

DIGITAL TRANSFORMATION REVIEW

N° 09 SUMMER 2016

The Digital Strategy Imperative: Steady Long-Term Vision, Nimble Execution



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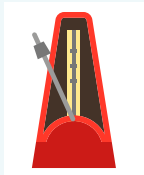
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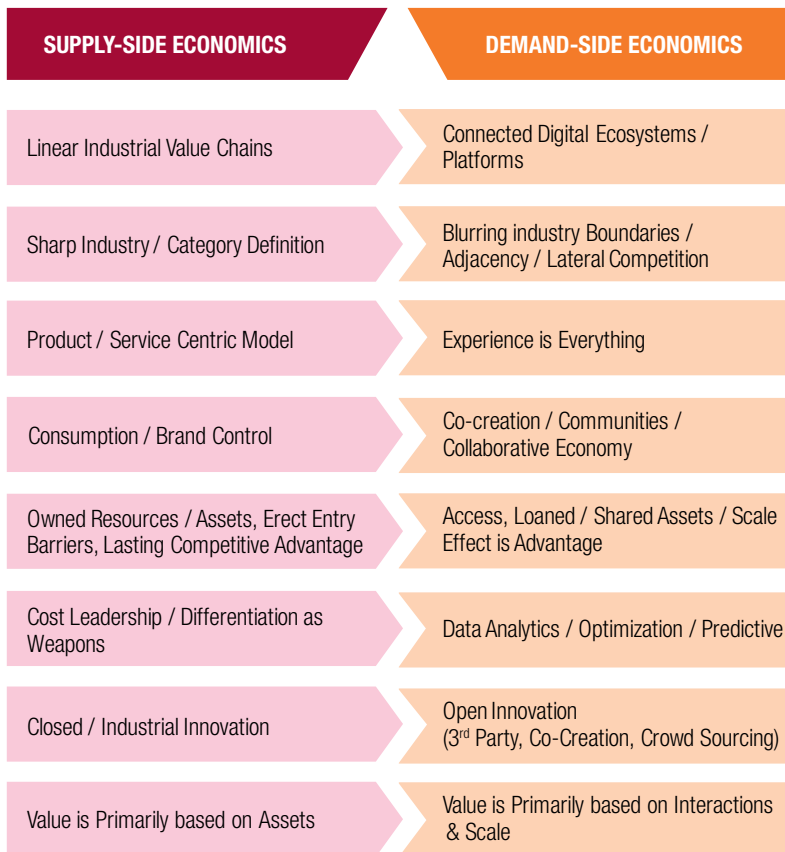
“How did you go bankrupt? Two ways. Gradually, then suddenly.” These lines from Ernest Hemingway’s *The Sun Also Rises* resonate in an economic environment where organizations face digital disruption from agile young startups to established tech giants. Companies compete in a world where Facebook

has a bigger population than China, Apple has more cash on hand than the US Treasury, and Amazon is making rapid inroads into the consumer goods sector, already boasting over 3,000 private-label products¹. The average life span of companies in the S&P 500 has declined from 61 years in 1958 to about 20 years now².

Change is everywhere today. As Figure 1 shows, industry boundaries are being redefined, access to assets is becoming more important than ownership, and linear value chains are becoming connected ecosystems.

This new environment requires a strategic rethink. In this edition of the Digital Transformation Review, we examine the approaches that organizations can take to crafting a strategy for a digital age, focusing on the following key questions:

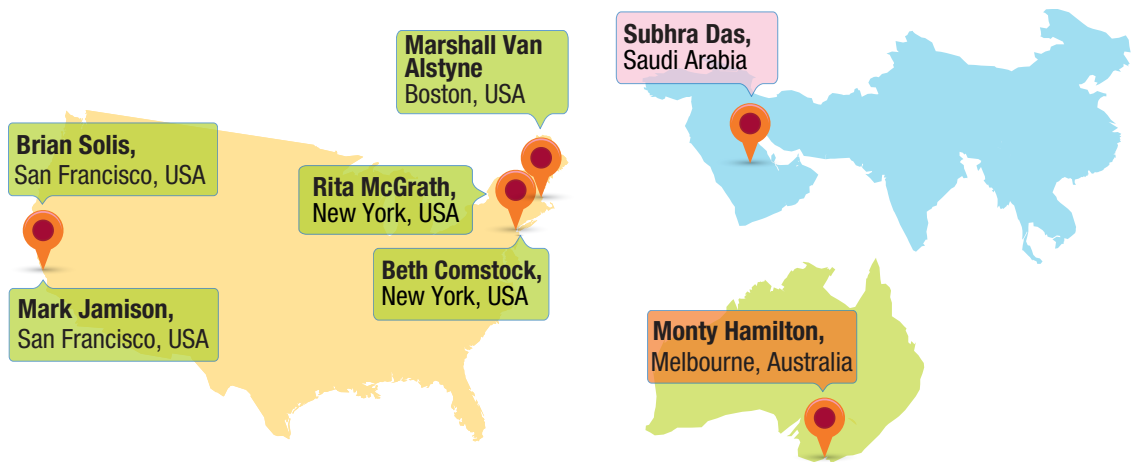
Figure 1: The Great Reshaping of Industry Boundaries



1. How do you design a digital strategy in today’s uncertain and volatile world and understand how much reinvention of the organization is required?
2. Should your company become a platform, or be a part of one?
3. What are the most successful approaches to executing digital strategy – acquisitions, partnerships, Greenfield?

In addition to Capgemini Consulting’s analysis, we spoke to a wide range of experts on these topics, from CXOs to academics and analysts, who offered views from across the world, from the US to Middle East (see Figure 2). The accelerating pace of technology change is also examined through the ‘startup corner’, where the next-generation of digital disruptors are profiled.

Figure 2: Guest Contributors to the Digital Transformation Review N° 09



Digital Strategy for an Uncertain Age

The End of Stability.

We open the Review in conversation with **Rita McGrath, Professor at Columbia Business School** and an acknowledged expert on strategy. Professor McGrath explains why organizations need to be nimble in an age of accelerated change and disruption. However, nimbleness does not signal any decline in the importance of long-term direction. As she says, “it is actually more important than ever to have a long-term strategy.”

A Portfolio Strategy.

Creating a digital strategy raises significant questions. What level of risk are we willing to take on innovative new business models? Can we deliver our digital strategy in-house or do we need to partner? Capgemini Consulting’s article addresses these questions and explains why we believe success comes from managing digital transformation as a strategic portfolio. Leaders need to establish a clear way forward in three areas that we call the how, the what and the why of digital strategy.

Should You Become a Platform?

Building a Platform Strategy.

Having a great product and adding new features to it iteratively is not enough today. **Marshall Van Alstyne**, co-author of “Platform Revolution” and a **research scientist at the MIT and professor at Boston University**, believes you need to be a platform and that “Even a weak platform will outperform a strong product every time.” A platform is a combination of rules and infrastructure that adds ever-increasing value to

all its users as usage increase, as exemplified by the likes of Airbnb and Uber. Globally, platform companies have a market value of over \$4.3 trillion³ and companies have upended entire industries by harnessing the platform business model phenomenon.

“If you generate network effects and figure out how to generate demand-side economies of scale in your industry, then you will be on track for one of these winner-takes-all positions.” Professor Marshall Van Alstyne

Visa: The Original Fintech Platform Giant

Visa is probably one of the first large financial industry players to put its payment platform at the very center of its digital strategy. For **Mark Jamison, Global Head of New Product Development at Visa Inc.**, “the winning models in the market place are the ones that build their business as a platform.” The company has also recently announced that it is opening its platform to third-parties, giving it access to fresh ideas and perspectives. “There is so much creativity and ingenuity in the world that third parties will come up with innovative ideas in payments that we had never thought of,” explains Mark Jamison.

Executing Digital Strategy

GE: From Industrial Leviathan to Digital Giant

GE has been in the Dow Jones Industrial Index since the original index was established in 1896. But this venerable company has also showed itself to be extremely nimble and committed to continuous transformation. In the latest chapter of its story, beginning in 2011, GE has embarked on a digital transformation at scale. GE is building a cloud-based platform for the Industrial Internet, Predix, and in doing so is creating both a “network effect and an intelligence effect”. GE has a billion dollar run rate investment so far into its digital initiatives and its ambition is to get \$15 billion in revenue by 2020. But these are still early days, barely a third of the way into GE’s digital transformation, says **Beth Comstock, the first female vice chair of GE.**

Telstra: Digitizing an Iconic Brand

Telcos have, in recent years, struggled with flat-lining revenues, increased competition from over-the-top players and poor levels of customer satisfaction. In this environment, an Australian telco stands out by virtue of its rapidly increasing customer satisfaction and an ambitious digital transformation program. Telstra,

an iconic Australian company, has embarked on this transformation path through its digital unit, Telstra Digital. **Monty Hamilton, head of Telstra’s digital operations**, spoke with us to outline how Telstra is driving digital innovation in its customer experience, crowd support and startup accelerator.

Jawwy: Rethinking Telecoms for the Digital Age

What happens when your customer base wants a Facebook-like experience from your traditional business? If you are Saudi Telecom Company, then you take that challenge head-on and create a digital telco. As **Subhra Das, CEO of Jawwy** – STC’s digital venture – explains, “When you want to reimagine and carve out a new experience, and do that rapidly, you have no choice but to go Greenfield.” We spoke with Subhra Das to understand what it takes to reimagine a traditional telco from the ground up as a digital service provider.

The Startup Ecosystem

Innovation Centers – Refreshed

Silicon Valley has held the mantle as the world’s capital of innovation for many years and for many a good reason. However, large organizations have come to realize that no one geography has

The view from digital's front-line

"The new formula of success is that you don't do it all yourself – you have to know what you have to be uniquely good at." – Beth Comstock

"You can invest millions of dollars in technology but if you don't have a culture that enables you to collaborate across the organization, then nothing will change." – Monty Hamilton

"We are building a new digital mobile operator model with the organizational DNA and agility of an internet player." – Subhra Das

"The importance of a long-term strategy is to give people something to hang on to and act as a broader guide during times of uncertainty." – Rita McGrath

"The pace of technology change dictates that we need to invest in people whose full-time job is to focus on things beyond 12 months." – Mark Jamison

"Start by asking 'What is the minimum viable platform, what is the minimum interaction that's going to create the most value for your external users?'" – Marshall Van Alstyne

a stranglehold on digital talent. Our updated research on corporate innovation centers reveals that Bangalore is now among the top 5 locations where large organizations have opened up new innovation centers, with financial services firms leading the field in terms of new innovation centers opened.

Brian Solis – Startups to Watch

A range of start-ups are challenging the way the world works through new technology, offering closed-tube travel at speed of ~970 kmph and wearable patches that continuously monitor your bloodstream and measures your metabolic activity. **Brian Solis, a Principal Analyst at Altimeter, a Prophet Company**, offers the view from Silicon Valley on some of the hottest startups that everyone should have on their radar.

We live in a fast-changing world where disruption has changed the nature of corporate strategy and sustainable competitive advantage. Organizations have to ask themselves new questions and make a determined leap forward, even if that journey contains significant uncertainty and risk. Large companies are inevitably tied to past successes, assumptions, cultures and systems. But we hope this edition of the Review helps leaders understand how to make a break from the past and begin the creative disruption of their business.

1. Bloomberg, "Got a Hot Seller on Amazon? Prepare for E-Tailer to Make One Too", April 2016
2. Fortune, "Why every aspect of your business is about to change", October 2015
3. The Center for Global Enterprise, "The Rise of the Platform Enterprise", January 2016

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Crafting a Bold and Balanced Digital Strategy





The End of Stability: Rethinking Strategy for an Uncertain Age



Rita McGrath

*Professor at Columbia
Business School*

Rita McGrath, a Professor at Columbia Business School, is one of the foremost experts on strategy and innovation. Her work focuses on strategy development in uncertain environments and her latest book is called *The End of Competitive Advantage: How to Keep Your Strategy Moving as Fast as Your Business*. Rita McGrath has been recognized among the Top 10 Most Influential Business Thinkers by Thinkers50 in 2015.

Capgemini Consulting spoke to Rita McGrath to understand how organizations should go about strategy development in an era of accelerated change and disruption.

How Transparency is Transforming Markets and Organizations

We are seeing major changes across sectors – industry boundaries are getting blurred, companies are co-creating with consumers. In your opinion, what are the major factors reshaping industries?

If I were to pick one major shift, I would choose the impact of the transparency of information. The transparency of prices, values and information has enabled the creation of markets for more and more things that never could have happened before. You have markets for all kinds of commodities which means that access to assets rather than ownership of assets is the key thing.

With markets becoming more transparent, what is the big learning for businesses?

One of the big lessons that companies need to learn is that customers don't care anymore about what companies do. It is a very difficult message for the industry. Customers care more about getting their own needs met. They will go with the firm that is more convenient, cheaper or user-friendly and don't care what

industry the company is from. Financial services is a case in point. Silicon Valley startups are taking over parts of the bundled banking model and offering just select services. For instance, Prosper for investing, TransferWise for funds exchange and LendingTree for mortgages. They are not replacing banks, but replacing many jobs that banks traditionally did. And that is an important distinction.

“Customers don't care anymore about what companies do.”

Stick to Your Long-Term Goals but Be Nimble

The technology landscape is fast-moving and very uncertain. Is it still possible to have a long-term strategy for large corporations?

I believe it is actually more important than ever to have a long-term strategy. The reason for that is that people don't do well under conditions of high uncertainty. People tend to be paralyzed when things around them appear to be out of control and change very quickly. The importance of a long-term strategy is to give people something to

hang on to and act as a broader guide during times of uncertainty. Obviously, you will have to adjust your strategy as things go forward - you can't just lay out the strategies without paying attention to your surroundings, but the key is to have a point of view on the future. Intel is an interesting case of how badly things can go when you miss the long-term strategy. The market was moving from PCs towards mobile devices and Intel completely missed that market transition. The result - Intel said in April that it would lay-off around 12,000 people or 11% of its workforce.

“It is actually more important than ever to have a long-term strategy.”

Intel was a giant of the PC era. What went wrong with their strategy?

Intel was used to designing chips for better speed and with higher processing power. When they were in a duopoly with Microsoft, higher processing speed was what sold computers. The processing power really limited what you could do with your PC. As Moore's law progressed there were

quantum improvements in speed and capacity. Intel followed that trajectory rather than working less powerful, low power consumption chips. Their assumption was that they were making chips for devices that would always have access to an electricity supply. They were never worried about power consumption.

The importance of a long-term strategy is to give people something to hang on to and act as a broader guide during times of uncertainty.

When you switch and look at the mobile world we want phones where the battery is going to last for a long time. Intel missed that inflection of going from a stationary device where processing speed was the dominant purchase criteria to a mobile device where low power was the dominant criteria. And I think they made the assumption that mobile was never going to be as big a market as it has subsequently turned out to be.

If you are a large organization, how do you create a roadmap that is nimble enough to adapt to changes?

Amazon offers us a very good example of a company that does this in a smart way. According to Jeff Bezos, CEO Amazon, “Lots of people get all hung up on what is changing in the world. I focus on what isn’t going to change. No customer will ever say I wish your products were more expensive, delivered slowly and wasn’t world class.” When you flip that on its head and look at it that’s brilliant. What he is basically saying is, “Let’s focus on innovations in our long-term roadmap around what isn’t going to change.”

According to Jeff Bezos, CEO Amazon, “Lots of people get all hung up on what is changing in the world. I focus on what isn’t going to change. No customer will ever say I wish your products were more expensive, delivered slowly and wasn’t world class.”

Can you share success stories of companies that have been able to stick to long-term goals whilst being really nimble?

My favorite example is a 150-year company called Schibsted in Europe. Before the internet era Schibsted was into traditional media, TV, newspapers and movie distribution. In the late ‘90s the top management understood the power of the internet and began significant moves to convert their paper-based classified advertising business into a business of selling classified ads on the internet. The head of strategy of Schibsted at the time said the internet was made for classifieds and classifieds were made for the internet. They relentlessly worked to convert their systems and structures over to the internet-based model. Schibsted was not afraid to cannibalize their existing business and rewarded senior folks who were able to switch the customers from their analog focus to their digital focus. Today Schibsted is among the top three players in the whole world in classified advertising.

