had a profound impact on subscriptions. It meant that our acquisition costs were now much lower because rather than trying to acquire subscribers anonymously, we were now marketing to registered users. It was a much more nuanced marketing approach and one of the fundamental reasons why we were able to re-kick start our subscriptions growth.

Can you give us an example of how you benefited from digital disruptions?

Previously, we relied on intermediaries – wholesalers and retailers – to reach customers. In fact, most publishers still allow third-party news aggregators to buy intellectual property rights wholesale and then retail the content and the software solution as one package. The aggregators sell the content and the software solution to banks, governments, corporations, universities, and any kind of collection of readers where the purchase is done centrally and the access is managed centrally. The pricing of the content is very commoditized since institutional customers have a lot of buying power – given they buy about 20,000 sources from an aggregator for one price. We felt that even though we were getting a high margin from this model, the amount of profits that we earned was actually a fraction of what we could earn if we went directly to customers. Not having a direct relationship with customers also meant that we didn't have access to direct customer feedback. We didn't know where we were adding value, where there were missed opportunities, and where we needed to improve.

> "Technology helped us establish a direct relationship with customers. This was very disruptive and the FT has significantly benefited from this disruption.

So, in 2007, we went to all seven aggregators we had at the time and said – "we are going to terminate our licenses with you for the rights to retail the FT. But what we are prepared to do is continue to have key content available on your platform if the end customer has bought a license from us." This was probably the most profound change that technology enabled for us. It helped us establish a direct contractual relationship with customers. This was very disruptive and the FT has benefited significantly from this disruption. Technology has given us a lot more insight into the customer. We now know who our readers are. We have a dialogue with them about how we provide value. We have very objective evidence of how customers are using the FT and how we're delivering value. Our customers have benefited as well because it has given them more transparency. They now know that they only pay for the FT once and can then access it through any of now nearly 50 third-party solutions. They also have evidence of their utilization, which they can use to decide whether their money is being well spent and whether they should spend more or not.

As a consequence of this change in our licensing model, we now have more than 4,000 institutional customers, more than 300,000 readers who benefit from our licenses, and we have increased profit by a factor of nearly five. We also have a 90% renewal rate.

Building the Organization, Capabilities and Skills for a Digital World

Can you outline some of the organizational changes that you implemented as part of your digital response?

In order to have a direct relationship with consumers, we had to build out our direct sales, marketing, and support capabilities, which we didn't have before. In particular, we brought our customer service in-house. We agreed that if we wanted to build a direct relationship with customers, we needed to service them directly and we couldn't outsource that relationship. We were driven by the desire to get feedback from our customers because that feedback is crucial to help us adapt and learn.

How did you evolve your resource allocation between print and digital?

We still have many customers who see the print version as valuable and who are willing to pay for it. Our transition strategy has been sympathetic to that. This is why, for example, we redesigned the newspaper recently. But we also made the decision that we wanted the print business to be profitable in its own right and before advertising. In the days when 80% of your revenue came from advertising, it was fine for your circulation to be subsidized by advertising. But in a world where you anticipate that advertising is going to be challenged, you want to make sure that print is profitable on its own. Equally, you want to be able to put as much of your surplus into digital and not use it to subsidize a loss-making print activity. So, we increased the prices for our print product quite significantly, in fact by more than double in the last 10 years. And we are very pleased with the fact that we've managed to get our print business to a profitable point and adapt to the digital world at the same time.

> "We made the decision that we wanted the print business to be profitable in its own right and before advertising.

What level of investment have you made in technology?

We are investing a lot in technology. For instance, when we made the shift to a direct licensing model, we launched a mobile app for our customers. Initially we developed an iOS app, but when Apple changed its commercial terms, which effectively meant that Apple would own the customer relationship, we decided to come out of iTunes and launch our own HTML5 app. The app was built quickly and cost effectively by a highly specialized independent software house. We ended up acquiring that business, which then became FT Labs.

> "We have invested heavily in the collection of data and have built up quite a significant capability in data analytics.

How about data analytics?

We have invested heavily in the collection of data and have built up quite a significant capability in data analytics. We have worked very hard at improving the targeting that we're able to offer our advertisers. It's one of the reasons that we've been able to be bold in reframing how we're going to sell advertising. We made a statement a few months ago that we're now going to sell what in effect are "attention minutes", in addition to inventory. As you know, most advertisers sell impressions, and they might sell the consequence of those impressions, such as clicks or even purchase. We'll still do this, but now advertisers will also be able to buy a guarantee that an advertisement will

be seen by a particular target group for a specified period of time. So, you are buying minutes or hours of time in front of that audience and it's verified that it's really a person there, it's not a machine.

In terms of your people, what training initiatives have you launched and can you tell us more about Digital Learning Week?

Digital Learning Week is a fantastic festival: an exhibition of different aspects of what it means to be digital. This could mean helping our people understand how to use social media better or how to market effectively in digital media. Overall, though, it's really about familiarization. It is intended to stop people feeling that just because they started their career in print media they don't have a lot of potential and a lot to offer with digital media. That's very important culturally. Digital should not be seen as a specialist activity done by a few technical experts.

Do you face emerging competitors in the digital space, such as LinkedIn, which is now investing in producing original editorial content?

Any organization that is investing in original content that is of interest to our target audience – leaders in government or business who are making multi-million-dollar decisions – is a competitor. But a lot of organizations are aggregating, repurposing or republishing content that's been originated by others. Origination is our USP.

> "Digital Learning Week is intended to stop people feeling that just because they started their career in print media they don't have a lot of potential and a lot to offer with digital media.

I think the other competition is time. Our audiences are very time-poor; there is a huge amount of competition for their attention. Therefore, we can't think of our competitors as just direct substitutes for what we do, but also substitutes for a reader's time. We therefore have to be very clear about how we improve the productivity of our readers. How do we help them discover interesting and compelling content effectively? How do we make the best use of their time?

What are the next phases of transformation for the Financial Times?

We are moving much more to being a service organization. We are looking at whether we can work with our customers to measure what a beneficial outcome for them is in using our journalism. For example, we have business education clients who we're working with to build on early insights we're getting that students who have read the FT are more compelling in job interviews. These students are able to link theory to practice, to relate what they heard in the classroom to what's happening in the market, and are able to apply what they have learnt. How do we improve that? Can we measure that?

> We are moving much more to being a service organization.

That's a fairly profound change. It needs a lot more evidence to be collected. It requires a much more trusting and direct relationship with the customer and it's going to rely a lot on data.

Learning the Lessons of Digital

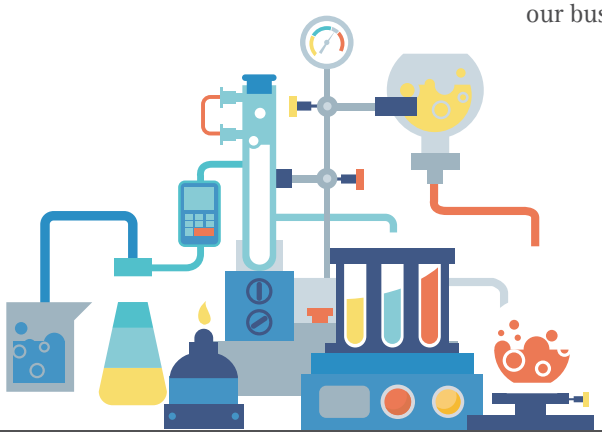
What are the key lessons that you learned from this transformation and what could be the key takeaways for companies across sectors?

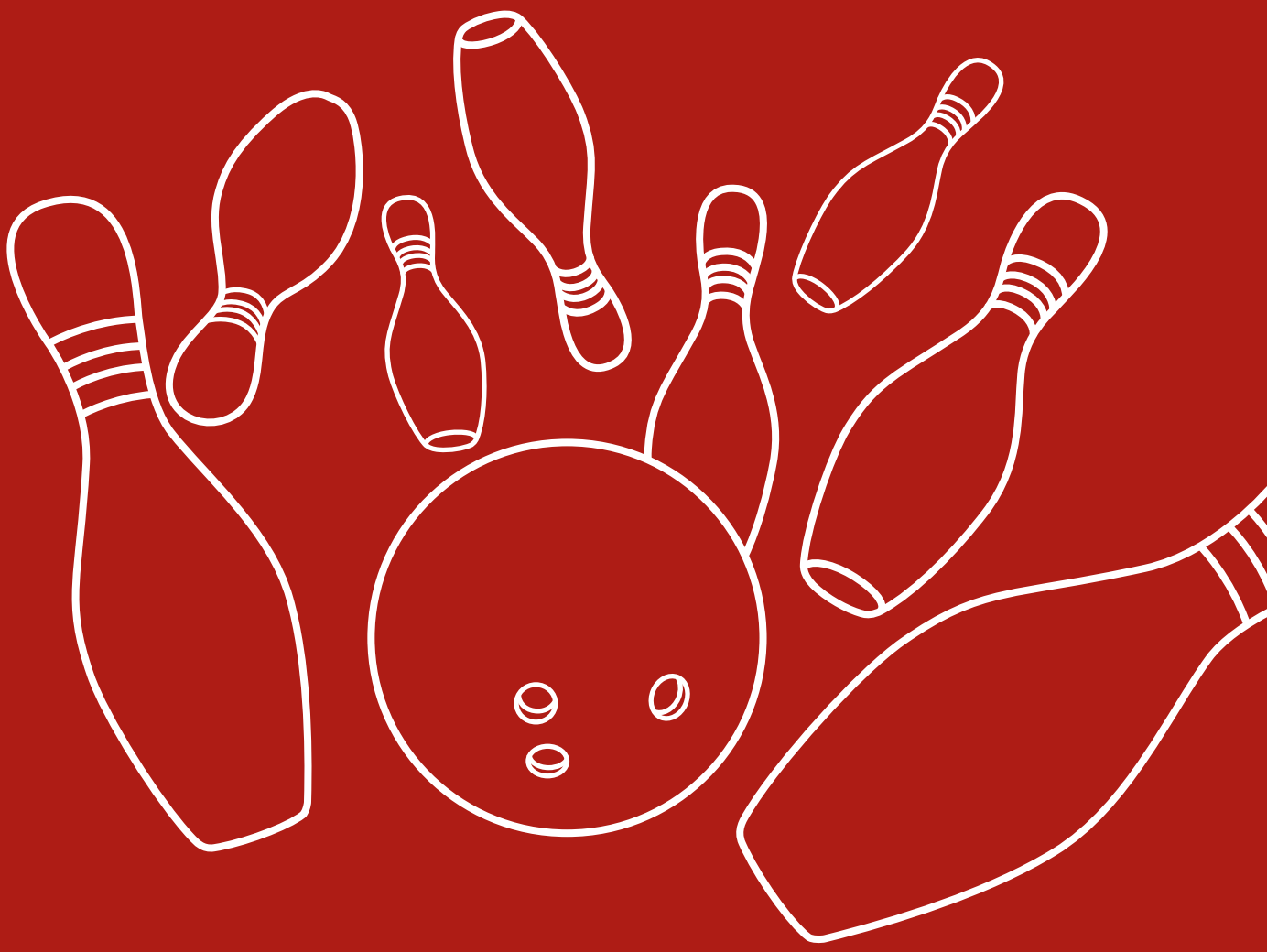
I think it's about asking the fundamental question of why the business exists and what purpose it serves. Then, you must be brave and confident about adopting a strategy to deliver that. Both competitors and customers told us outright that our ambition to charge for our journalism wasn't going to work. But we went back to the fundamental reason that we exist: that the market sees value in having information sourced and validated in an independent way so they can make decisions on it. We came up with a strategy to deliver that in a world where the whole economics of distribution and funding had changed.

> We ensure that we continually review our business model.

How do you decide to evolve your business model?

We have regular discussions on different forums on the changes and adaptations that we need to make. That's not only done at board level. We have a product council that involves multiple stakeholders across the business. We also look at changes in customer feedback and sentiment. We take all of these measures to ensure that we continually review our business model.





Designing Transformational Business Models

Interview with Serguei Netessine

– Chaired Professor of Global Technology and Innovation at INSEAD
@snetesin

Serguei Netessine is The Timken Chaired Professor of Global Technology and Innovation at INSEAD and the Research Director of the INSEAD-Wharton alliance. Before joining INSEAD in 2010, Professor Netessine was a faculty member at the Wharton School, University of Pennsylvania. He has co-authored dozens of publications in prominent management journals. His latest book - "The Risk-Driven Business Model: Four Questions that will Define Your Company" (www.defineyourcompany.com) - co-authored with Professor Karan Girotra of INSEAD, provides a toolkit to help organizations design innovative business models. Capgemini Consulting spoke with Professor Netessine to understand how companies should adapt their business models to survive digital disruptions.

Business Model Innovation is the Key to Surviving Disruption

Why is business model innovation so important today?

The shortcomings of traditional innovation approaches that focus on new technologies and new products alone are becoming increasingly evident to many organizations. For example, pharmaceutical companies spend as much as 30% of their revenues on R&D, trying to develop new products or technologies. But the return from this enormous expenditure has been very elusive and it is a common problem across industries. For every successful new product that a company creates, there are typically 10 that fail. For example, Apple has many new product successes to its credit, but it has also seen some major failures, such as the Newton project. This was a series of handheld computers that Apple produced in the 1990s that lost it close to $1.5 billion.

We also see more and more companies – such as Airbnb, Uber or Alibaba – that do not really invent any products or technologies. Yet, they have huge market capitalizations as a result of their innovative business models. I think this is the main driver of business model innovation.

> It is becoming increasingly more evident to many organizations that traditional innovation approaches that focus on new technologies and new products alone, often do not work.

Would you argue that groundbreaking technology rarely achieves mass adoption without an innovative business model?