“Schibsted was not afraid to cannibalize their existing business and rewarded senior folks who were able to switch the customers from their analog focus to their digital focus.

The End of Five-Year Strategic Plans

Companies spend a lot of time preparing their three or five-year strategy plans. Do you see this continuing in the longer run?

I think we need to be very careful about what we are describing. A strategy is not the same thing as a strategic plan and a budget. If you don't have a very clear distinction between strategy and planning or budgeting, the budgeting and planning activities drive strategy right out the door. Planning and budgeting have specific deadlines, and it's a very organized process. We are getting away from this notion of reviewing classic five-year plans full of charts and



graphs with immovable targets that are basically budget documents. We are moving towards a process of developing strategy that is more dynamic in terms of inception and implementation.

We don't hear that many companies nowadays talking about Crowdsourcing strategy involving the entire organization. Do you think it is still an important aspect of strategy development?

It definitely plays a role. You need to access ideas from the frontline because that's where interactions with customers take place and where the real information about what's going on in the market exists. However to come up with a strategy, someone has to ultimately take responsibility. One of the best

approaches to this that I have seen was under Alan Mulally when he came into Ford. He initiated a weekly Business Plan Review meeting with all his senior executives. In a lot of companies, senior executives know about their own area, they don't know what's going on in other parts of the firm. The first thing Mulally did was to break that down. The meeting was mirrored down at each senior executive's team all the way down to the organization. When you mirror the Business Plan Review meeting all the way down the organization, you get inputs at that level which then get crystallized at the weekly



The Winning Strategy for an Uncertain Age

Focus on What is Not Going to Change



Amazon

- Delivers world class products quickly
- **Focus** on innovations in a long-term roadmap around **what isn't going to change**

Stick to Your Long-Term Goals but Be Nimble



Schibsted Media Group

- **Cannibalized** existing business
- Rewarded senior folks for switching customers from analog to digital
- Now top 3 player in classified ads

The Importance of a Long-Term Strategy



The importance of a **long-term strategy** is to give **people something to hang** on to and act as a broader guide during times of **uncertainty**.



Should You Become a Platform?

YES

... if the **addition of extra users adds value** to what you are offering

... and if transaction costs are low

Greenfield, Acquisitions or Organic Growth?



If you can't change fast enough, you buy. - Rita McGrath



The Innovation Dilemma

You are not good at innovation



you have to acquire



but if you are not good at innovation, it's hard to judge the value of acquisitions

meeting with Mulally. I think it's a very structured approach to getting input from all across the organization without having it devolve into whoever shouts the loudest gets heard the most. Some companies like Swiss Re and IBM use technologies to accomplish some of this information sharing. Employees are invited to give strategy perspective on a technology platform like enterprise social media or video blogs.

If you are manufacturing office staplers, you will unlikely need a platform. If I buy an office stapler, it has a certain value to me. The fact that you have bought the same stapler does not really add a lot of extra value to me.

Create a Platform When the Network Effect Adds Value to Consumers

Companies such as Facebook and Airbnb have been immensely successful with their platforms. We are now seeing large organizations developing a platform strategy like GE for industrial Internet or Visa for payments. Do you reckon all companies should become platforms?

There is a school of thought that says they should. Being a platform is unavoidable if the addition of extra users adds value to what you are offering. For instance, one person on Facebook has zero value, a billion people on Facebook has exponential value. But if you are manufacturing office staplers, you will unlikely need a platform. If I buy an office stapler, it has a certain value to me. The fact that you have bought the same stapler does not really add a lot of extra value to me.

Being a platform is unavoidable if the addition of extra users adds value to what you are offering.

What are the advantages of a platform strategy?

The objective of a platform is to be the central place where other organizations buy, sell, transact and communicate because you get a little bit of revenue off of each of those transactions. The danger of being a platform is you are not really in control. If your user community decides to go to some other platform, there is not much you can do to keep them tied to you. We have seen this in MySpace or Friendster. So, platform strategies are not without their risks.

The danger of being a platform is you are not really in control.

Do you think there are some sectors that are more conducive to a platform strategy than others?

Platforms flourish where the transaction costs are low. If you have high transaction costs, then it's going to be expensive for each member to join and chances of them doing that are low. But if your transaction costs are low, then the more membership you get the better it is for the platform.

“**Platforms flourish where the transaction costs are low.**

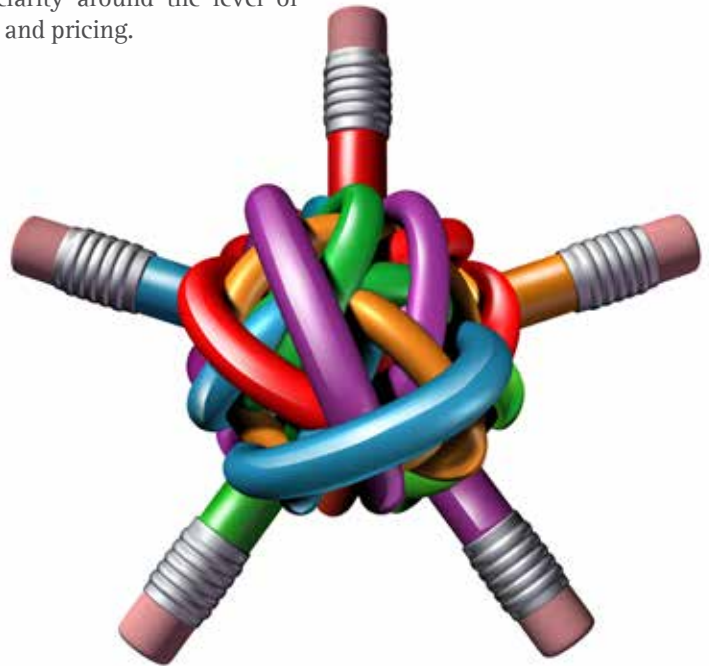
If You Can't Change Fast Enough, Buy

The routes to implementing digital strategy are many. Some companies are going Greenfield, others are trying to transform the core of their operations, while others are acquiring firms. What is the best approach to implement digital strategy?

The classic answer is that if you can't change fast enough you buy. The trouble with acquisition relative to organic growth is it is very expensive. Companies that have survived their startup phase are going to charge a hefty fee to be bought by a large company that hasn't been able to innovate for itself. There is a bit of a conundrum where organizations are under incredible pressure to innovate while at the same time most organizations are not good at it. The dilemma is if you are

not good at innovation, you have to do acquisitions. But if you are not good at innovation, it's also very hard to judge the value of the acquisitions. MySpace would be a case in point where an acquiring company bought them and thought that it was going to help them get into some massive new opportunity, only to find that they didn't know how to manage it and it fell apart. If you are in an industry with too many players then acquisition may be your best alternative – you take out some of the existing providers to help get some clarity around the level of rivalry and pricing.

“**The dilemma is if you are not good at innovation, you have to do acquisitions. But if you are not good at innovation, it's also very hard to judge the value of the acquisitions.**



If a company decides to choose the path of acquisitions, how should they go about integrating an acquired company?

There are three kinds of archetypes that companies pursue when integrating acquisitions. The first is the Cisco model. Cisco is quite famous for their track record in acquisitions where the acquired company's logo disappears and it becomes Cisco within 48 hours. That's the kind of crash and burn theory of acquisitions where you buy the company and own it completely. Some acquired companies are fine with it, and many aren't. The second model is to buy a company, but leave it on its own and they let it be independent. That is what you do to get into a new market or technology. You want to let it live its life the way it is. Amazon and Zappos is a perfect example of this model. The third model is where an acquisition gets merged with a two-way influence between the two company's cultures. You want a change of the culture of your company by going through these acquisitions. Nokia/Alcatel-Lucent is a good example of such a model.

How can companies choose which path to consider – acquisitions, greenfield or transformation?

Speed is definitely a key consideration. Your ability to integrate the potential acquisition is another. You have to be careful with acquisitions where there is a huge cultural gap or where the companies bring with them huge liabilities. For example, when Boston Scientific bought Guidant, it was famously described as the second worst acquisition ever after AOL-Time Warner. Boston Scientific hadn't appreciated the cultural gaps and legal liabilities due to defective medical products produced by Guidant.

What would be your key recommendations to large organizations on their shift to digital?

The first thing is to get an inventory of digital and non-digital initiatives in innovation, business development and product portfolio. You can't make intelligent plans until you know where you stand and most organizations are not aware of where they stand. There are bits of knowledge spread all over the organization

that are not centralized. Step two - organizations need to develop a point of view about the future for a five- to eight-year timeframe. They need to introspect on the big strategy questions like which markets to enter, what customer demographics to target and how to improve or differentiate product offerings. The third step is to walk backward from that future and ask what are the actions needed to move to the envisioned future. This is also called the 'future-back' strategy as organizations need to envision the future and then work backward into what needs to be done today to deliver the future vision.

Are there companies that you admire and that have been able to succeed their digital transformation so far?

GE would certainly be one as they have expanded their business into the software and analytics domain. Procter & Gamble has also done some very interesting work around innovation. Delta Air Lines is starting to leverage digital for the benefit of their customers. Ford and the auto companies in general are doing some really interesting things. General Motors recently bought a big stake in Lyft.

A Portfolio Strategy to Execute Your Digital Transformation

By Didier Bonnet, Senior Vice President, Capgemini Consulting

Senior Executives in pretty much all industries have now elevated digital transformation to the top of their strategic agenda. And they're right to do so. The risk of falling behind the curve is so great that senior leaders are not debating whether digital technologies will affect their competitive position, but rather how to conduct an effective digital transformation and how fast it can be done.

However, an organization's determination to get on the front foot with a bold digital strategy often falters when it comes up against the multi-dimensional complexity of the questions it faces and the risks it must manage. Should we prioritize short-term improvements at the expense of potentially larger strategic shifts? How fast will our industry be disrupted: months, years, or even decades? What level of risk are we willing to take on innovative new business models? Can we deliver our digital strategy in house or do we need to partner? The list goes on. Senior leaders are struggling to craft digital transformations that provide a balanced approach between strategic risk and speed of execution.

Should we prioritize short-term improvements at the expense of potentially larger strategic shifts?

Part of the problem is that many digital transformation roadmaps are designed as if every digital initiative has the same impact, time horizon, or risk level. That is not the real world. Success comes from consciously managing your digital transformation as a strategic portfolio over time. This requires addressing three areas in an analytical and consistent way (see Figure 1):

- **The Why** - Insight and foresight about how the competitive digital landscape is affecting your industry and your business. This is about new sources of value creation as well as threats to your current position.
- **The What** - Designing a portfolio of initiatives that will balance the need for short-term improvements with longer term strategic and business model evolution and allow you to respond within a risk profile that you and your stakeholders are comfortable with.
- **The How** - The ability to execute on your strategy at the right tempo, balancing risk with the need for speed, and making the right trade-offs between in-house and external capabilities.

With a command of these frameworks, leadership teams will gain a common understanding and language for how they will generate value from digital transformation, manage risk, and establish a robust action plan to deliver business results.

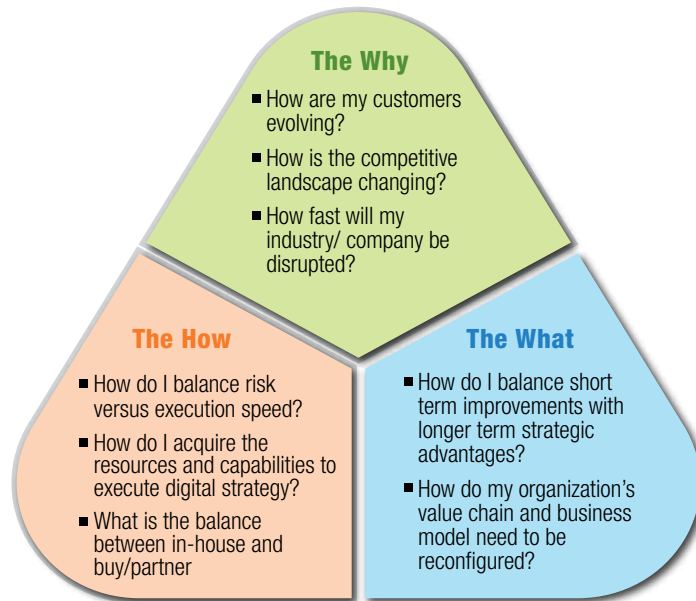
Success comes from consciously managing your digital transformation as a strategic portfolio over time.

The Why: High Stakes for the Digitally Unprepared

Getting a clear picture of how digitization will affect your industry, organization, and competitive position is a complex exercise. It is about both offense and defense.

Offense is about understanding how digital transformation can help the organization create more value. Do you understand how the customer experience can be enhanced through digitization? What step changes in productivity are possible through digitizing our operations and connecting our workforce efficiently? Can we disrupt our industry or an adjacent industry using our digital competencies?

Figure 1: Formulating and Executing Your Digital Transformation Strategy



Conversely, defense is about understanding where your organization's vulnerabilities and risk exposures are in this stage of digital transition. How is digitization impacting the company's value chain or the business model it operates in? How is it changing products, services, pricing, or distribution? Are there opportunities for new entrants and lateral competitors to disrupt the established business model? Do we have the right skills and competences to respond? What is the likely time horizon for these changes?

The forces at play are complex, and you will not be able to predict everything. But you can proactively shape your digital transformation program around three types of scenarios:

- Digital trends where there is a significant level of *certainty*. For instance, if you are in retail banking today, you can safely assume that millennial customers will demand a seamless and intuitive way of connecting with your services in digital ways.
- Digital trends where there is a strong *likelihood*. Once again, with retail banking, it is likely that your branch network will reduce in size over time and/ or will be revamped to cater for different needs of the digital generation.
- Digital trends and discontinuities where there is *uncertainty* about the outcome. For instance, recent development in cryptocurrency could have a profound impact on the banking world, be it positive or negative.

Once the digital landscape has been analyzed and mapped, you need to shape your digital transformation program accordingly—tackling the scope of the change needed and the speed of execution that would maximize value creation and/or minimize the risk of being outflanked or disrupted. Balance is key. Too much focus on reconfiguring the existing operations or the short-term gains, and you might not get the organization ready to face the real digital threats. Too much focus on the reinvention and you might end up in constant discovery with little impact, or misread the timing of disruptions and increase the risk profile of the transformation.

The What: Balancing the Scope of Your Digital transformation

With a clear picture of the digital landscape, you are in a position to shape your digital transformation program. As you design the program, it is essential to frame your digital initiatives according to their impact on your current operations. As Figure 2 illustrates, two dimensions are critical:

- **The breadth of reconfiguration required within the current value chain.**

There are large pockets of value that digital technologies can help to unlock in your current value chain. These days, pretty much every core process and

every function of the firm can be reconfigured more effectively using the power of digital technologies. For example, specialized technologies are available today to automate many of the end-to-end core processes of an HR or a finance department. The increasing availability of customer and operational data has also opened up many opportunities for value creation, such as hyper-personalization or predictive maintenance.