Yes, I believe that is true. The challenge with new technologies is that they usually have very different cost and revenue parameters from an old technology. This makes their adoption using an old business model very difficult. Take the case of energy-efficient light bulbs. They help consumers save on electricity and are more environmentally friendly, but they are also more expensive than normal bulbs. This is why the adoption of energy-efficient bulbs has been very slow in some countries. However, we are now seeing new business models, pioneered by energy efficiency services companies, which are driving up the adoption. These energy efficiency services companies replace old bulbs with energy-efficient ones free of charge. Commercial consumers don't have to pay anything for the new bulbs. Instead, they need to measure how much money they save on electricity by using the new bulbs. At the end of the year, the savings are split between the consumer and the energy services company. This new business model is in large part responsible for the increasing adoption of energy-

efficient bulbs.

The Risk-Driven Approach to Business Model Innovation

What are the different ways in which organizations can innovate their business models?

Companies can redesign their business models by changing their cost or revenue structure. For instance, a company could go from charging per song (like iTunes) to charging per month (like Spotify). This changes the revenue structure. Companies can also change their cost structure by, for example, outsourcing manufacturing to a low-cost country. But I think most companies realize that these kinds of innovation are quite common and are relatively easy to copy.

> Companies can also redesign their business models by changing the way in which risk is managed.

There is another approach to business model innovation that companies should explore: redesigning their business models by changing the way risk is managed. Dell is an interesting example of a company that used the risk-driven approach to stay ahead of the competition. Dell's innovation, which disrupted the computer industry, was to produce computers on demand. In doing so, Dell eliminated the fundamental risk that other computer manufacturers were facing – the risk of uncertain demand. Dell's competitors were often forced to liquidate excess stock or lower prices significantly because of lower than expected demand. In contrast, Dell completely eliminated the risk of mismatch between demand and supply by producing only what customers wanted when they wanted it.

It is important to note that Dell's cost structure was higher as a result of this approach. In order to deliver on demand, it had to manufacture close to where its customers were. This meant producing in the United States rather than in low-cost countries like China. Further, since it retailed its products for about the same price as its competitors, Dell's revenue structure was about the same as that of its competitors. Despite this, Dell managed to dominate the industry for many years by building its business model around managing risk more effectively.

You identified two types of risks - information risk and incentive-alignment risk. Could you tell us about the differences between them?

If I go back to the example of Dell, most computer manufacturers were producing computers without really knowing exactly which configuration the customer wanted. They were producing based on forecasts. This is what we call information risk – a situation where companies make decisions without enough information.

> Information risk is a situation where companies make decisions without enough information.

Incentive-alignment risk arises when incentives are not aligned on a value chain. This happens very often with new technologies. For example, Netafim, an irrigation company based in Israel, develops advanced irrigation equipment that increases crop yields by 400-500% with very little water. Despite the dramatic improvement in crop yield, Netafim found it very difficult to sell their equipment. The technology was expensive and farmers lacked

the educational background to fully understand the benefits. So, in this case, the incentives were fundamentally misaligned. Farmers were not convinced of the value of investing in the equipment, despite its seemingly obvious benefits. To fix this problem, Netafim decided to sell services instead of products. They offered to install their products free of charge for farmers. At the end of the year, they would measure crop yield. If it had increased by the promised 400%, they would take a share of the difference in revenues. This helped align incentives in the value chain. Farmers were now willing to use the equipment since they did not need to pay anything upfront, which minimized any downside risk. By eliminating incentive-alignment risk, companies can create business models where everybody benefits.

> Incentive-alignment risk arises when incentives are not aligned in a value chain.

Are there startups that have adopted a risk-driven business model?

Yes, San Francisco-based startup Timbuk2, a consumer products company, has adopted a risk-driven business model. Timbuk2 produces quality, custom-made bags to order. They manufacture the bags locally in San Francisco, which is one of the most expensive cities in the world. Nevertheless, they are highly successful because they produce on demand. As a result, they completely eliminate information risk.

Uber is another example of a company that has adopted a risk-driven business model. Taxi service providers are exposed to the risk of mismatch between demand and supply. They need to purchase cars, hire taxi drivers, and pay wages to drivers. However, the demand for taxis may exceed or fall short of supply, which results in losses. By offering higher rates to drivers when demand outstrips supply, Uber incentivizes more drivers to offer their services. As a result, whenever demand increases, it is matched by a corresponding increase in supply. By aligning incentives in this manner, Uber has been able to mitigate one of the taxi industry's fundamental problems.

> The fundamental issue with most companies is that they never re-evaluate their business models.

Successful Companies Constantly Reinvent their Business Models

In your opinion, why are some companies more successful than others in surviving disruption?

The fundamental issue with most companies is that they never re-evaluate their business models. Blockbuster, for instance, pioneered the revenue-sharing business model in the video rentals industry. Before Blockbuster introduced the new model, studios charged retailers very high rates for tapes. Under the new model, Blockbuster paid studios lower rates upfront but shared revenues with them instead. The new model helped Blockbuster increase its market share from 25% to 38% in just two years. However, Blockbuster never really revisited its business model again. And when they did revisit it, it was too late. They were already far behind their competitors.

In hindsight, there is a lot that they could have done. For instance, they could have thought of new ways to structure their relationship with customers. Instead of charging exorbitant penalties in late fees, they could have graduated to a subscription model like Netflix. And, of course, Blockbuster should have thought earlier about delivering DVDs by mail and offering video on demand.

> Amazon is one of those amazing companies that constantly and relentlessly tries to analyze its business model and tries to disrupt it before being disrupted by others.

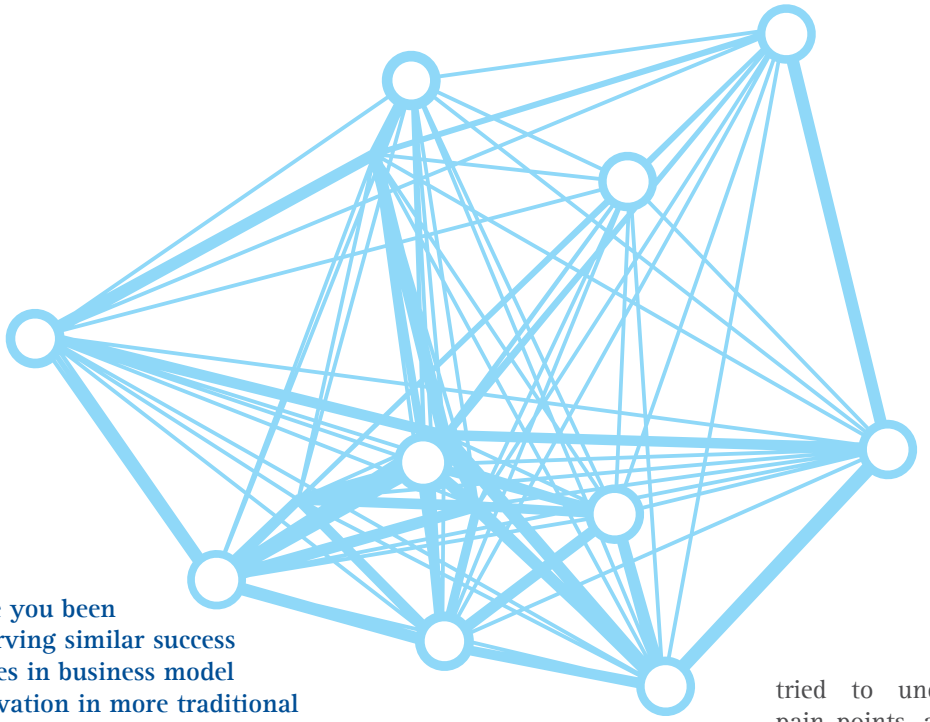
What are some of the lessons we can draw from Amazon's success?