- **The level of reinvention necessary in the core offering or business model.**

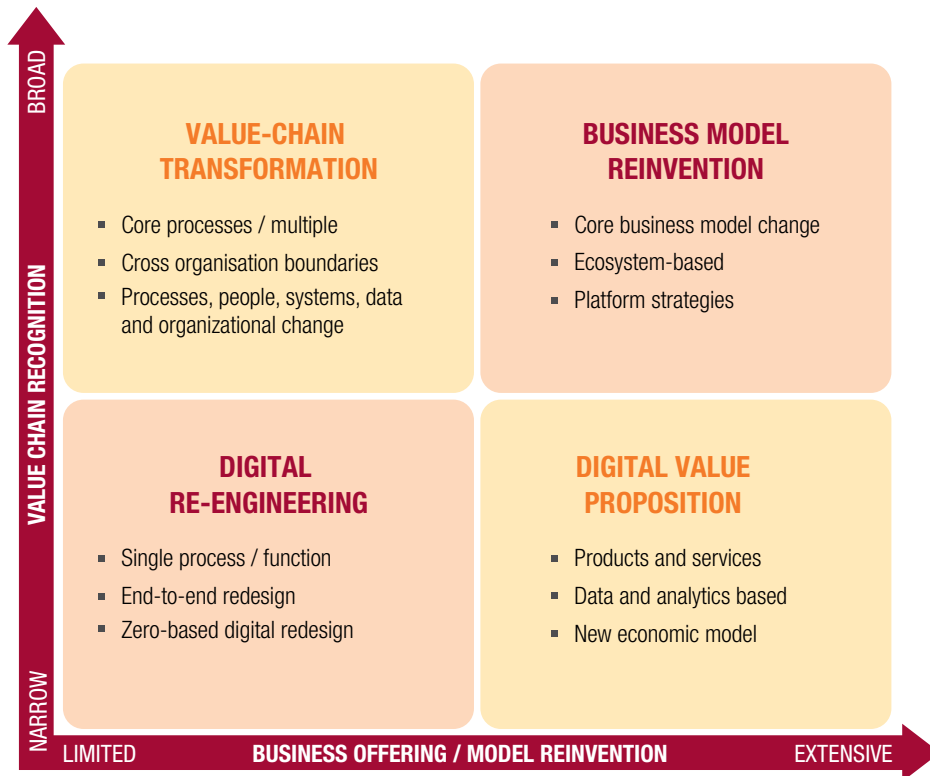
Digital technologies have also opened up myriad opportunities to fundamentally alter the way your business is traditionally conducted. This requires vision, creative skills, and more often than not, opening up your organization to an ecosystem of innovative partners that can support you in this reinvention. Reinventing the business model can be a “bet-the-ranch” strategic move, such as moving to a platform-based model. GE, with its “industrial internet” is a good example of such a radical move¹. But it doesn’t need to be a make-or-break play. Many enhancements to your service offering or business model can be done without creating massive shifts and risk to current operations, while still generating significant business returns.

Let’s look at each dimension of the portfolio in turn.

Digital Reengineering.

Some initiatives will have a narrow scope within your value chain (e.g., a single function or process) and will not fundamentally change your existing offerings or business model. Although reengineering has had bad press, the opportunities that digital technology creates to reconfigure processes and functions are numerous. Often there is a need to virtually zero-base an existing process and digitally reconfigure it end-to-end. The focus is on improving operational efficiency or sales effectiveness, or both. Schindler, a world leader in elevators and escalators, provided its workforce with access to real-time updates from sensors embedded in elevators. It helped them proactively respond to outages and schedule service visits efficiently, thus saving 40 million kilometers of driving and preventing 4,435 tons of emissions per year². Lily Pulitzer, a US-based fashion retailer, increased its same-period sales by close to 25% in 2014 by rolling out mobile point-of-sale capabilities in its stores³. Some of these initiatives will be harder than others depending on the level of change management required, but all should provide a reasonably short time frame to value. These initiatives are therefore essential portfolio components to fuel investment and demonstrate early successes.

Figure 2: Mapping the Digital Initiatives - The “What” of Your Digital Transformation Portfolio



Value-Chain Transformation.

These initiatives often cut across organizational boundaries (e.g., functions or geographies) and the change management can be substantial. The risk profile and the time to value are therefore greater. US retailing giant Macy’s launched an ambitious omnichannel fulfillment program⁴ to digitally locate and make available for sale even the last remaining item from a line of stock. Macy’s conducted a pilot to test the new fulfillment process on a limited

range of products and stores. Then, with a massive transformation effort, extended it across its supply chain network. The company rolled out the program to all of its 775 stores across 45 states in the US. Macy’s estimates that the program helped it reduce \$1 billion of inventory from its stores that would otherwise have been marked down or not sold. Value-chain transformations are complex endeavors that will invariably impact processes, systems, data, people, and organizations.

Digital Value Proposition.

Reinventing offerings or business models need not be disruptive; it can be about combining products and services in new and innovative ways, making better use of analytics, designing new economic models, or repackaging an existing offer. Property and casualty insurer, Tokio Marine, augmented its traditional business by launching One-Time Insurance in partnership with mobile operator Docomo. The app-based offer allows customers to

buy insurance in narrowly defined periods (a day, a week) for lifestyle events such as borrowing a car or going skiing for the weekend. These innovative services can be developed in a reasonable time frame, as they do not necessarily demand a fundamental restructuring of the existing value chain. The risk can also be managed by using proof of concepts and experimentation.

Business Model Reinvention.

Reinventing your business model is not a decision you will take lightly. It is by far the most challenging of transitions. Organizations will go down this path if they are reacting to a major industry disruption that is threatening the business. Or having identified a major opportunity, it can be about deciding to proactively disrupt the business or industry before someone else does. Such transformation will invariably involve an external ecosystem of partners, a substantial re-skilling and skill acquisition exercise, and more often than not, some surgery on your current organizational model. GE transformed itself from an industrial equipment manufacturer to a seller of software and data-centric services. GE's vision is to be a top 10 software company by 2020. Its digital business—GE Digital—grew by 20% and generated revenues of \$5 billion in 2015 with plans to

grow this to \$15 billion by 2020. By the end of 2016, it is expected to have 200,000 assets under management, 100 applications, and 20,000 developers⁵.

The How: Executing at the Right Tempo

Deciding what digital initiatives are critical to face the new digital future is important. Finding the right tempo and means to execute are even more critical. Why? Because balancing speed, risk, competence building, and financial capacity is difficult, and they are all essential ingredients of a winning digital transformation. The digital transition needs to both protect profitable assets, while making the successful transition to a new digital or digitally enhanced business. When faced with executing on your digital transformation strategy, you will be confronted with competences you do not yet possess; technology you don't know or own; ways of working that are not familiar to your business; new untested business models; and even cultural barriers that will have to be overcome. It is a daunting task. Executives need to focus on two critical dimensions (see Figure 3):

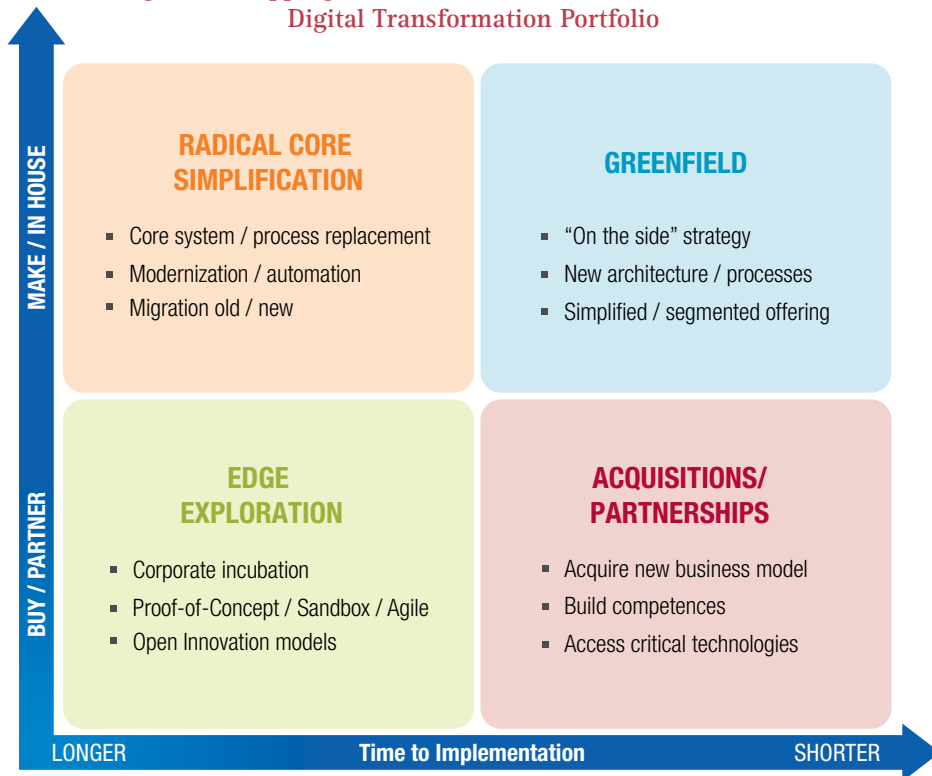
- **Time to Implementation** – Understanding the speed at which each component of your digital strategy needs to be implemented. Speed of execution will be driven by

external factors: the rate of technological upheaval, the pace of change in your industry, and the intensity of competition from adjacent or brand new players. But it will also be strongly influenced by internal factors: the current digital competences you possess versus those you need, how suitable your organizational model is versus what is required to be competitive, and your familiarity with the core technologies underlying your digital transformation versus those you need to learn and experiment with.

- **Make/buy/partner** – Assessing your ability to execute with the capabilities you currently possess versus the need to access external resources through acquisitions or partnerships is key to success. This is a big decision that requires a careful analysis of timing and risk and its criticality will obviously be linked with the competitive pressures your company is under.

“GE transformed itself from an industrial equipment manufacturer to a provider of software and data-centric services.”

Figure 3: Mapping the Execution Route – The “How” of Your Digital Transformation Portfolio



Let’s look at each execution path in turn.

Edge exploration.

When technologies are unproven and benefits unclear, the exploration route is appropriate. Building incubation or innovation sandboxes can allow you to test potentially transformative technologies in a controlled environment. This will mean opening up the organization to external parties such as start-ups, incubators and universities. For

instance, CVS Health, operator of Minute Clinics and one of the biggest drugstore chains in US, has opened a Digital Innovation Lab in Boston that is intended to “be a source of new ideas that will drive the company into the future”⁶. One of the goals of the Digital Innovation Lab is to connect with start-ups that are developing healthcare-related products and services and to ensure CVS can be an ideal learning lab for early-stage companies⁷.

This is a speculative approach, but is a good way to mitigate high costs of failure. However, it is not a fast process, as identifying promising applications takes time in large organizations and scaling up a successful pilot is a lengthy process. James Patterson, Managing Vice President and Head of Capital One Labs, commented: “Creating excellence at small scale is relatively straightforward. Doing so at scale is extremely hard. And that’s where most innovation centers struggle.”⁸

He added, “That’s primarily because you are involving a totally different and expanded cast of characters to get to scale compared to just getting to pilot. It’s not good enough to just have an idea and to get it in the hands of a few hundred people.”

Radical Core Simplification.

Sometimes what needs to change is more obvious but it requires a radical overhaul of core processes and underpinning technology. These major business simplifications occur, for example, when a cost base has become unacceptably high or when a technology platform has been overtaken by much more nimble, speedier, and easier-to-maintain alternatives. In 2011, the UK’s Lloyds Banking Group invested in a four-year technology program that involved automating and simplifying complex manual banking processes. These initiatives helped achieve annual savings of £352 million, and a 7% reduction in total costs. The program reduced the number of unique business processes from 700 to just 23, helping to halve the number of manual errors⁹. These business simplification exercises have one thing in common: they are anything but simple to pull off! Their risk profile is high. To succeed, it requires upmost leadership attention, strong internal program management, and financial commitment to stay the course as the migration to the new core processes can take years to implement.

Acquisitions and Partnerships.

When the competitive pressures are so great that organic development would take too long and put the company at risk, acquisitions or external partnerships become viable options. Several reasons drive this external focus. Your skill or competence gap might be too big, and the skill set you need in short supply. You may be facing a new business model that is not culturally matched to your traditional operations, and in that case acquiring a company for its innovative business model might be the answer. In the case where ownership of a technology or platform can become a true source of competitive advantage it might make sense to go for a first mover advantage by acquiring or licensing the technology base outright. For instance, since 2011, Walmart has acquired nearly 14 start-ups to boost its digital transformation. In the process, Walmart gained crucial access to talent and technology know-how in data analytics, search, mobile, advertising, and social shopping¹⁰. Acquisitions can also be used to secure an innovative business model. In 2014, BBVA acquired “Simple”, a fully digital US bank with no physical branches. Simple’s digital-only model eliminates all the fees associated with traditional banking¹¹. Acquisitions are of course risky in themselves, and digital acquisitions are no different. They can also be expensive. Wait too

long and the strategic importance of the technology or the competence set becomes obvious to all your competitors—leading to a bidding war. Acquisitions can also take time to complete. However, in most cases, it is a relatively shorter route compared to organic developments.

Greenfield.

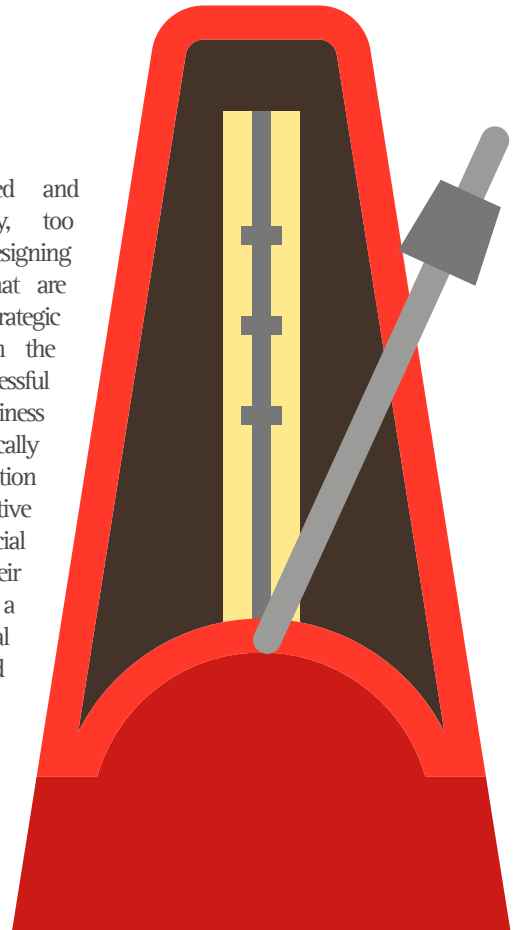
When simplifying the core business proves too difficult or lengthy, or when a new digital culture is required to succeed, companies go for a Greenfield option. This is about building a new and simplified operation “on the side” of the core business—sometimes branded differently. The aim is to migrate the old into the new over time. The Greenfield option is attractive as organizations can start with a blank canvas, creating a company that is digital from day one and with a highly simplified offering and operations. Essentially, this is about building a start-up within a large firm. It requires a heavy dose of new talent and competences, many from outside the existing firm. It needs to be built with specific customer segments in mind. It also requires strong leadership to protect the Greenfield business. “Antibodies” from the parent business often spring into action to work against the new model, particularly as cannibalization of existing business lines will be inevitable. STC, the Saudi Arabia-based telecom operator has adopted such Greenfield approach. STC recently launched a digital

operator, Jawwy, to target the digital-savvy, young mobile consumers of Saudi Arabia with a completely new customer experience. Subhra Das, CEO of Jawwy, explained: “At Jawwy, we are building a digital mobile operator model with the organizational DNA and agility of an internet player.”¹² He added, “Our strategy is not about price. It is about designing and launching a best-in-class customer experience that is fully digital end-to-end.”

Of course, none of these execution routes are mutually exclusive. Many companies hedge their bets by pursuing multiple portfolio options. For instance, some telcos faced with a long timescale and uncertain outcomes in their core transformation, are both radically simplifying their core operations as well as developing Greenfield operations.

Think Portfolio!

In a constantly disrupted and evolving digital economy, too many organizations are designing transformation roadmaps that are static—not balancing strategic and competitive risks with the speed required for successful implementation and business results. Thinking dynamically about digital transformation execution requires an executive reboot. To succeed, it is crucial that senior executives turn their ambitions and strategy into a balanced portfolio of digital initiatives, with short and longer-term outcomes. They also need to make sure they use the full panoply of execution models available to cope with the pressures and magnitude of the digital transition.