Amazon is one of those amazing companies that constantly and relentlessly analyzes its business model and tries to disrupt it before being disrupted by others. When Jeff Bezos started Amazon as an online retailer of books, he realized that it was impractical for a cash-strapped startup to carry millions of books in inventory. So, he invented a business model that he called "Sell All, Carry Few". In this model, Amazon operated like a virtual retailer and outsourced most of its fulfillment to distributors and wholesalers. Within a few years, however, Bezos realized that most of its distributors were not good at fulfilling individual book orders. This was negatively affecting customer satisfaction and damaging Amazon's reputation. So, he completely turned Amazon's model around and started investing heavily in warehouses in order to stock all inventory internally.

In 2001, Amazon started offering its website development, order fulfillment, and customer service capabilities to other companies like Toys "R" Us, Borders, and Target. In 2006, it went further and began to offer these capabilities to small retailers as well. So, Amazon came full circle from completely outsourcing fulfillment to distributors and wholesalers to selling its fulfillment capabilities to others.

Apart from the innovations on the fulfillment side, what are some of the other ways in which Amazon has experimented with its business model?

In 2005, Amazon made a major change to its revenue stream when it launched Amazon Prime. Experience had shown that a lot of customers chose not to buy online because they were deterred by high shipping costs. So, with Amazon Prime, Amazon began offering customers a shipping subscription. This meant that customers did not have to worry about paying for individual shipments. Amazon also experimented with its product mix. In the late 1990s, Amazon started expanding beyond books into categories such as music, videos and games that required similar logistics capabilities as books. It has continued to expand its product portfolio constantly, even with unrelated product categories, as a way to hedge risks. Its expansion into computing services such as cloud computing and electronic data systems is an example of this.



Have you been observing similar success stories in business model innovation in more traditional industries?

I think the larger the company, the less frequent the innovation. But, we certainly see some interesting innovations in traditional companies. Maersk Shipping Line is one example that comes to my mind. Maersk is an industry leader in shipping and one of the oldest and largest shipping companies globally. I really like their recent major innovation, which is called "Daily Maersk". Maersk performed a very extensive analysis of customer pain points to understand what bothered their customers the most. They realized that the biggest challenge that customers faced was the uncertainty in container arrival times. In fact, there was a 55% chance that containers did not arrive on time. As a result, customers had to make various provisions to manage the resulting uncertainty, such as holding more inventory or making their production capabilities more flexible, which led to additional costs.

Maersk decided to fix this problem. They began to guarantee the arrival time for their containers and offered to pay a penalty to customers in case a shipment did not arrive on time. They added many more ships on their routes to make sure that there were daily departures and customers did not have to worry and plan ahead. In exchange for helping customers better manage uncertainty, Maersk charged a premium for this service. I really like how they questioned their business model, tried to understand customer pain points, and adopted a new strategy in response. They did it very openly, with the CEO speaking publicly about the new strategy. It is very rare to see this kind of an organized process.

> "Companies need to look for symptoms of inefficiencies in their business model by trying to see if there is a mismatch between what the customer wants and what they deliver.

Designing Transformational Business Models

Business Model Innovation is the Key to Surviving Disruption

Returns from **traditional product innovation** can be elusive

30%

Pharma companies spend **~30% of revenues on R&D**, but without much return

Companies like **Airbnb, Uber or Alibaba** do not invent any new products - **yet are successful due to their innovative business models**

A Framework for Innovating Business Models

What - Companies look at the kinds of decisions they want to make

e.g. **Zappos** decided to focus on a single product line

When - Companies look at the timing of decisions

e.g. **Dell** decided to sell a product first, and produce it later

Who - Companies change the decision-maker

e.g. **Google** allocates 20% of any employee's time to do whatever they think is best

Why - Companies change the incentives that exist in a value chain

e.g. In the **US healthcare sector**, doctors recommend many procedures as their incentives are tied to them

> **Unlike technological or product innovations, business model innovation cannot be relegated to the R&D department. It needs to be driven by the top management.**
>
> - Professor Serguei Netessine

Building a Culture of Sustained Business Model Reinvention

How can companies anticipate if their business model is becoming obsolete?

Companies need to look for symptoms of inefficiencies in their business model by trying to see if there is a mismatch between what the customer wants and what they deliver. There are many troubling symptoms that indicate that the business model is not working well. These could be large fluctuations in financial performance, underutilized employees or excessive inventory. To start with, companies need to conduct a business model audit in order to identify information or incentive-alignment risks in their current business model.

> Companies need to develop scaled-down versions of their new business models and test them with a subset of customers.

Could you tell us about the framework you have developed in order to help companies innovate their business model?

We have developed four different approaches for companies to deal with information and incentive-alignment risks and we denote them by four words: "What", "When", "Who", and "Why".

In a "What" approach, companies need to look at the kinds of decisions they want to make and how they can increase or reduce risks using those decisions. For instance, they could decide to focus on a narrower set of decisions. A good example would be companies like Zappos and diapers.com that only sell a single product category (both were acquired by Amazon.com).

The "When" approach changes the timing of decisions. A good example here would be Dell. Instead of first producing a product and then selling it, Dell began selling a product first and producing it later, in response to actual customer orders.

The "Who" approach changes who makes the decisions. For instance, Google allocates 20% of any employee's time to do whatever they think is best. Google realizes that employees are best positioned to identify the most important projects to work on. The "Who" strategy has produced nearly 50% of all innovations at Google.

The "Why" approach changes the incentives that exist in a value chain. For example, the fundamental problem in the US healthcare sector is that doctors are compensated per procedure. This results in doctors prescribing too many procedures and leads to higher healthcare costs for companies. This is an incentive problem. To change these incentives, many companies have started integrating doctors within their organizations and paying them a fixed salary. This has reduced the cost of healthcare for companies and increased the quality of care.

Companies need to apply these approaches and identify ideas for business model innovation. As a next step, they need to experiment with these ideas. Experimentation is very important because it is difficult to accurately predict the success of an innovation. Companies need to develop scaled-down versions of their new business models and test them with a subset of customers.

> Unlike technological or product innovations, business model innovation cannot be relegated to the R&D department.

What kind of an organizational structure should companies build for business model innovation?

Unlike technological or product innovations, business model innovation cannot be relegated to the R&D department. Business model innovation needs to be driven by the top management. Business model audits should have the support of CEOs and potentially board members and should involve top managers from all functional roles. Once they audit the business model, identify inefficiencies and generate ideas, companies should set up a small team tasked with testing these ideas and implementing them on a small scale. It is important that this team is not affected by resistance from within the organization. It should therefore operate independently, in a startup-like environment. Once an idea is tested and found to generate positive results, companies can then start rolling out the innovation across the organization.

How can companies create a culture that encourages constant business model innovation?

We recently conducted research in Singapore which showed that only about 5% of manufacturing organizations in Singapore practice business model innovation. This number is consistent with some sectors in Europe. Companies very often lack basic understanding about what the business model is and why they should look at it. So, I think the process of creating a culture of constant business model innovation should begin with education. Next, organizations should make a habit of making business model audits a regular exercise. Innovation should not happen only when a company is in financial trouble but on a frequent basis, driven by the CEO.

WHAT ARE THE CHALLENGES IN RESPONDING TO DIGITAL DISRUPTIONS?

"Over the last 20 to 25 years, organizations have functioned according to the notion that they should innovate in line with their DNA and within the bounds of their core business. But, the digital age requires a different approach."

- Philippe Lemoine

"The fundamental issue with most companies is that they never re-evaluate their business models."

- Serguei Netessine

"Technology is seldom the problem. The big issues tend to be political."

- Rita McGrath

"Companies often find it very hard to acknowledge that their old business model does not work anymore."

- Rita McGrath

"Unlike startups, large corporates have too many processes that really slow things down."

- David Cohen

When Digital Disruption Strikes
How Can Incumbents Respond?

By Didier Bonnet, Jerome Buvat and Subrahmanyam KVJ, Capgemini Consulting
@didiebon, @jeromebuvat and @SuB8u

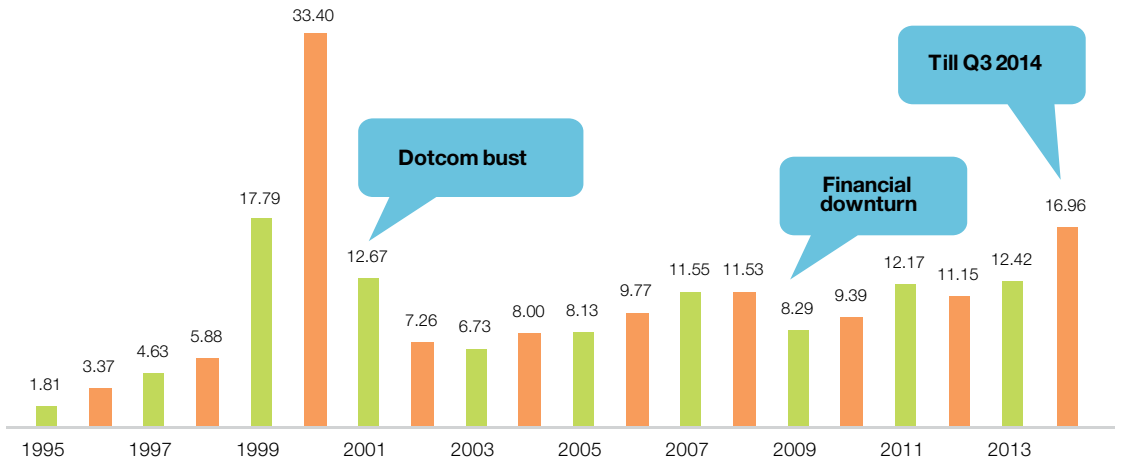
Volatility and Corporate Darwinism

Since 2000, 52% of companies in the Fortune 500 have either gone bankrupt, been acquired or ceased to exist[1]. US corporations in the S&P 500 in 1958 remained in the index for an average of 61 years. By 1980, the average tenure of an S&P 500 firm was 25 years, and by 2011 that average shortened to 18 years based on seven-year rolling averages[2]. These are challenging times for companies as the speed, volume and complexity of change intensify.

> Since 2000, 52% of companies in the Fortune 500 have either gone bankrupt, been acquired or ceased to exist.

While there are several reasons for companies vanishing from the radar or going bankrupt, technology disruptions are playing a big part in amplifying this development. One critical manifestation of this heightened volatility is the emergence of technology-driven startups across multiple sectors. Venture funding to startups is at historic highs. In just one startup hotspot, Silicon Valley, venture capital investment in the first

Figure 1: Venture Capital Investments in Silicon Valley, 1995-Q3 2014 ($ Billions)



Source: NVCA, "National Venture Capital Association Yearbook", 2014

three-quarters of 2014 was around $17 billion, a figure that is only surpassed by the peak of the dotcom era in 2000 (see Figure 1).

Digital innovation is shaking the core of every industry and incumbents are struggling to respond. The emergence of startups such as Uber – which disrupt entire sectors with their agile, innovative business models – is worrying traditional incumbents. In recent research by GE, two-thirds of respondents agreed that businesses have to encourage creative behaviors and must disrupt their internal processes in order to do so[3]. What does a successful strategy for responding to disruption look like? How fast have companies responded to digital disruptions? To understand more about how traditional incumbents respond to digital disruption, we conducted research spanning 100+ companies (see research methodology at the end of the article).

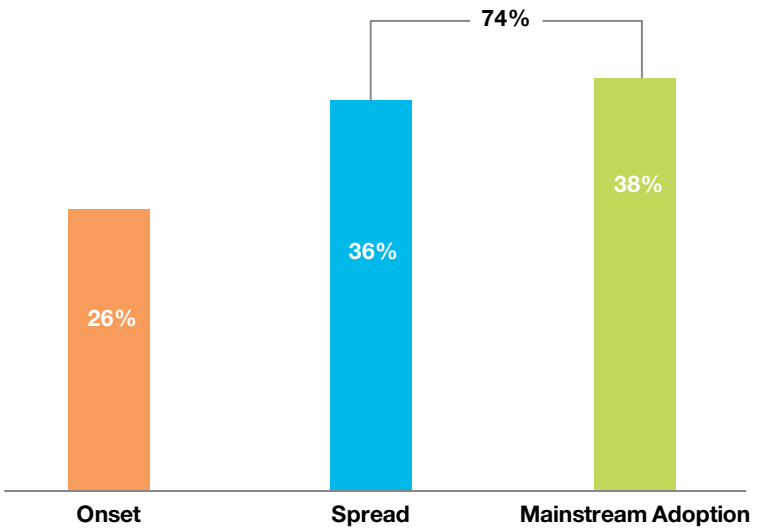
> In the Silicon Valley, venture capital investment in the first three-quarters of 2014 was only surpassed by the peak of the dotcom era in 2000.