1. GE has been transforming itself from a manufacturing giant to becoming a digital master. Its Industrial Internet platform aims to bring together the industrial network of connected machines, advanced analytics and people at work, to drive new levels of efficiency and productivity. The massive scale of Industrial Internet is expected to benefit 46% of global economy, impact 100% on energy production and 44% on global energy consumption. Likewise, GE's Big Data platform Predix is at the heart of GE's digital business, which is growing at 20% and amassing \$5 billion revenues in 2015. For more details on GE's transformation, please see: <https://www.capgemini-consulting.com/general-electric-and-its-digital-transformation>
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7. The Boston Globe, “CVS to open tech hub in Boston”, November 2014
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Should You Become a Platform?





A Platform Strategy: Creating New Forms of Value in the Digital Age



Marshall Van Alstyne

Research scientist at MIT and tenured professor at Boston University, Questrom School of Business

Marshall Van Alstyne – a research scientist at MIT and tenured professor at Boston University, Questrom School of Business – is one of the world’s foremost scholars of information business models. He co-developed the theory of *Two-sided Networks*, a major contribution to understanding the impact of network effects.

Marshall is co-author of [*Platform Revolution*](#) (published March 2016), which analyses how seemingly disparate companies, from PayPal to Alibaba, have upended entire industries by harnessing a single phenomenon: the platform business model.

Capgemini Consulting talked to Marshall to understand how these companies are unlocking hidden resources and creating new forms of value.

Every Company Can Be a Platform

What is a platform for those that are new to the concept?

A platform is a nexus of rules and infrastructure that facilitates interactions among a network of users and third-party participants. As users create value for other users, a network effect expands the community, unleashing the power of a platform. Take Facebook, AirBnB, Alibaba and Uber. These seem like disparate companies, but all have a strong foundation: a platform business model.

Even a weak platform will outperform a strong product every time. If you are using a traditional product strategy, just adding new and better features won't work. This occurs because you won't be able to evolve fast enough with just your internal team.

Executives often think of companies like AirBnB as being 'platform-born'. Do traditional organizations even have a chance given the radical change that would be required to be a platform company?

There is a huge variety of hybrid business models. Traditional companies can continue to operate

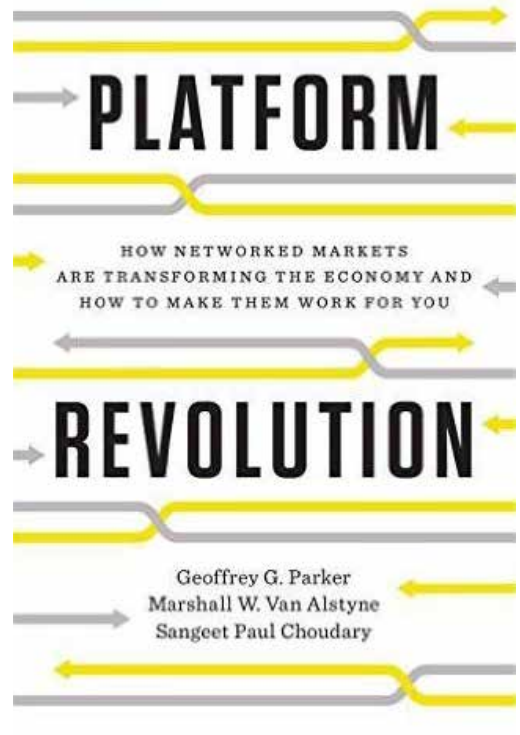
the old business model and add a platform business model on top. It's a mistake to think that you need to transform the entire business straightaway. One of the most famous examples is Apple. It still produces phones and, therefore, it still has to manage traditional product designs and supply chains. That part of Apple continues to operate as a traditional business. But, Apple has added a platform dimension. This includes the mobile phone operating system iOS and the iTunes market ecosystem.

Even a weak platform will outperform a strong product every time.

Also, imagine if hotels such as Marriott, Intercontinental, or Hyatt had added a platform to their existing business. There is no reason they could not have done this, since the business models are not in conflict. However, they moved too slowly.

Let's say you are one of these hotels and are competing with AirBnB, what would you do?

One thing they could do is start to join the platform and put their spare rooms on AirBnB. However, they would then become beholden to the platform in the same way that publishers have become beholden to Amazon, which is a dangerous position to be in. The other thing they could do is buy the number two player and scale that, enter a partnership with Intercontinental and Marriott, or create an industry consortium and share the capability on



a similar platform. Those are the kinds of levers that they can try. Starting from scratch as an individual player would be difficult at this point because AirBnB is just too far ahead. In a market with network effects, incumbents have too few users bringing them useful sources of supply.

Traditional companies can continue to operate the old business model and add a platform business model on top.

Besides Apple, are there examples of traditional companies that have adopted a platform successfully?

My favorite examples are Nike and McCormick Spice. Originally, you might think of Nike as a sports apparel or shoe company. However, adding data sensors and a community was an ingenious move. They developed the Nike FuelBand to track health and sports activity, which allowed groups to track and improve their sports performance together. Nike is now trying to become the operating system for sports gear and clothing. Whether Nike succeeds, or a competitor like Under Armour, this will be done by

connecting your tennis racket, your bike, your clothing, your watch, and other apparel.

McCormick Spice – a US-based company that manufactures spices and herbs – thought, “How am I going to build a platform on salt and pepper?” In a brilliant maneuver, they added information, taste recipes and communities. They effectively developed a recommender system and have become a ‘Netflix for food’. The platform allows them to even design new consumer packaged goods, expertise they can sell to packaged goods manufacturers, grocery stores, and even restaurants.

McCormick Spice – a US-based company that manufactures spices and herbs – thought, “How am I going to build a platform on salt and pepper?”. In a brilliant maneuver, they added information, taste recipes and communities. They effectively developed a recommender system and have become a ‘Netflix for food’.

Prepare for a Winner-Takes-All Market

What are the advantages and risks of launching a platform strategy?

In the Internet era we are seeing a rise of giant firms that is analogous to the conglomerates of the industrial era, but for the opposite reason. The industrial era was driven by giant supply-side economies of scale, leading to huge market concentration. This occurred in electrical utilities, steel production, oil refining, auto manufacture, railroads and many others. These firms became so large, they are the reason we have antitrust law. In the Internet era, we are seeing similar market concentration. Google has 91% market share of search in Europe; Android represents 80% market share in mobile; Microsoft has a 90% share in desktop operating systems; Facebook has 1.6 billion people on its platform; and Alibaba has 70% of all logistics transactions in China and 80% of all ecommerce transactions. None of these firms are known for having industrial scale capital facilities. Instead, their market concentration is driven by demand-side economies of scale and not supply-side -- that’s a giant network effect at play!

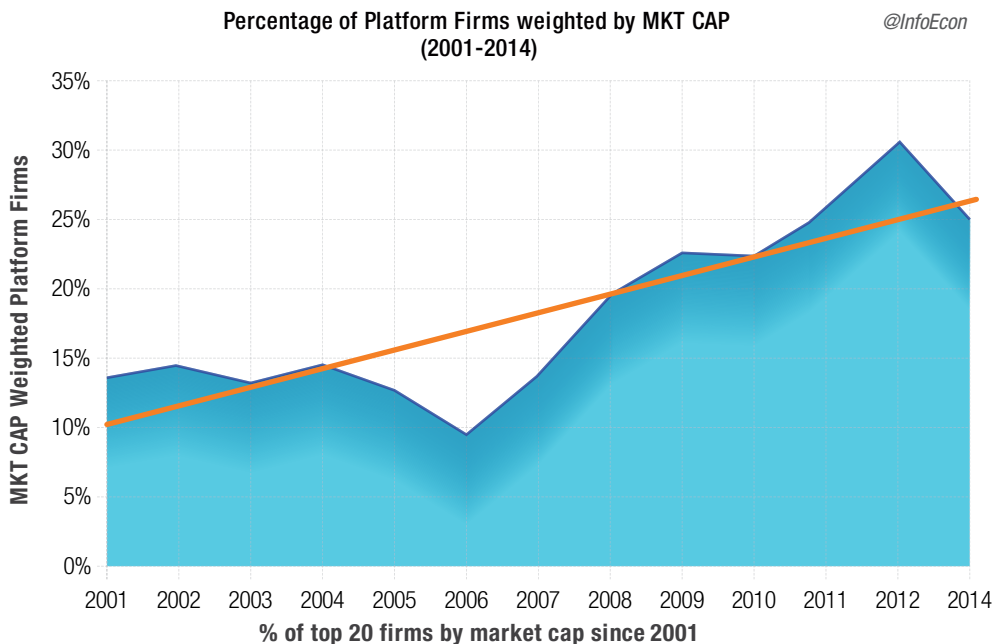
If you generate network effects and figure out how to generate demand-side economies of scale in your industry, then you will be on track for one of these winner-takes-all positions. If you are too late, you lose the option to create a platform because competitors will have created one around you. Then, you will have to then bump up against their network effects and you may be too late to penetrate.

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Besides a high-level strategy, do platforms affect day-to-day tasks for a company?

You must manage a company in the Internet era differently than how one used to manage a company in the Industrial era. Functions such as marketing, strategy, logistics, finance, IT, and human resources used to be handled inside the firm, but now must be managed with external versions of these same activities (see figure on the next page).

Platform Firms are Becoming More Important in our Economy



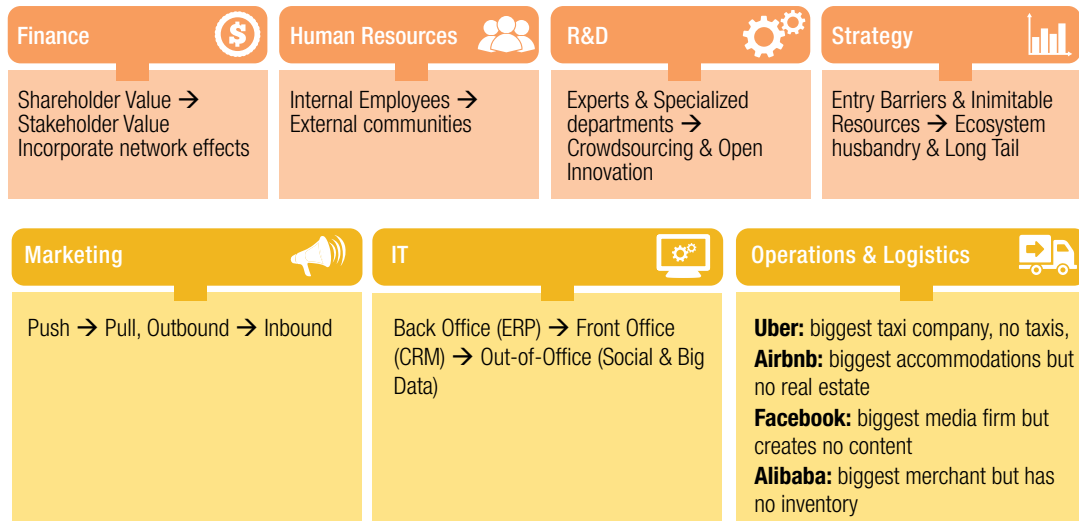
Source: Van Alstyne, Marshall, "Platforms: How Change in Industry is Driving Change in Strategy", MIT Platform Summit 2015

Take operations and finance as examples. Marriott and Hyatt have property that they own. Airbnb doesn't own property, but property is traded outside the firm. Finance used to value the assets owned by the company. But how are you going to value AirBnB or Uber based on their assets if they

do not own them? Instead, you must value the transactions that third parties bring to the platform as well as the feedback that pulls more transactions onto the platform. So valuation methods must shift from owning capital to attracting and husbanding capital. Notice that Airbnb and Uber have

done something remarkable. They have shed even the variable costs of production. This allows them to scale at a staggering pace. If your industry is going to be transformed by platforms, you are going to have to understand these complementary scales.

Network Effects & Inverting the Firm Changes...



Source: Van Alstyne, Marshall, "Platforms: How Change in Industry is Driving Change in Strategy", MIT Platform Summit 2015

Competition in your Blind Spot

How does this change competition for companies?

In the Internet economy, it can feel like competition comes out of nowhere. Swatch and Timex are suddenly competing with Samsung. Ford is suddenly competing with Google in self-driven cars or with Uber in a way that they never anticipated. The United States Postal Service is used to competing with

FedEx and not Facebook. However, it now finds itself competing with Facebook because its core business model is based on bulk mail for ads and ads are vastly more effective on Google and Facebook.

How do these new players keep coming in and taking over an existing business? Incumbents keep looking at product features, overlapping product features and overlapping services, but that's the wrong way to view competition in the Internet economy. The right way to view competition is, "do you

have overlapping users?". Consider that it is far easier to add a product to a platform than to add a platform to a product. If an adjacent platform can add your product or service to its user base in a way that feels free, you will be out of business. Amazon sells Amazon prime, which is free shipping. But then it's easy to add free video as well and cut into the cable business. If the market is "multisided," meaning that it offers many different kinds of interactions across different kinds of users, then it can give away one type of interaction in order to provide

Firms Should Fear Firms Outside their Immediate Industry

	Isn't afraid of...		But should fear...
Publishing	Houghton Mifflin Harcourt	Mc Graw Hill	Amazon
Broadcast	NBC	CBS	NetFlix
Electronics	Toshiba	Philips	Nest (Google)
Delivery	United States Postal Service	FedEx	Facebook
Cars	Toyota	Ford	Uber, Google
Watches	Swatch	Timex	Samsung

Source: Van Alstyne, Marshall, "Platforms: How Change in Industry is Driving Change in Strategy", MIT Platform Summit 2015

another one for free. For example, LinkedIn facilitates professional-to-professional interactions but it charges recruiters for the recruiter-to-professional interaction. This clobbered Monster's business that focused on recruiting alone and had a much smaller network. Players inside the traditional industry will probably be in the same position you are, so it is easier to anticipate their moves. However, it's harder to anticipate the moves of companies coming from an adjacent platform. It's those firms you really have to start worrying about.

What's an example of a firm using its platform to compete in an adjacent ecosystem?

As another example, Alibaba's strategy team is starting to offer microloans. They will be in a position to offer microloans better than banks because they can observe accounts receivable, transactions history, and how frequently people pay for things.

Not only will they be able to vet loans in a new and interesting way, but will also have a different incentive structure. Traditional lending institutions must make money from the loan itself, but Alibaba can make its money from subsequent transactions. This means it can afford a lower-priced loan than a bank. By the time banks see what's happening, they are already

check-mated because it's too late. Alibaba will already be a dominant player. It's far easier for Alibaba to add microloans to their transactions platform than it is for banks to add a transactions platform to their loans. At that point, the banks wouldn't want in, because they won't be able to recover unless they can somehow participate in the downstream transaction ecosystem.

If an adjacent ecosystem platform can add your product or service to its user base in a way that feels free, you will be out of business.

As technology becomes more connected, the size of overlapping users is increasing. How can companies distinguish which users they should cater to?

Look at who is closer to the relationship. Apple is really good at reaching customers through AT&T systems. They took over the customer relationship and then multi-homed across both the Mac and Windows operating systems using iTunes. Apple built a layer on top of the network and took

control of the relationship so users affiliate with Apple more than with AT&T. It's really who gets to control the customer interaction, who can reach through and do that in a better way. Those are your biggest threats.

How can traditional companies, such as telcos, ever enjoy as strong a relationship with their customers as firms like Apple?

They need to do a better job of becoming more than just pipes and tap the network effects in their data. They need the transaction data and preference data for starters. For example, telcos have some opportunities because they already have businesses and consumers on board. Now the question is, "Can we design marketplaces and innovation ecosystems where we are the market as opposed to someone sitting on top of our backbone?" Their problem is that they have effectively been pushed down the stack. They have been commoditized and they need to reach up through that stack and see what kind of services that they can provide closer to the customer. Alternatively, they may be able to participate by acquiring certain existing platform companies, operating over the top, and then growing through them.

Embrace a Platform Mindset Built on Fairness and Community

How do you know which area of your business could benefit from a platform?

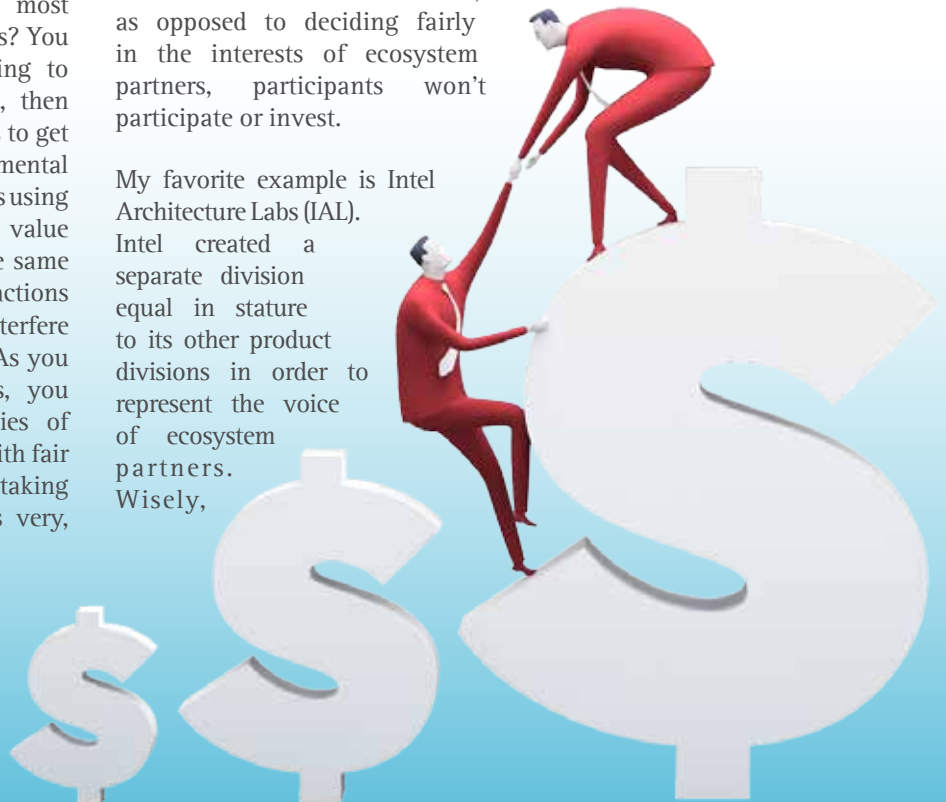
Start with your key value proposition. In Lean Startup you had a minimum viable product. The exact analog here is your minimum viable platform. What is the minimum viable platform, what is the minimum interaction that's going to create the most value for your external users? You need something that's going to attract people. From there, then layer on further interactions to get new data and create incremental network events. Again, this is using consumer data to create value for other consumers. At the same time, ensure that new interactions add value rather than interfere with existing interactions. As you layer on new interactions, you must address the intricacies of each of those interactions with fair governance of interactions taking place on the platform. It's very, very complex.

What do you mean by governance? Is an example of governance, "I am Apple, I take 50% of all revenue of Apps more or less?"

We like to define governance as a combination of three things: 1) who gets to participate, 2) how do you create and divide value, and 3) how you resolve conflict. You have highlighted one element of it: do they keep 10%, 2% or 70%? But participation and conflict issues also matter. If firms always decide in their own self-interest, as opposed to deciding fairly in the interests of ecosystem partners, participants won't participate or invest.

My favorite example is Intel Architecture Labs (IAL). Intel created a separate division equal in stature to its other product divisions in order to represent the voice of ecosystem partners. Wisely,

this representative voice of ecosystem partners meant that projects launched by partners couldn't be killed or absorbed by Intel. If you do not look after the health of the ecosystem, or manage cannibalization in such a way that the ecosystem wins and not just internal product divisions, you won't get ecosystem partner investment. A platform strategy fails if every time someone invents something really valuable, the first thing you do is take it away.



The norm in traditional managerial practices is if value is seen, then try to take it all. Why is this different for companies with a platform strategy?

The simple argument is that 5% of a trillion-dollar market is much more valuable than 95% of a million-dollar market. For example, SAP and Salesforce explicitly think about what percentage of the total ecosystem value they take. It's not 95%, it's much lower. So the real question is how much ecosystem value does a firm create and what governance mechanisms allow you to take value at a slow and steady rate that keeps the ecosystem healthy and growing. How do you look after the ecosystem partners, especially the small ones, so that they continue to invest and grow?

What is the minimum viable platform, what is the minimum interaction that's going to create the most value for your external users?

“One of the biggest mistakes I see firms make is asking, “How are we going to monetize?” as the first question instead of “What’s the best platform design?”

One of the biggest mistakes I see firms make is asking, “How are we going to monetize?” as the *first* question instead of “What’s the best platform design?”. If this occurs, your monetization strategy will put friction on your network effects. Then, your competitor will design a better platform, take your users and then monetize later. Rupert Murdoch made this very mistake when he acquired MySpace. He immediately thought of ads, based on his news experience, and he drove users away, killing the platform. MySpace has never recovered.

What skills do executives and a workforce need to ensure platform success?

It takes people skills in community management. They tend to be much more socially aware and understand the interests of ecosystem partners. When something goes wrong, you fix it quickly and openly and manage the external relationship so that the community continues to participate. To ensure platform success, you have to be comfortable managing without controlling and that's not traditional management practice.

The Platform Revolution: The Near Future for All Industries

Is there any industry immune to integrating platforms into their strategy?

Most industries will be affected, but the order of transformation will take place in proportion to the amount of value created by information and by the external community. Media and software industries are obvious transformations. Services industries will also follow. Even though there is a lesser proportion of value that's being created by information and by community, there are pockets where a platform approach has been valuable even in heavy industries.

A good example is Red Lake Mine, a mining company that is more than 50 years old. The analysts thought that its mines were maxed out and its stock price began to dwindle. The CEO opened up its mining data and offered open innovation challenges. A few thousand people around the world took on the challenge and identified new veins of gold in mines, tripling the amount of extraction in the next couple of years. One might imagine a heavy industry as one immune to platform transformation but even here it is possible. Energy is another industry that, despite its huge capital costs, will undergo platform transformation. In this case, the need to manage spare capacity and trade on production surplus will force the transition.

To ensure platform success, you have to be comfortable managing without controlling and that's not traditional management practice.

There are pockets where a platform approach has been valuable even in heavy industries.

Do you need a long-term vision, strategy and investment program to integrate a platform strategy? For example, General Electric, a traditional appliances company, invested in Predix, its software platform, which is seen as having great potential. However, GE also invested for four years in building a team of 1,500 software engineers.

Platform design is art. After Johnson Controls built PANOPTIX systems for buildings, they eventually pulled back. They weren't able to convince developers to come and join their ecosystem. There are a variety of different failure points because it's such a complex problem with so many different moving parts. You must manage the cannibalization in a

judicious way. You must manage the interactions among your growing ecosystem partners. You must manage value being created externally and you must also manage external quality control and fraud prevention. That's hard and that's not what firms are used to doing. All these activities must realign and adjust, and it's a long-term investment to get it to work.

Strategy in platforms is like playing three-dimensional chess. You have to look at the strategic choices of your ecosystem partners just as much as you look at 3D choices of your own platform internally. Conceiving all those multi-party interactions and getting it right gets complicated and it's not going to happen by accident.



Visa: The FinTech Giant Leading Digital's Platform Revolution



Mark Jamison

*Global Head of New Product
Development at Visa Inc.*

Visa is a global payments technology company that connects consumers, businesses, banks and governments. In 2015, the company processed 112 billion transactions¹ and \$7.4 trillion dollars' worth of goods and services. Visa has built one of the world's most advanced processing networks, capable of handling more than 65,000 transactions per second.

Mark Jamison is the global head of new product development for Visa. His role is to understand, prototype, test and commercialize new payments and commerce capabilities. Prior to Visa, Mark's roles include Global Head of Customer Experience at BBVA and Chief Digital Officer at Capital One Bank, where he was responsible for delivery of digital products, user experience and design standards across all channels for Capital One Bank. Mark was also the founder and executive leader of Capital One Labs.

¹ As of March 31, 2016

Digital Transformation at the Original FinTech Firm

What is Visa's approach to digital transformation?

Visa did not require as radical a transformation as many others in our industry. Digital was already in our DNA. We like to say that Visa was one of the original FinTech companies. Since the 50s, we have been a technology-based organization that allows instantaneous transfer of value anywhere in the world in near real-time. Visa is also a San Francisco headquartered company and digital is part of our culture.

We like to say that Visa was one of the original FinTech companies.

Could you give us some examples of the digital initiatives you launched?

Let me start with Visa Checkout – an initiative we launched to help improve online purchase conversion rates. We found there was a clear need to make online buying easier. Visa Checkout brings the simplicity of the swipe to the online world so customers can complete a purchase with just a username and password. We have had a lot of success globally with this initiative.

Another major digital initiative we launched is the Visa Token Service (VTS) – terminology for what we consider to be a reinvention of the account number. The VTS replaces sensitive account information, such as the 16-digit primary account number, with a unique digital identifier called a token. The token enables payment transactions to be processed without exposing actual primary account number details that could potentially be compromised. For instance, if I want to add my card to Android Pay, they ping Visa and Visa takes that card number and passes them back a token that represents that card number with security and intelligence built into that token. So, from that point on, Android Pay can use the token to enable transactions when you buy things. But, if someone were to steal that token, it will be completely worthless. Issuers, merchants, and wallet providers can deliver secure mobile payment applications, gain access to third-party digital payment experiences, or securely maintain cards on file in order to offer their customers safe ways to shop online and with mobile devices.

You have already invested in some FinTech companies like 'Stripe.' How is Visa working with the FinTech ecosystem?

Visa's mission is to ensure that every Internet connected device, appliance or wearable, can become a secure place for commerce. And to do that, collaboration with the ecosystem is essential and comes in the form of partnerships, investments, acquisitions and collaboration.

Collaboration with the ecosystem is essential and comes in the form of partnerships, investments, acquisitions and collaboration.

We have set up innovation centers globally where co-creation with partners is the goal. We also have an active team that evaluates new ventures and decides if we want to help guide or accelerate the venture. We collaborate with the ecosystem for rapid prototyping and testing of new technologies and we have made investments in a number of companies. We have also invested in additional companies such as Chain, a San Francisco-based company that is a leader in implementing Blockchain infrastructure and developing applications using the Blockchain protocol.

The pace of technology change dictates that we need to invest in people whose full-time job is to focus on things beyond 12 months.

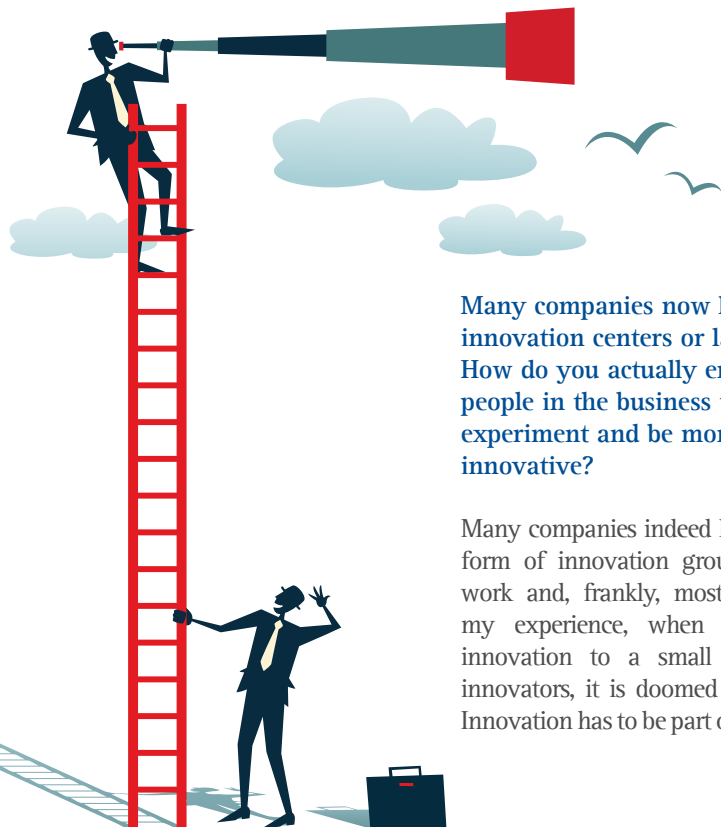
What is the rationale for launching innovation centers and what role do your centers play?

The pace of technology change dictates that we need to invest in people whose full-time job is to focus on things beyond 12 months. Our global network of innovation centers – in San Francisco, Dubai, Singapore and Miami – are an important part of our overall approach to fostering innovation with clients. The innovation labs help us develop a point of view on what the future might look like and help us work back from there.

Our innovation centers focus on three things. First, they engage clients in a conversation around where our industry is going and help them understand the big

levers. Second, we explore new technologies and utilize human-centered design with the aim to support solutions that could deliver real benefits to people. Third, we collaborate and experiment with Visa's technology, Visa Developer Platform in particular, for rapid-prototyping using Visa APIs and SDKs. It's a very applied process meant to deliver tangible results.

When you cede innovation to a small group of innovators, it is doomed to failure. Innovation has to be part of the DNA of the company – it is everyone's job.



Many companies now have innovation centers or labs. How do you actually encourage people in the business to experiment and be more innovative?

Many companies indeed have some form of innovation group. A few work and, frankly, most don't. In my experience, when you cede innovation to a small group of innovators, it is doomed to failure. Innovation has to be part of the DNA

VISA & the Platform Revolution



US\$7.4 trillion
worth of transactions (FY15)

112 billion
transactions

A network capable of handling more than
65,000 transactions
per second



VISA's
new winning model=

From **proprietary** technology capabilities to a
platform open to third-parties

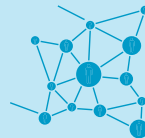
Why become an open platform?

ANDROID

iOS

Winning models

are the ones that build their
business as a platform



Platforms are

winner-takes-all

kind of models

The advantage of VISA's platform



Access to the world's
largest payment
network



Interoperability with **13,700**
financial institutions



In **200 countries**



40 million merchants
around the world

Should companies become a platform?

YES if "you believe you can be a
platform for your industry like iOS or Android"

The Importance of a Long-Term Strategy

“ Successful companies understand the purpose
of their existence ”

of the company – it is everyone's job. In our case, we have heavily invested in methodologies like Human Centered Design or Design Thinking to help you rapidly prototype and iterate your products with real customers. It's a powerful model and we use this approach with clients and across our entire company.

The winning models in the market place are the ones that build their business as a platform.

Open Platform:
The Future of
Visa

Visa recently announced the opening of its payment platform to third-parties and developers. What is the rationale behind this move?

Let's take a step back to understand this. The winning models in the market place are the ones that build their business as a platform. For instance, iOS is a platform that other people build apps on. Android is another

example of a very successful platform. Due to the network effect, it can be a winner-takes-all kind of model. There is one big winner in each area. We want to be the winner of the payment sector and create a standardized platform for the payments community. Being a key player in the payments space, we are very well positioned to win the platform game.

Making proprietary technology services and capabilities open to third-parties is clearly a massive shift for Visa. We believe this will be a winning model.

What is the value proposition for the ecosystem?

The benefit when you build on top of Visa's platform is that you get security, scalability and access to the world's largest payment network. When you build to these standards and access our network, you can have immediate interoperability with over 13,700 financial institutions in over 200 countries and over 40 million merchants around the world. No other company in this space has the customer density, global reach and scale that is available through Visa's open platform.



There is one big winner in each area. We want to be the winner of the payment sector and create a standardized platform for the payments community.

The value proposition for our enterprise clients, such as banks, is that they get the speed and agility that comes with consuming capabilities via formatted APIs. Big enterprises have a hard time keeping pace with changes in their market place. So, instead of having to build a bunch of new capabilities themselves, they can just consume the capability using our platform in a relatively short time.

Also, there is so much creativity and ingenuity in the world that third parties will come up with innovative ideas in payments that we had never thought of. This is what successful platforms have discovered. It will open up our list of who our clients are to a whole new universe of independent software vendors.

How will you assess the success of your platform strategy?

That comes down to a couple of things. One is how many API-related queries you are getting. The second is to understand if important clients are using our platform. Customers always have an alternative to do things the old way or the new way. If we build a better platform they will all convert to this agile way of consuming capabilities.