Three Quarters of Incumbents Responded Late to Digital Disruptions

There are three broad and linear stages to disruption[a]. The first stage, *Onset*, is typically within the first year of the arrival of disruption. That is marked by the entry of a disruptive startup that either brings forth a new technology, or a new technology-enabled business model. The next stage, *Spread*, typically takes place two or three years post the arrival of a disruptive technology/company. In this stage, the main disruptor starts growing in popularity, and there are multiple me-too services that mimic the disruptor. The final stage – *Mainstream Adoption* – is when the disruption reaches large-scale acceptance and is over four years from its arrival.

a Adapted from Steven Sinofsky, Board Partner, Andreessen Horowitz; http://recode.net/2014/01/06/the-four-stages-of-disruption-2/.

Figure 2: Response of Incumbents to Digital Disruptions by Stage



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Source: Capgemini Consulting Analysis

A response is an action taken specifically to ward off the disruption/disruptive startup, such as the acquisition of the disruptor or the development of a new business model.

Our research found that nearly 74% of companies responded to digital disruptions only after the second year of their occurrence. Worryingly, over 38% of incumbents responded[b] to the emergence of a disruptive company after the fourth year. This is the period when the disruption starts to move more mainstream (see Figure 2). Our research also showed that the vast majority of companies that went bankrupt responded only when the digital disruption had already firmly taken root.

> Nearly 74% of companies responded to digital disruptions only after the second year of their occurrence.

b A response is an action taken specifically to ward off the disruption/disruptive startup, such as the acquisition of the disruptor or the development of a new business model.

Why Incumbents Struggle to Respond to Digital Disruptions

In most organizations, decision cycles lag technology cycles. However, that is not the only reason why incumbents struggle to respond to digital disruptions. We found five root causes behind incumbents' slow responses.

> In most organizations, decision cycles lag technology cycles.

Slow Decision Cycle

Old-school approaches to designing change – such as annual strategy meetings – are too cumbersome for a non-linear, fast-paced digital world. Technology cycles are becoming shorter than corporate decision cycles[4] as technology progression accelerates. Organizations are finding it increasingly hard to match the pace of rapid technology changes. Thirty-seven percent of respondents in a global survey of industry executives reported being worried that their organizations would not be able to keep pace with technology changes and as a result, lose their competitive edge[5].

Complacency about Existing Business Models

One of the biggest challenges in responding to disruption is complacency. When disruption strikes, companies find it difficult to keep pace with the fast-moving and changing world as they cling on to the old successful business model. One key reason for organizations becoming complacent is management inertia – failure to sense the need to change. INSEAD's Professor Serguei Netessine believes that organizations do not ask enough hard questions of their business models. As he explains: "I like to compare it to financial auditing, which every organization does every year, many times. Often, a public company will do it once a quarter. But then you ask the same company how often [it examines] its own business models, they'll tell you, 'Well, I don't know. Twenty years ago? Thirty years ago?'"[6].

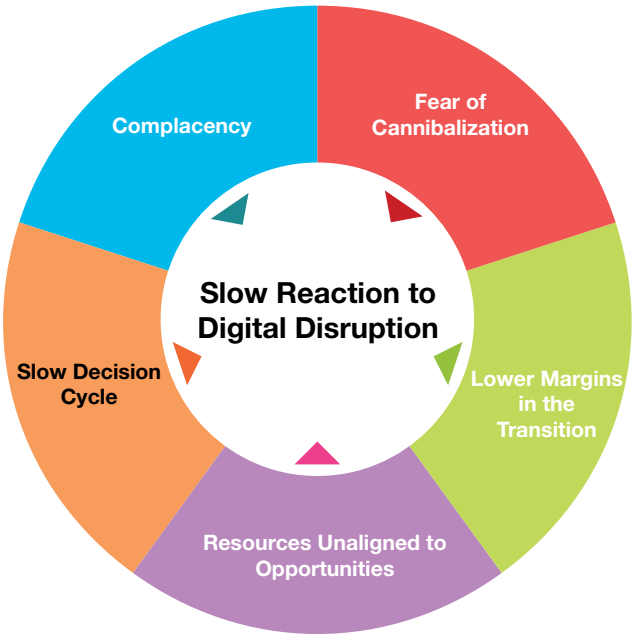
> One key reason for organizations becoming complacent is management inertia – failure to sense the need to change.

There are many examples of such complacency. Consider the case of RIM/BlackBerry. For years, BlackBerry was the product leader in enabling secure push mail on mobile phones, earning a committed following with corporate users. However, while RIM continued to focus on its lead product, Apple was reinventing what a mobile phone could be. Apple's iPhone married email functionality to tools that up until then were only possible on a PC. BlackBerry's core users began to migrate in droves. RIM believed its dominance of the enterprise market was impregnable, but trends such as Bring Your Own Device and the growth of smartphones caused massive challenges. It saw its market share of the smartphone OS market reduce from a high of 20% in Q1 2009 to as low as 0.8% in Q3 of 2014[7].

Fear of Cannibalizing Existing Business

The threat of cannibalizing existing business can prevent incumbents from going to market with innovative offerings. Take the case of Kodak. Kodak, an innovator in photography, invented the world's first digital camera in 1975. Despite its solid lead in the film business, it failed. Kodak had most of the patents for the digital photography

Figure 3: Major Causes Behind Incumbents' Slow Responses



Source: Capgemini Consulting Analysis

technology, but did not commercialize them aggressively as it feared cannibalization of its film business. Instead, other firms licensed Kodak's technology and commercialized it. This restricted Kodak from leading the digital camera race[8]. As Rita McGrath, professor at Columbia Business School says, "Kodak continued to focus and invest in film-based technologies in the 1980s and 1990s, while Fuji was systematically extracting itself from film-based photography and shifting massive resources, both financial and human, to the new and unproven digital technology. By 2003, Fujifilm had 5,000 digital processing labs in chains stores through the U.S. At that time, Kodak had less than 100[9]."

> Kodak had most of the patents for the digital photography technology, but did not commercialize them aggressively as it feared cannibalization of its film business.

A company that has embraced cannibalization as a very successful business strategy is Apple. The company has launched a variety of products (iPod, iPhone, iPad) that have cannibalized one another. Apple's CEO Tim Cook explains, "Our core philosophy is to never fear cannibalization. If we don't do it, someone else will[10]."

Lower Margins in the Transition

In industries where digital business has lower margin than traditional business, taking the digital path is often perceived as a significant bet on the company's future revenues. Incumbents hesitate to take the plunge. The newspaper industry, for example, has largely depended on advertising revenue to subsidize low subscription revenues. To transition to digital, where advertising rates are a fraction of what they are on print, has a significant impact on profitability. This can blind management to the potential opportunities of digital for new business models and sources of revenue.

One company that has successfully tackled this challenge is the Financial Times. Today, over two-thirds of the FT's audience is online. Mobile readership drives 50% of total traffic and 20% of digital subscriptions. The total circulation, across print and online, for the paper at the end of Q3 2014 was 690,000, the highest in its 126-year history. One key reason for this, according to its manager of marketing and audience development, is that the FT thinks of itself as "a premium brand with high quality content", and not as a newspaper[11].