Making proprietary technology services and capabilities open to third-parties is clearly a massive shift for Visa. We believe this will be a winning model.

Instead of having to build a bunch of new capabilities themselves, they can just consume the capability using our platform in a relatively short time.

Do you have any examples of initial applications developed after the opening of the platform?

There is a really good example that is in production today. We collaborated with the Emirates National Bank of Dubai (Emirates NBD) for a challenge they faced. Emirates NBD's customers include a lot of high net worth customers. When those customers travel around the world, they face challenges in getting their card accepted. For instance, fraud and security rules decline transaction from the same card in different countries in a short time period. It wasn't a great experience for the customers, so they integrated a new capability we put on the platform called Mobile Location Confirmation. The consumer can accept the option to ping their phone when travelling. When

There is so much creativity and ingenuity in the world that third parties will come up with innovative ideas in payments that we had never thought of.

the customer is in Sao Paulo and tries to buy something, we ping the phone, and if the customer's phone is there in Sao Paulo, the risk of it being fraud drops by a significant magnitude and this enables transaction approval. This capability is in production, and we are very happy with the success of this application.

Customers always have an alternative to do things the old way or the new way. If we build a better platform they will all convert to this agile way of consuming capabilities.

Do you think every company should become a platform?

I think a platform strategy makes sense for companies that have the belief they can become the industry's leading platform. If you believe you can be a platform for your industry like iOS or an Android are for their respective customers and partners, go for a platform strategy. If you are a developer, you will go where there is distribution and scale.

I think a platform strategy makes sense for companies that have the belief they can become the industry's leading platform.

A Radical Re-Imagination of The Business, Not Incremental Steps

Do you think it is possible to develop a long-term strategy in an organization given the pace of technology-driven change today?

Of course it is possible. Successful companies understand the purpose of their existence. They really understand what their purpose is, the 'why', and they don't get caught up over the long term in the 'what'. I call it 'freedom within a framework', a strategy that tells you where you are going. It might not give you every explicit step. In the world that we now operate in, things are changing so quickly that you really can't set an operating plan that goes beyond a couple of years. But that doesn't mean that you can't have the processes in place that allow you to adjust really rapidly over time to make sure you get to the right point.

If you are driving from San Francisco to LA at night, your lights can only give you visibility so far on the road - you can only see with clarity so far in the near-term. But you still have the confidence that consistently following the path your lights illuminate will get you to LA.

Could you name an organization that you truly admire that has succeeded in its digital transformation?

BBVA has been a real visionary in the banking industry. Francisco Gonzalez, Chairman and CEO of BBVA, has often publicly¹ said that BBVA will be the first bank in the world to become truly digital. They've made strategic and investment decisions to achieve that vision ranging from building a real-time, single instance banking backend to implementing a comprehensive services-oriented architecture and robust Big Data analytics. They effectively built the infrastructure of a modern technology company with a large investment over multiple years. It's an incredibly impressive feat to achieve.

¹ Euromoney, "Digital banking: BBVA's González – The digital banker", September 2014

What would be your key recommendations to big organizations for initiating digital transformation?

Be really bold in your thinking. You won't succeed if you make incremental steps. It's all about looking at where the future is and working backwards; not trying to take incremental steps forward. And that has implications for talent, culture and investments. What digital transformation requires is a radical re-imagination of your business.

“What digital transformation requires is a radical re-imagination of your business.”



Executing Digital Strategy: Acquisitions/ Greenfield or Organic Growth?





GE: How an Industrial Leviathan became a Digital Giant



Beth Comstock

Vice Chair of GE

Beth Comstock is the first female vice chair of GE. She leads the organization's Business Innovations unit, which seeks to accelerate growth from new service models. Prior to her current role, Beth served as GE's chief marketing and commercial officer, and before that was President of Integrated Media at NBC Universal, where she oversaw the company's digital efforts, including early development of hulu.com, Peacock Equity, and acquiring ivillage.com.

GE is a highly diverse business and a venerable 140-year-old organization that occupies a significant place in the US' corporate history. How did this corporate giant take such giant strides in its digital transformation to position itself as one of the top ten software companies globally by 2020? Capgemini Consulting spoke to Beth Comstock to understand more about GE's strategy for shifting from industrial leviathan to digital giant. Incubating state-of-the-art technology, investments in startups, and strategic partnerships are some of the ingredients GE has used to propel its digital transformation.

The Journey So Far

What have been the key milestones in your digital transformation journey?

We started our journey about five years ago. We were already picking up a lot of signals between 2008 and 2011 and understood that digital disruption was going to impact the industry in a big way. We started by incubating digital expertise via our technology group. We embedded a software analytics team at our global research center for example.

It was around 2013 when we decided to meld the best of our digital capabilities with the best of our physical capabilities. Hardware and advanced materials science have always mattered a great deal in our business, but we started focusing on the intersection of the two and began digitizing the manufacturing process, not just the things that we made. The vision started to coalesce around a digital transformation, from designing to producing to shipping and in-the-field services. Our biggest impact today has been on our service business because you are suddenly selling everything as a service.

Where is GE now in its journey towards a digital industrial company?

This is a long journey for us. I think we are about a third of the way in our digital transformation. We built an industrial-strength cloud to power all of the data needs that our industries are going to have. We have really great use cases, especially in the energy sector and in transportation.

This is a long journey for us. I think we are about a third of the way in our digital transformation.

Can you give us an idea of the level of investments you are making in digital across the business?

We have a billion dollar run rate investment so far into our digital efforts. And our goal is get \$15 billion in revenue by 2020.

We have a billion dollar run rate investments so far into our digital efforts.

Can you share some examples of digital initiatives you have launched?

A great example is our “Digital Wind Farm”¹, which connects the embedded sensors and controls in the actual wind turbine, providing connectivity across multiple layers. The blades of the turbine are able to sense the environment. Using technologies such as radar and lidar², they know where the wind is coming from and motors shift the pitch of the blade to react to the wind. So, the whole wind farm is orchestrating and communicating and optimizing for that specific environment, even for microclimates that may be different within the wind farm. They are then able to send information about the cost and the quality of the energy being generated to the utility company. This way, the utility can plan to not use other energy sources, such as coal or gas, when wind is more efficient. It’s all done with

¹ GE's Digital Wind Farm is a comprehensive hardware & software solution comprised of GE's customizable 2 & 3MW wind turbine products, a predictive analytics software platform, and performance optimization controls technology that, over the course of a wind farm's life, can improve its energy output by up to 20% (as compared to an average, North American wind farm.) Source: <https://renewables.gpower.com/wind-energy/technology/digital-wind-farm.html>

² Lidar is a detection system which works on the principle of radar, but uses light from a laser

Predix, our cloud-based platform for the Industrial Internet, which provides a digital infrastructure for the wind farm, enabling collection, visualization and analysis of unit- and site-level data.

GE's Predix Platform – The Cornerstone Of GE's Digital Strategy

Predix is very much at the core of your digital transformation. Can you explain the concept of Predix and why you want to become a platform company?

If you think of the range of industries that GE is in – energy, transportation, healthcare – you realize that some of the basic capabilities are similar. You want to connect your machines, know how they are performing and predict failure and maintenance. That's the vision.

To do that, we needed a platform that would ingest, analyze, and predict a vertiginous volume of industrial data with the right kind of security capability. It hadn't really been built at industrial scale, so it needed to be.

We needed a platform that would ingest, analyze, and predict a vertiginous volume of industrial data with the right kind of security capability. It hadn't really been built at industrial scale, so it needed to be.

Why did you decide to open up your platform?

The more people that can be building and contributing non-confidential data to the stack, the better the outcomes are. This is why we have opened up our Predix platform to our customers – and even competitors – to enable them to write applications on the platform. We already have 11,000 developers at this stage.

So you wanted to create a network effect?

With Predix, we are creating a network effect *and* an intelligence effect. The more people you have on the platform contributing, the smarter the whole system gets.

You mentioned technology that's industrially scalable. How does Predix scale up with increasing data volumes?

We have created the concept of a “digital twin”, where we simulate in the cloud every piece of machine we make. As data comes in, the cloud constantly runs simulations to make the models that will one day predict service needs. They will predict things before they become catastrophic or before it costs a lot of money.

With Predix, we are creating a network effect *and* an intelligence effect. The more people you have on the platform contributing, the smarter the whole system gets.

Implementing The Strategy: Building, Acquisitions Or Greenfield

How do you operationalize GE's digital strategy? Investing, Greenfield or acquisitions?

I think we have done a little bit of all.

What we have done especially well is investing in digital startups that we can embed in our technical stack. An example is Maana, which acts like a search engine for the Industrial Internet. We have invested in startups from a venture perspective and are also using their technology as a part of our offering. So, as they grow, we grow.

The creation of our new GE startup, Current, powered by GE, is an example of us launching Greenfield operations.

The creation of our new GE startup, Current, powered by GE – which focuses on energy efficiency, energy management, and on-site power – is an example of us launching Greenfield operations. It can be a pretty profound shift for a 140-year-old business. Our startup goes to market in a different way. The measurements for the organization are different, as is the way we drive our commercial strategy.

While we have focused less on acquisitions, we recently announced the acquisition of Daintree Networks, which leads the market in smart building control, sensing, and enterprise IoT applications. Together, we will make buildings of all sizes smarter,

more energy efficient, and be the gateway to new services that create value for customers both in energy and beyond it.

In the past, GE grew a lot through acquisitions. Recently, we have focused on the organic route. When something is new, you have to grow it. You can't buy everything. We invested in technology and innovation to grow from within – to grow ourselves.

In the past, GE grew a lot through acquisitions. Recently, we have focused on the organic route. When something is new, you have to grow it. You can't buy everything.

In the fast-moving digital environment, how can you build quickly enough?

Partnerships have helped us advance our capabilities really rapidly. We are now working with Cisco, Intel, Pivotal and many startups. A lot more partnerships are happening at GE and it doesn't always require an ownership stage.

The new formula of success is that you don't do it all yourself – you have to know what you have to be uniquely good at. We may partner with some companies helping us do some of the simulation and machine learning. These can be things that are not necessarily core to our capabilities but which are important for the stack.

Partnerships have helped us advance our capabilities really rapidly.

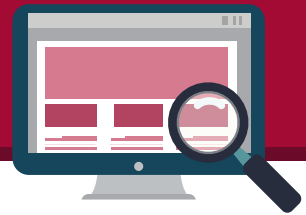
With technology evolving so fast, is it still possible to have a long-term strategy? Do you still have three- or five-year strategy plans?

You still need to have a vision of where you want to go or understand your differentiation. But you have to be much more adaptable. Maybe your vision stays the same, but how you get there may change faster than you could have imagined. So, I think the three- to five-year plans are more vision setting. They are more like scenario planning that tells you what the world might look like.

The new formula of success is that you don't do it all yourself – you have to know what you have to be uniquely good at.



Industrial Leviathan to Digital Giant



GE's DIGITAL JOURNEY in NUMBERS



140
year old company



2011
when GE started its digital transformation



We are about a **third of the way** in our digital transformation
-Beth Comstock



1 billion USD run rate **investments** so far into digital efforts



Objective of **15 billion USD** in digital revenue by 2020



11,000 developers already writing applications on Predix



50 million data elements of industrial assets secured and monitored everyday

(source: <https://www.ge.com/digital/sites/default/files/predix-platform-brief-ge-digital.pdf>)



GE'S DIGITAL STRATEGY

Investing

in digital startups – Maana, a search engine for the Industrial Internet

MAANA

Greenfield

GE startup “Current, powered by GE”, focusing on energy efficiency

Current, powered by GE

Acquisitions

Daintree Networks, smart building control/ enterprise IoT

Daintree Networks

Partnerships

Cisco
Intel
Pivotal
Microsoft
Oracle

amongst others

Organic Growth

“We invested in technology and innovation to grow from within”

Beth Comstock

You still need to have a vision of where you want to go or understand your differentiation. But you have to be much more adaptable.

Culture

GE is well over a century old. How did you adapt GE's culture to the digital world?

We had to get leaner, more agile and react faster. We told our employees - "We are going to hold you accountable for being faster. You can try something. It doesn't have to be perfect every time." Of course, this does not apply to everything that we do - we want a perfect flight for a jet engine. But for some of the other things, perfection is not required.

We told our employees - "We are going to hold you accountable for being faster".

We launched FastWorks, our lean startup method, which is all about launching something in a minimally viable way. The key principle is that you only fund what you need to get to the next stage of development. It's like having our business leaders act like venture capitalists - funding things earlier and faster, killing things quicker.



How do you encourage people to experiment and accept a very iterative process?

We did a massive overhaul of GE's incentive structure to better reflect what we are trying to do. We are also changing how we fund projects – implementing this seed/launch/growth stage gate funding. Business units in the past might have said, “I made \$5 million in five years.” Now, we would have a series of iterative questions instead. For example, “What can you do with \$50,000 in five weeks to validate that this is even a need in the marketplace?” And “What can you do with \$150,000 in three months to validate that we even have the technology that's going to be required?”

We have not figured it all out but that's the transformation that's happening real-time here.

We did a massive overhaul of GE's incentive structure to better reflect what we are trying to do.

What is the culture you would like for GE? How would you define it?

I think the company has to be more collaborative, more open and react even faster. We want to instill a culture of permanent iteration – a culture obsessed with constant improvement; a culture of perseverance.

The company has to be more collaborative, more open and react even faster.

Does the move of GE's HQ to Boston play a role in this change of culture?

Yes, I think it's a great manifestation of our new culture and the acknowledgement that we are a much more distributed company. We have turned our headquarters into centers of expertise that are connected to the outside world. The role of our headquarters is now more about bringing in new models from the outside and finding ways to adapt and translate them for our business units. Boston is also a city where there is a lot of Industrial Internet capability development going on.

Governance

You created GE Digital. What was the rationale behind creating this new unit?

We needed to get to scale fast. You can't have five different businesses building five different technology stacks and clouds. It does not make sense. We centralized the digital capabilities until we felt confident we had the heft we need while at the same time creating that connectivity to the business unit and the market. So, it's a tension. It's neither central nor distributed, and you are constantly toggling back and forth.

Is there a dual reporting structure?

We have Chief Digital Officers (CDOs) for each line of business and they are all part of the centralized digital unit. They report in to our head of digital and their business units. We need to have that dual oversight to make sure the business needs are represented, but also the digital needs are not underwhelmed. Our CDOs have revenue numbers and productivity numbers. Those roll up to the business leaders' P&L. So, they have accountability in both places. They've got to get it built, and they have to make sure it gets rolled in a way that the customer finds value.

The Future

How do you see GE evolving in the next ten to twenty years?

We will still be selling hardware. You can't fly a plane without an engine. You can't create electricity without some kind of electricity power generation. These industries will continue to exist. But more and more of our revenue will be coming from new service models, from "as a service" and not just from the pure hardware.

Just get started – don't over-analyze things.

Can you give us some examples of these new service models?

Let me give you an example of a new service we are incubating – inspection done by drones. Drones surveying oil rigs in the sea and wind farms. There will be new applications, new kinds of mash-up of the hardware and the software. But GE will continue to remain in its core industries, perhaps looking at being more of a system partner than just a machine partner.

What would you recommend to companies on how to handle their shift to digital?

Just get started – don't over-analyze things. Pick an area to get smart. The more you do, the smarter you get. I also think partnering with others who have the expertise is the fastest way to get there.

We have Chief Digital Officers (CDOs) for each line of business and they are all part of the centralized digital unit.

SHOULD YOU BECOME A PLATFORM?

“Even a weak platform will outperform a strong product every time. If you are using a traditional product strategy, just adding new and better features won’t work. This occurs because you won’t be able to evolve fast enough with just your internal team.”

– Marshall Van Alstyne

“With Predix [GE’s cloud-based platform for the Industrial Internet], we are creating a network effect and an intelligence effect. The more people you have on the platform contributing, the smarter the whole system gets.”

– Beth Comstock

“The danger of being a platform is you are not really in control. If your user community decides to go to some other platform, there is not much you can do to keep them tied to you.”