> 48% of successful companies relied on hiring specialist digital talent in the wake of a disruption.

Key Resources Unaligned to Opportunities

In most organizations, people are treated as resources tied to divisions, products, services and business units. Managers are typically reluctant to let go of resources assigned to them for fear of any potential diminishing of their authority. Similarly, organizations tend to try and retro-fit new opportunities into existing organizational structures. These political challenges pose significant hurdles when it comes to digital disruptions that, more often than not, cut across the entire organization.

Successful Responses to Digital Disruptions

We studied the strategies adopted by organizations that have successfully withstood digital disruptions (see research methodology at the end of the article)[c]. We found four dominant responses to disruptions adopted by these organizations: acquiring digital talent, mimicking the competition, acquiring the disruptor/ competitor and taking a judicial approach. Most successful companies adopt a combination of these responses to ensure a robust and well-rounded approach. In this section, we examine each of these winning responses in detail.

Acquiring Digital Talent Brings in Fresh Thinking

Often, incumbents resort to acquiring select digital talent so they can start to build more coherent responses in-house. Travel agent Thomas Cook was one of the early companies to be disrupted by the advent of online booking sites. The company, as part of its multi-pronged approach to this digital disruption, hired a series of executives with backgrounds in digital technology as digital 'gurus' to join its Digital Advisory Board[12]. These executives were specialists in areas such as innovation management, customer experience management, user interface design and intelligent systems[13]. In our research, we found that 48% of successful companies relied on hiring specialist digital talent in the wake of a disruption (see Figure 4).

Mimicking Enables Incumbents to Have a Ready Offering

We found that 32% of successful companies launched services that mimicked those of a disruptive competitor (see Figure 4). In some cases, the incumbent can throw significant resources at creating competing solutions. For instance, even though Apple's iPod, iPhone and iPad are known to be path-breaking and breakthrough innovations, they were not the first of their kinds. A number of digital music players existed before the iPod was launched[14]. Similarly, a number of tablet PCs were launched in the 1990s and early 2000s, but it was the entry of the Apple iPad in 2010 that sent the tablet market soaring[15]. Apple's focus on creating products that dramatically improve on competing offerings from disruptors in its industry has enabled it to continually stay ahead of competition.

> 32% of successful companies launched services that mimicked those of a disruptive competitor.

Acquisitions Help Incumbents Compete and Scale-Up

A common response to disruption is to acquire one of the leading disruptors. Our research found that 36% of successful companies relied on acquiring companies as a tactic to access disruptive technology/ innovation (see Figure 4). Once it has completed an acquisition, the incumbent might either choose to absorb the disruptor in its operations or continue with business-as-usual.

> Over the years Walmart has acquired multiple startups in innovative fields and subsequently folded the teams into their operations.

c Successful companies are those that have maintained and/or improved their market position

An example of the former category is Walmart. The company, through its Walmart Labs arm, has over the years acquired multiple startups in innovative fields and subsequently folded the teams into their operations. Luvocracy is an example. The startup was an online community of half a million members that allows consumers to discover and buy products recommended by other people. Walmart subsequently closed the service and absorbed its key technologies into existing and proposed Walmart platforms[16].

In other instances, the acquirer allows the innovator to continue to do business without much interference. For instance, car sharing is disruptive to car rental firms such as Avis and Hertz. Realizing this, Avis paid over $500 million to buy Zipcar, a rent-by-the-hour startup[17]. The company continues to operate independently and leverages Avis' global network.

Another key driver for acquisitions is consolidation, which gives the incumbent more scale to fight back. The music industry, which suffered significant disruption from digital music, is a good example. The six major labels that existed pre-digital have now become three, with the healthier labels acquiring their struggling brethren. By doing so, these labels have increased scale, expanded their rosters of top-selling artists and increased their holdings of recording and publishing copyrights.

A Judicial Approach Slows Down Disruptors

Digital technologies, because they are so new, are often not covered in existing regulatory legislation and base their competitive model on a disruptive approach that was not anticipated by policy-makers. Incumbents can thereby respond by suing disruptive startups, citing unfair advantage under the regulatory framework that governs their industry. Other legal concerns that incumbents typically raise against startups include the evasion of taxes, and the exposure of consumers to new risks due to disruptive platforms. Our research found that over 32% of successful companies have resorted to using the legal route to slowing down disruption (see Figure 4).

> 32% of successful companies have resorted to using the legal route to slowing down disruption.

Aereo, for example, was a disruptor that offered live-streams of broadcast TV over the Internet. Since traditional broadcasters and distributors were cut-off from any monetization opportunities in this model, they sued Aereo in the US courts. The case went all the way to the Supreme Court, which ruled that Aereo was ultimately in violation of existing regulation. The company subsequently went into bankruptcy and shut down[18].

Similarly, Uber, the taxi-services app, has seen significant pushback from local taxi services in many cities across the world. In Spain, for instance, a local court ruled that Uber was illegal and Uber had to suspend its operations in the country. Similarly, the company has also been sued or legally questioned in several US states including California, Colorado, Portland and Oregon[19]. However, the startup has only been going from strength to strength. It recently raised a billion dollars in venture capital and is valued at over $40 billion[20].

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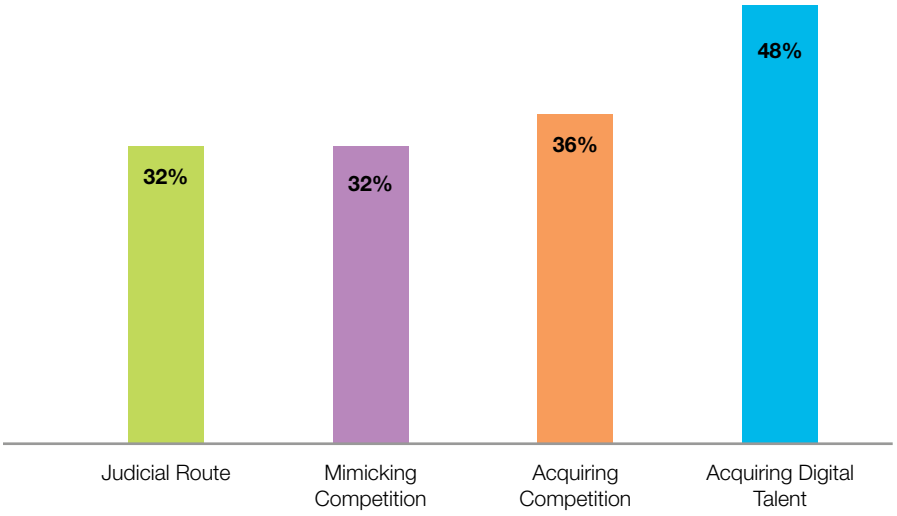
Our research found that the number of companies taking the judicial route has increased significantly. While 8% of incumbents used this approach over the 2000-2010 period, in the 2010-2013 period, it has risen to 27%.