– Rita McGrath

“Being a platform is unavoidable if the addition of extra users adds value to what you are offering.”

– Rita McGrath

“I think a platform strategy makes sense for companies that have the belief they can become the industry’s leading platform. If you believe you can be a platform for your industry like iOS or an Android are for their respective customers and partners, go for a platform strategy.”

– Mark Jamison



Monty Hamilton

*Director of Digital Operations
at Telstra*

Telstra: Securing a Bright Digital Future for One of Australia's Most Iconic Organizations



Telstra is Australia's leading telecommunications company, with revenues of \$26.6 billion in 2015 and 36,000 employees across 20 countries, offering a full range of communications services and competing in all telecommunications markets. It aims to make digital the default channel for all key customer-facing activities, such as billing, payments and customer enquiries.

Monty Hamilton is Director of Digital Operations at Telstra. He is responsible for the day-to-day running of Telstra's Digital business across customer segments – Consumer, Business, Enterprise and Government channels. Prior to joining Telstra, Monty co-founded UBank – ubank.com.au – a direct bank owned by National Australia Bank. At Telstra, he also co-founded the largest digital event in Australia – The Australian Digital Summit.

Capgemini Consulting spoke to Monty Hamilton to understand more about Telstra's shift to digital and the transformation of its customer experience.

Learning from Five Years of Digital Transformation

How and when did Telstra's digital transformation begin?

We began five years ago with the creation of Telstra Digital as a business unit. We brought together our online, mobile, social and ecommerce initiatives to bolster digital sales and service capability.

We first decided to focus on delivering a much better experience for our customers through digital technologies. Many of our customers actually prefer interacting with us using digital channels. We had to deliver on our customers' expectations of interacting with us digitally. There are also considerable productivity benefits for the organization which can be realized from a digital transformation.

When we started in 2011, less than 20% of our customer transactions were digital compared to 56% in H1 2016.

What have been some of the key achievements so far?

One of our key measures of success is the share of customer transactions conducted on digital channels. When we started in 2011, less than 20% of our customer transactions were digital compared to 56% in H1 2016. We passed the 50% milestone in October 2015. We are now a more digital company than we are a physical company.

We are now a more digital company than we are a physical company.

Can you say a word about Telstra Digital?

Telstra Digital is not a separate entity or a separate organization. It's a business unit tasked with the responsibility of helping Telstra transform digitally. It's not about one area controlling the transformation – it's about enabling the digital transformation base plan across the organization. This is absolutely critical as I have seen approaches where a digital unit alienates itself from the rest of the organization. But Telstra's Digital Unit is here to help the broader organization – it is a center of excellence for digital. It is

the very close collaboration between the product or channel teams and the digital unit that has helped us to attain our objectives.

It is the very close collaboration between the product or channel teams and the digital unit that has helped us to attain our objectives.

You started by investing massively in IT systems. Why was it so critical for your digital transformation?

Like many incumbent organizations, our IT systems were built for our thousands of team members to use in retail stores and contact centers rather than for our millions of customers. We had to completely transform our systems to enable direct digital interactions.

We initially focused on three core capabilities. First, we had to make sure that our systems would be resilient and support direct customer transactions. Second, we needed a capability in identity management to bring our customers and their product holdings together into a single customer view. The third piece was

the customer channel. We provided web and app-based customer services through the Telstra 24x7 app. Today, over 2.9 million customers actively use the Telstra 24x7 app. It's the number one Australian application on tablet, and the second most popular Australian application on smart phone. Our objective is to minimize the effort required for our customers when they interact with us.

Telstra launched its 'Digital First' program in 2014. What was the objective of this initiative?

We began our digital transformation in 2011 by focusing on the customer experience. In 2014, we started thinking more broadly: how could we use the digital design, build and run model in place with our customer facing digital transformation to change the experience of the Telstra employees, contact center team members or the field technicians who are visiting our customers every day?

Our Customer Advisor Tool (or CAT as it's known internally) took the exact same design principles for customer facing digital apps and applied these to our internal workforce. Today 1,800 of our store team and 7,000 of our contact center team use the Customer Advisor Tool each day. Ahead of traditional CRM interfaces, the application is operated on our digital architecture with a responsive interface so it works

on tablets - in our stores we're having conversations on the shop floor instead of behind the counter, the application is also faster and easier for our consultants to get all the relevant information to help a customer saving around 2 and a half minutes on certain call types.

We also thought about how we could truly connect our customers between digital channels and retail stores. Today, over 300 Telstra stores have low-energy Bluetooth beacons installed. When a customer walks into a store with the Telstra 24x7 app and with Bluetooth enabled on their phone, the store is aware that our customer has entered and customers can interact with the store from their phone. We're in the early days here, however we have some great use cases planned to benefit our customers in the year ahead.

Telstra also launched a community / crowdsourced customer support approach. How does it work and how successful has it been?

Crowd sourcing has been part of our digital journey since day one. Today, nearly one million Australians visit our customer community each month. In our digital community, customers help other customers resolve the issues they face. More than 60% of visitors to the community now find the answer to their questions from someone within the community.

Crowd sourcing has been part of our digital journey since day one.

It is a win-win scenario for everyone – less effort for our customers and a productivity benefit for us and our shareholders. And, even more importantly, it enables us to get completely transparent feedback from our customers in a collaborative environment. This helps us improve our products.

60% of visitors to the community now find the answer to their questions from someone within the community.

In the spirit of our 'Digital First' program, we decided to extend this crowd support model to our internal organization. If an initiative works so well with customers, why not create something similar internally? So, we built a peer support community to tap into the knowledge of our employees. Today, over 17,000 of our employees have used this peer support community. It is transforming the way we deliver

services and launch our products. It is now easier to train, coach and develop our employees with the peer support community.

If an initiative works so well with customers, why not create something similar internally?

Telstra's Digital Strategy
– The Long-Term Organic Route

Telcos have chosen different strategic paths for their digital transformation. Some are launching digital brands or adopting a Greenfield approach. Telstra clearly chose the long-term transformation route. What was the rationale for this choice over say a Greenfield approach or digital sub-brands?

It's important to understand the significance of Telstra as an organization in Australia. We are one of the most recognized brands in the country and there is an enormous sense of national pride in our century-old history.

Our vision for digital was – and still is today – to create a bright future for Telstra in a digital world. It wasn't about building something new and replacing things we've got. We have an incredible brand, culture, history and technology infrastructure. Our mobile network is consistently rated as one of the best in the world. We have an incredible work process. We didn't have a starting point of broken assets. We wanted to build a resilient organization – transform our company for the very long-term.

It was a logical decision to build upon the organization we had rather than through a brand strategy or a Greenfield approach.

Over 17,000 of our employees have used this peer support community.



Many companies are going down the acquisition route to accelerate their transformation. Large organizations like Wal-Mart have acquired dozens of startups. Is Telstra considering the acquisition route?

We have and will continue to make strategic investments to help us transform our business. Telstra Ventures, our corporate venture capital group founded in 2011, invests in high-growth opportunities that enable us to offer new products and services to our customers. During 2015, we made nine new investments. Telstra Ventures' portfolio now consists of investments in 20 companies in Australia, the United States and Asia. The end objective is to help our customers through better experience and shareholders in making the right investment.

These investments present an incredible portfolio of capability for us to leverage internally to help accelerate our digital transformation. For example, we're using capability from investments in Box for enterprise storage, DocuSign for contract acceptance, Ooyala for video with our customers and TeleSign for security.

You talked about ventures, could you say a word about your startup accelerator?

We launched our startup accelerator program called muru-D four years ago. 'Muru' is an aboriginal word meaning "path" and the 'D' stands for "Digital". muru-D identifies and supports startups to create valuable technology products and services through a six-month acceleration program. We provide the facilities and support such as real estate, technology and access to the resources of Telstra and we take a small equity share upfront in the business. muru-D launched in Singapore in 2015 and we hope to attract the region's best digital talent and successful startups.

You can invest millions of dollars in technology but if you don't have a culture that enables you to collaborate across the organization, then nothing will change.

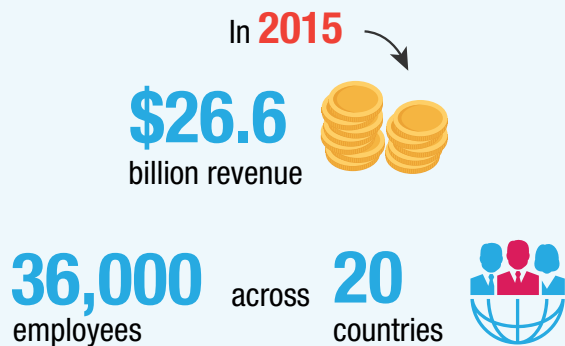
No Digital Transformation without a Change in Culture

In our research, we found that culture is one of the major obstacles to digital transformation. How did you create a digital culture at Telstra?

The culture at Telstra was wonderful but we didn't have a digital culture. And this was clearly an issue. You can invest millions of dollars in technology but if you don't have a culture that enables you to collaborate across the organization, then nothing will change.

Telstra's Digital Journey

TELSTRA'S KEY FIGURES



KEY DATES

2011 Digital Transformation Launched – **Focus on customer experience** 

2014 onwards **Leveraging digital capabilities** created to improve the experience of employees

SOME KEY ACHIEVEMENTS OF TELSTRA'S 5-YEAR DIGITAL JOURNEY

Digital Interactions

Digital customer transactions were

< 20% in 2011 **56%** in H1 2016



Crowdsourcing – For Employees

Over **17,000** of Telstra's employees have used the company's **peer support community**

Crowdsourcing – For Customers

60% 

of visitors to the community **find the answer to their questions** from someone within the community




Telstra's Investments in Startups

Telstra Ventures' portfolio = investments in **20** companies in Australia, the United States and Asia

KEY RECOMMENDATIONS

1 Focus on **employees** and **culture** first 

2 **"Rapidly iterate"** – customer service app: **29** releases in **4** years

3 **Become an enabler** to digitization in the organization and not a controller or retailer of digitization 

There is not one specific activity that enables a cultural change. It is a series of initiatives, be it hiring or new work approaches. For example, one of the changes we enabled in our digital team is rapid prototyping. That was critical as you can't spend three years building something. What you initiated three years ago will not be what a customer wants today. You have to be prepared to rapidly iterate and have a number of release cycles. We operate through an agile model when it comes to our technology and digital development practice. And this has really helped us create a culture of agility and collaboration within the organization.

“
Every morning our executive team receives the net promoter score for the previous day.

There is another very fundamental culture change that we implemented in our organization. For over five years now Telstra has put 'improving customer advocacy' – measured by our net promoter score – at the top of our strategic pillars. All employees can view the net promoter score for the specific channel they are responsible for on a daily basis. Every morning our executive team receives the net promoter score for the previous day. It serves as a very significant cultural proof point. You don't make decisions without customers' interest at heart. It enables change in traditional decision-making processes. People at all levels of the organization can speak up on the importance of our customers. I would say that's one of our most significant cultural changes across the organization.

Are there traditional companies that you admire for their digital achievements?

I have been impressed by the transformation of the travel industry. Qantas, for example, has been doing some really interesting things on the digitization of their customer experience – connecting their physical presence at check-in, around the airport and on the plane with smartphone apps that make travel easier and more enjoyable – and probably saving them a lot of money at the same time.

“
Focus on employees and culture first.

What would be your key recommendations to large organizations on how to handle their shifts toward digital?

One, focus on employees and culture first – it is the people and the culture that will enable the transformation and put technology to work. Encourage your team to embrace technology to solve problems and improve customer experience.

Two, rapidly iterate and have a number of release cycles alongside your traditional or legacy IT – experiment with selective customers and industrialize when there is a true need. Our web-based customer service app ‘My Account’ is a great example – between our IT and digital team, we have had 29 releases of this app over the last four years.

Three, become an enabler to digitization in the organization and not a controller or retailer of digitization. The opportunities to grow and succeed as a result of digital transformation are available to everyone in your organization – not just a digital business unit.





Jawwy: How a Saudi Digital Venture is Rewriting the Telecom Rulebook



Subhra Das

*Chief Executive Officer,
Jawwy from STC*

Jawwy is a new digital mobile service that was launched by Saudi Telecom Company (STC) in May 2016. STC is the largest telecommunication services provider in the Middle East & North Africa, with revenues of \$13.52 billion in 2015. It has some 100 million customers worldwide and owns a fiber-optic cable network spanning 137,000 kilometers across Asia, the Middle East, and Europe. STC is the leading telecom operator in the Kingdom of Saudi Arabia and its international presence extends across Kuwait, Bahrain, Turkey, Lebanon, Jordan, Malaysia, India and South Africa.

Subhra Das is the CEO of Jawwy – STC’s digital venture. Previously, he was EVP of the Consumer and Digital Business Unit and Head of Innovation at du, UAE’s premier telecom operator. At du, Subhra successfully developed and executed an innovation-led strategy to drive du’s rapid ascent to a record 45% market share within 5 years from launch in one of the world’s most highly penetrated mobile market. Subhra has led 6 mobile operator start-ups in various capacities across the globe and is also a digital entrepreneur. He is an alumnus of Harvard Business School where he studied innovation under leading thinkers such as Dr Clayton Christensen and Dr Michael Tushman.

We spoke to Subhra to understand how a digital-only mobile operator can better meet consumers’ evolving needs.

Going Greenfield – the Only Way to Rapidly Meet Consumers’ Digital Needs

STC is the largest telecom operator in the Kingdom of Saudi Arabia (KSA). Why did you decide to launch an independent digital venture?

The market in KSA stands out in many respects. Sixty-seven percent of the population is below 30 years of age. Saudis are some of the most prolific users of social media in the world and have an ever-increasing appetite for all things digital, with 190 million YouTube videos viewed in KSA daily. That translates to six YouTube views per-citizen per-day, which is the highest in the world. Saudi Arabia also has the world’s highest penetration of Twitter among internet users.

As Saudi millennials are so digital-savvy, they expect a completely new kind of experience that is very different from what today’s operators can provide. They expect an experience that is real-time, on-demand, online, DIY and social (or ‘ROADS’ for short). This is very much on par with the experience offered by the likes of Google, Apple, Facebook and Amazon – seamless, intuitive and very simple. Current operators struggle

to meet these needs as they are often constrained by their legacy systems, mindset and culture. This creates an immense frustration for consumers at every stage of the experience – from buying to using the service or contacting customer support.

We concluded that we needed a completely different way to reach out to Saudi millennials. We needed to reimagine the mobile service experience for the digital generation. This was not something that could be done overnight given existing organizational and systems realities. So, STC decided to create a completely new digital venture/BU – Jawwy. When you want to reimagine and carve out a new experience, and do that rapidly, you have no choice but to go Greenfield. You don’t want to be constrained in any way by the existing organization’s operating model, culture and systems. Hence the Greenfield route was a natural choice. We are building a new digital mobile operator model with the organizational DNA and agility of an internet player. We believe this is how we will positively disrupt the mobile service experience in Saudi Arabia.

We are building a new digital mobile operator model with the organizational DNA and agility of an internet player.

What is Jawwy’s value proposition and ultimate objective?

Jawwy is a complete re-imagination of the mobile service experience for the digital generation in KSA. In Arabic Jawwy means ‘my own way of doing things’ or ‘my own style’. Customers order the Jawwy SIM, have it delivered to their doorstep or pick up from a convenient Collect location, and download the Jawwy app to start using our services. They can build, share and manage their plans in real-time via the app. Other features of the app include instant service activation through the product catalogue and real-time contextual offers and notifications. New pricing plans and offers can be launched within a day or two. The customer care model is digital, featuring self-help, online, social and peer-to-peer support using crowd-sourcing. All our marketing communications are online and

social media based. We have designed a best-in-class customer experience that is fully digital end-to-end. And we are addressing the core business of telecom operators. We are not undertaking digital initiatives at the edges yet, such as mobile health or mobile money. This is a transformation of the core of how telecom services are designed and delivered.

Our objectives are threefold. One, capture the KSA youth market where STC can do more. Two, future proof STC's market position. And three, establish STC as a lead innovator on the global stage.

This is a transformation of the core of how telecom services are designed and delivered.