Establishing the Right Mix of Responses

Drawing lessons from incumbents that have successfully tackled disruption – retained their market position or have improved it – can help organizations establish the right mix of responses (see Figure 4).

Successful companies have a relatively even spread across different tactics. They have acquired competition, hired digital talent and gone down the legal route too. Overall, the best approach

Figure 4: Response Tactics of Successful Incumbents



N = 84

Note: Figures refer to percentage of companies adopting a particular approach. Multiple responses per company

Source: Capgemini Consulting Analysis

is a balanced one that uses a mix of tactics (see Figure 5 for a comparison).

Making the Most of Digital Disruption

As technology cycles keep getting shorter, disruptions will become more prevalent. And as the world increasingly becomes software-driven, competitors will emerge from adjacent industries rather than just the 'home' industry of the incumbent. Does this spell the end of the centuries-old corporation? Not necessarily. Incumbents need to position digital innovation at the heart of their business. To achieve this, they can take a series of practical steps.

Proactively Identify Customer Pain Points

One of the biggest entry points that disruptive startups take is to identify customer pain points. Resolving these customer pain points then becomes the unique selling proposition of the disruptor. Startups such as Airbnb, Uber and Lending Club, which are based on a peer-to-peer economy, have been successful because they have identified gaps in what customers want and what incumbents provide. Rachel Botsman, leading expert on the collaborative economy, highlights how these startups disrupt existing markets by solving real customer problems, "Many collaborative startups find ways to simplify complex and frustrating customer experiences.

> As the world increasingly becomes software-driven, competitors will emerge from adjacent industries rather than just the 'home' industry of the incumbent.

For example, Uber and Lyft have simplified an otherwise complex and unreliable experience for customers of taxi services[21]." While some incumbents react to the emergence of the pain point by denying its importance, the market has been created.

Question the Status Quo and Constantly Audit Your Business Model

As INSEAD's Serguei Netessine explains, "Business models and the advantages that flow from them are transient. What is a competitive strength today might be a burden tomorrow[22]." It is vital for a company to keep questioning the status quo. Blockbuster's innovative idea of sharing revenues with the studios, instead of paying the studio for each product, revolutionized the video and DVD rental market. Blockbuster's market share skyrocketed. However, they failed to look ahead and anticipate the impact of streaming and eventually went bankrupt. Netflix, on the other hand, thrived because it adapted and actively cannibalized its DVD business. Organizations will constantly have to question the status quo and pose 'what-if' questions of their core operating model.

> Incumbents need to constantly revisit their business model to ensure it is not outdated.

Many incumbents typically stick to the same strategy playbook that has served them for years. However, the pace of technological change has made this approach dangerous. Incumbents need to constantly revisit their business model to ensure it is not outdated.

Reorganize Resource Allocation around Opportunities

Most organizations are typically organized by business units or market units. Resources are subsequently tied into what are in reality independent fiefdoms. Responding to digital disruptions requires that organizations move to a resource allocation that is centrally governed and organized around opportunities, not existing structures. As Columbia Professor Rita McGrath says, "In companies [that have been able to survive disruptions], employees tend to worry less about organizational roles and structures.[23]"

> Responding to digital disruptions requires that organizations move to a resource allocation that is centrally governed and organized around opportunities, not existing structures.

Figure 5: Pros and Cons of Response Types

Response to Digital Disruption	Pros	Cons
Acquiring Disruptor/ Competition	• Enables a certain level of 'control' over spread of disruption • Gives the incumbent a head-start over its competition	• Does not rule out the possibility of other "me-too" services that operate like the acquired disruptor • Requires large investments that may be hard to justify to investors
Acquiring Digital Talent	• Brings in fresh thinking into the company • A more robust approach that prepares the incumbent for future disruptions	• Hard to hire certain digital skills, e.g. analytics • Requires a dedicated strategy to attract and retain digital talent
Mimicking Competition	• Ensures incumbent has offerings matching the disruptor • Helps reduce customer churn in the short-term	• Risk of comparison with disruptors and falling short of customers expectations • Challenges of replicating a true disruptor within existing legacy operations
Judicial Approach	• Allows incumbents to gain time to prepare a more coherent response	• Likely to antagonize existing/ prospective customers

Source: Capgemini Consulting Analysis

Move to an Open Innovation Model

Large companies need to learn to spot the early warning signs of disruption to avoid being surprised by their impact at a later stage. This requires a shift to an open innovation model that allows them to stay tuned to sources of disruptive innovation. An open innovation model entails engaging closely with the startup ecosystem by setting up innovation labs and incubators and partnering with startup accelerators. As David Cohen, founder of leading startup accelerator Techstars says, "Being around the disruption at the early stages – and spotting it before others do – gives you a competitive advantage and you can help the startup grow at the same time[24]."

Digital disruptions are a fact of economic life in the twenty-first century. New digital technologies do not care for organizational history or tradition. In fact, they sweep aside existing approaches and models, creating a new world order. Digital disruptions are in many ways a very democratic force and they can just as well originate within a two-person startup as they can in a $100 billion organization. While that prospect might make many incumbents feel vulnerable and uncomfortable, the secret is to see it as an opportunity.

Checklist: Are you in a Position to Successfully Negotiate Digital Disruption?

How do you spot disruptions?

We actively look out for new technologies that can impact our industry

We gain insights into customer behavior by actively monitoring sentiment on social media sites, understanding emerging behavior of millennials and tracking new startups globally

We have a good view of our customer's pain points

We have a set of leading indicators (patent filings, consumer behavior etc) that we track to foresee disruptions

How do you rate your organization's agility in responding to disruptions?

Our leadership team has a digital vision that encompasses all organizational units

We can quickly pull together pilots based on new technologies and get them off the ground

We are ready to buy a disruptor if it makes strategic sense

We have a high-level roadmap for digital transformation, which is flexible based on changing market scenarios

We revisit our business model regularly

What is your approach to scouting for opportunities outside of your business?

We have a 'labs' setup where we encourage investments in emerging technologies and trends

We invest our time and effort in hiring and nurturing digital skills

We have partnered with/ funded startups at various stages

We encourage our partners/ customers to contribute to our product development process

Research Methodology

We conducted a comprehensive study of 100 leading companies in North America and Europe to understand how they negotiate digital disruption. For our study, we selected 10 leading players across 10 industry groups that have been digitally disrupted. The industry groups included Public Transport, Healthcare, Hospitality, Education, Publishing, News and Media, Photography, Music, Banking and Travel. All of these industries were carefully selected on the basis of disruption witnessed at various stages. The incumbents that we studied have been leading players in these industries for over two decades.

In our research, 84 companies had been successful in withstanding digital disruptions – success implies that they have maintained and/ or improved their market position – while 16 had been unsuccessful – these are companies that went bankrupt. Our focus was to understand the various strategies used by successful incumbents to respond to digital disruptions.

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Digital Transformation Review
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