Dream BIG

When you want to reimagine and carve out a new experience, and do that rapidly, you have no choice but to go Greenfield.

How different is Jawwy from the second brands launched by telecom firms in Europe?

Operators in Europe have launched their second brands mainly to create low-cost alternatives and as a reaction

to the price pressure coming from MVNOs. But, Jawwy is not a price play, but a digital experience play.

Can you describe Jawwy's operating model and systems?

Jawwy is a BU within STC with full latitude and significant autonomy to design, develop, deliver and operate this unique end-to-end digital experience. A special Supervisory Board oversees the working of the BU. Jawwy has its own strategy, commercial, technology and support functions while being reliant on STC's network and regulatory areas. Jawwy employs a lean organization structure and puts special emphasis on recruiting top global talent and fostering an organization culture similar to the DNA and agility of an internet player.

Jawwy is not a price play, but a digital experience play.

Jawwy has full control and ownership of IT systems that integrate with STC's network. Given the need to provide an end-to-end digital experience, Jawwy partners with several new-age SaaS, PaaS and IaaS providers. This provides multiple benefits, including faster time-to-market and responsiveness, agility, faster scaling and better economics.

Design a Customer Experience Digitally from the Ground Up

How did you design the customer experience?

We hired a leading team of ethnographers from New York who conducted ethnographic research on the digital habits of millennials and their telecom pain points. These pain points included - confusing tariff plans, data usage tracking, recharge issues, billing and payment challenges, poor buying experience, disillusionment with one-way brand communication, and

extremely weak service support. We also looked at the evolving needs and wants of this segment. Millennials are already used to a significantly enhanced level of experience delivered by over-the-top (OTT) players.

It was very clear that millennials seek a real-time experience offered online and through an app and with do-it-yourself (DIY) and social features. We then had to rely on creativity, great design and cutting-edge tech to address the pain points and their needs using the power of digital. We focused on simplification of the experience and partnered with leading design firms.

How did you use digital technologies to enhance the user experience?

Early in our journey we designed the systems architecture for a digital telco based on reimagination of the customer experience. We then looked at cutting-edge tech available in the market and moved forward with the right partnerships. Some of the key partners are Silicon Valley firms with new age tech, app and online solutions backed by cloud-based and virtualized platforms. Our partnership with ItsOn is an example of using

new digital technologies to move the smartness of telco back-end systems to the front-end using an app, thereby enabling real-time and unprecedented mass personalization experiences when it comes to service activation and usage management of plans. To address the buying experience, we built full e-commerce capabilities from the ground up, complete with integration with several 'last-mile' delivery firms and a nationwide network of Click & Collect outlets. On the support side we invested in several social media technologies and new age contact center solutions including crowd-sourcing. The challenge is about making the experience seamless across the customer journey. We accomplished this by using approaches like single sign-on and login using social media credentials. Our customer accounts are also linked to their social IDs, which enables a great experience.

Jawwy has full control and ownership of IT systems that integrate with STC's network.

How about the customer support?

Customer support in the telecom market is very time consuming and highly frustrating. Customers have to select the correct options and are kept waiting to talk to an agent. We opted not to have an inbound call center and have completely moved the support service experience to digital. Our support features include new age self-help, social, peer-to-peer, online chat and email-based applications. We also have an excellent search option, which is dynamic, and helps customers troubleshoot a lot of issues themselves. We want our customers to help each other. We have therefore created a user community similar to Giffgaff, the UK-based MVNO, which relies mostly on community-based customer service.

Customer support in the telecom market is very time consuming and highly frustrating.

What was the timeframe from inception to launch for Jawwy and the investment involved?

Jawwy BU was set up in in Q1 2015. It has been about five quarters since inception and we launched in May 2016. STC's investment in Sapphire to date has been extremely modest and is in line with lean start-up approaches.

We opted not to have an inbound call center and have completely moved the support service experience to digital.

The Importance of Having an Independent Governance Structure

Could you elaborate on the governance aspects of running Greenfield operations within a large organization?

Given the need to have a fresh approach to the operating model, culture and systems – which will be different from the approach you

will find within large organizations – it is important to have a fairly independent governance structure with a Supervisory Board. In our case, the Supervisory Board is chaired by STC Group's CEO, which ensures smooth working with the wider STC organization and reduces friction. We are also privileged to have CEOs of other STC Group companies on our Supervisory Board, which gives us access to a broad repository of expertise. Our Supervisory Board is also diversified, with young digital talent, and including a Board member from one of the world's leading Silicon Valley-based digital firms.

Telecom operators have to figure out ways to keep the exploitation business and the exploratory business apart.

Jawwy - How a Saudi Digital Venture is Rewriting the Telecom Rulebook

STC – the largest telecom operator in the Middle-East and North Africa



USD 13.5bn
revenue



100 million
customers

The Saudi Market = A very Digital-Savvy Population



67%

of the population is below 30

190m

You Tube videos viewed daily

6 videos/day/citizen, the highest in the world



Highest penetration of Twitter among Internet users

Why Set Up a Greenfield Digital Venture?

Millennials expect a **new kind of experience** - on par with what Google, Apple and Amazon offer

An experience that is **Real-time, On-demand, Online, DIY and Social**

Not something that can be offered overnight given the organizational and systems constraints

Go Greenfield

A Lean Startup Approach

5 Quarters
to Set Up a Greenfield Operator

&

Modest
Investments

Incumbent Operators Need to Carve Out Completely Digital Entities

Telecom operators are struggling with their digital transformation. What do you think are the main reasons and what advice would you offer to large telecom operators in Europe or the US?

Digital transformation is, of course, an arduous task for telecom operators. One wonders if digital transformation is actually an oxymoron, because it requires a change in the DNA of an existing organization.

Existing telecom organizations are essentially in exploitation mode when the digital agenda is actually an exploratory business. In the words of

Dr Michael Tushman, my professor at HBS, an “exploitation business kills the exploratory business when they are together.” So telecom operators have to figure out ways to keep the exploitation business and the exploratory business apart.

Operators in Europe and the US are very familiar with the issues they face, and the options they have, in digital transformation. One option is around creating what Dr Michael Tushman and Dr Charles O’Reilly call the “ambidextrous” organization – one organization, two cultures. The other option is to create a spinoff. Or a combination of both. The final solution also depends on the operator’s digital maturity and the regulatory conditions in the local market.

Our experience has shown that with the right governance and operating model, a well balanced team of digital and telco professionals, and the right partnerships, one can make significant inroads and fast.

“With the right governance and operating model, a well balanced team of digital and telco professionals, and the right partnerships, one can make significant inroads and fast.”



YOUR RECOMMENDATIONS TO LARGE ORGANISATIONS ON HOW TO HANDLE THEIR DIGITAL TRANSFORMATION

“Be really bold in your thinking. You won’t succeed if you make incremental steps. It’s all about looking at where the future is and working backwards; not trying to take incremental steps forward. And that has implications for talent, culture and investments. What digital transformation requires is a radical re-imagination of your business.”

– Mark Jamison

“Just get started – don’t over-analyze things. Pick an area to get smart. The more you do, the smarter you get. I also think partnering with others who have the expertise is the fastest way to get there.”

– Beth Comstock

“Existing telecom organizations are essentially in exploitation mode when the digital agenda is actually an exploratory business. [...] Telecom operators have to figure out ways to keep the exploitation business and the exploratory business apart.”

– Subhra Das

“The first thing is to get an inventory of digital and non-digital initiatives in innovation, business development and product portfolio. [...] Step two – organizations need to develop a point of view about the future for a five- to eight-year timeframe. [...] The third step is to walk backward from that future and ask what are the actions needed to move to the envisioned future.”

–Rita McGrath

“One, focus on employees and culture first – it is the people and the culture that will enable the transformation and put technology to work. [...]

Two, rapidly iterate and have a number of release cycles alongside your traditional or legacy IT – experiment with selective customers and industrialize when there is a true need. [...]

Three, become an enabler to digitization in the organization and not a controller or retailer of digitization.”

– Monty Hamilton

Working with the Startup Ecosystem



The Rise of Innovation Empires Worldwide

By Brian Solis – Altimeter @ Prophet, Jerome Buvat and Amol Khadikar, Capgemini Consulting

Silicon Valley No Longer the Capital of Corporate Innovation

Fast forward a 100 years from Henry Ford's assembly line innovations, which sent shockwaves through the manufacturing industry, and you will find Ford in the midst of another fundamental transformation: from automobile company to provider of mobility services.

A significant factor in this transformation is the company's Silicon Valley innovation center. The center has very quickly become an audition stage for technology startups that are looking to showcase how their interface technologies can enhance the driver experience for Ford customers. A Ford executive explains how this inflow of ideas provides a great forum for jointly exploring new possibilities, saying: *"We get hundreds coming to our doors in a year in our Silicon Valley office alone [...] Sometimes we think that the ideas are a little*

off the wall and they might not be ready for a vehicle yet, but it's still really interesting to see what people are looking at'." Ford opened this facility in 2012, expanded it in January 2015, and now houses nearly 100 employees who focus on accelerating innovation in mobility, connectivity, autonomous vehicles, customer experience and big data². The center has launched fourteen mobility hackathons since 2014 and is partnering with Nest and other local initiatives to reimagine urban transportation.

This ability to build fruitful relationships with a wide spectrum of technology startups is one of the key reasons that large and traditional companies set up innovation centers. The rising importance of innovation centers is a development that we (Capgemini Consulting and Brian Solis of Altimeter Group, a Prophet company), studied as part of the industry's first analysis of the global trend in July 2015. Almost one year later, the time is right to

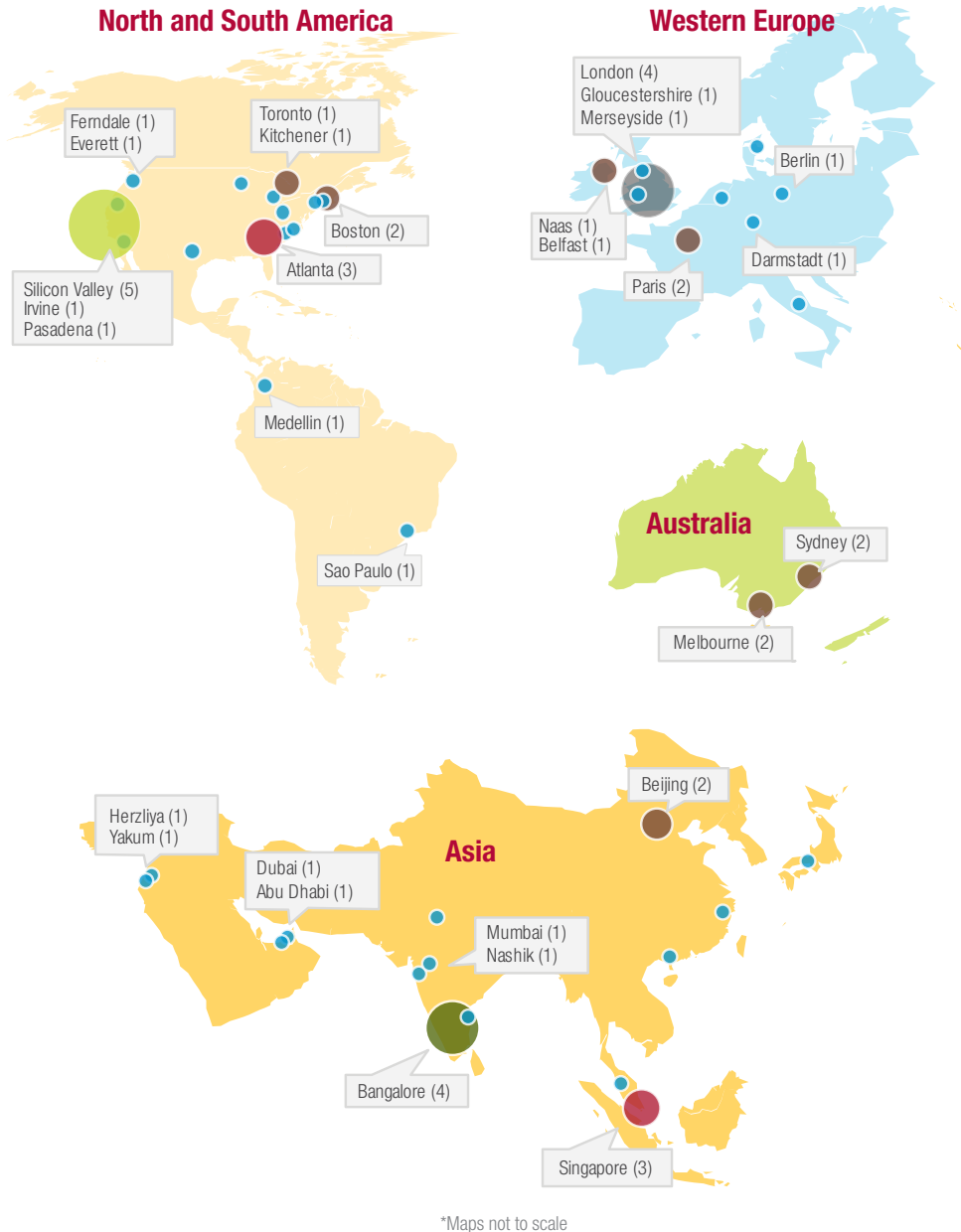
update our research to examine the centers that have opened since then and identify new developments.

Silicon Valley still remains the hub of the world's most dominant innovation "empire" – a location of a thriving innovation ecosystem where innovation centers cluster. However, as the innovation center phenomenon has continued to spread globally, a number of new 'empires' have emerged where innovation centers are flourishing.

From July 2015 (when our previous research was published) to February 2016, 56 new innovation centers have opened in 20 countries and 11 more centers are planned to open soon (see Figure 1).

Over the last year, we witnessed the rapid rise of Asia as a destination for innovation centers (see Figure 2). Compared to our previous research, Asia has seen a 29% rise in the number of innovation centers being launched:

Figure 1: Innovation Centers Launched Between July 2015 and February 2016



Source: Capgemini Consulting and Altimeter Analysis

- Singapore:** The city state is fast emerging as a Fintech hub in Asia. UBS launched an innovation center in Singapore, focusing on creating innovative customer propositions around digital wealth management³.
- India:** The country has seen a significant increase in the number of innovation centers, often centred on Bengaluru, which some have dubbed the “Silicon Valley of India”. It is estimated that \$9 Billion was invested in startups in India in 2015⁴. In this fertile environment, Airbus and Visa have set up innovation centers in India.
- Australia:** The country is a new entrant onto the list, with Huawei Technologies choosing to locate a center there. In addition, local companies Telstra and Insurance Australia Group also set up innovation centers in Sydney and Melbourne.

Figure 2: Top 10 Locations for Innovation Centers, Worldwide



Source: Capgemini Consulting and Altimeter Analysis

India: The New Innovation Destination of Choice

India has been rising in the ranks of favorite destinations to open innovation centers. Our previous research identified eight innovation centers in India in July 2015. India has since seen eight more innovation centers open their doors. Bangalore has been the most favored city with four new innovation centers. Bangalore is home to several billion-dollar Indian startups such as: Flipkart, InMobi and Mu Sigma, and attracts world-class technology talent and investments. Among the new innovation centers opened here are: Airbus' BizLab, which intends to bring together startups and Airbus' internal entrepreneurs; and Visa, whose new technology center in Bangalore will house 1000 developers accelerating development of next generation payment solutions. Global firms are showing interest in other Indian cities as well. For instance, TriMas Corporation – a diversified global manufacturer of engineered and applied products – opened an innovation center in Delhi to focus on driving innovation across its range of packaging solutions, while Puratos, a leading global food ingredient company, launched an innovation center in Mumbai.

Source: Travel Daily Media, "Airbus opens innovation centre in Bengaluru", November 2015; BusinessWire, "Visa Opens Technology Center in Bangalore; Accelerates Digital Commerce Globally", August 2015; TriMas Corp, "TriMas' Rieke Establishes Global Innovation Center in India", December 2015; IIFL, "Puratos India launches a Food Innovation Center in Mumbai", July 2015

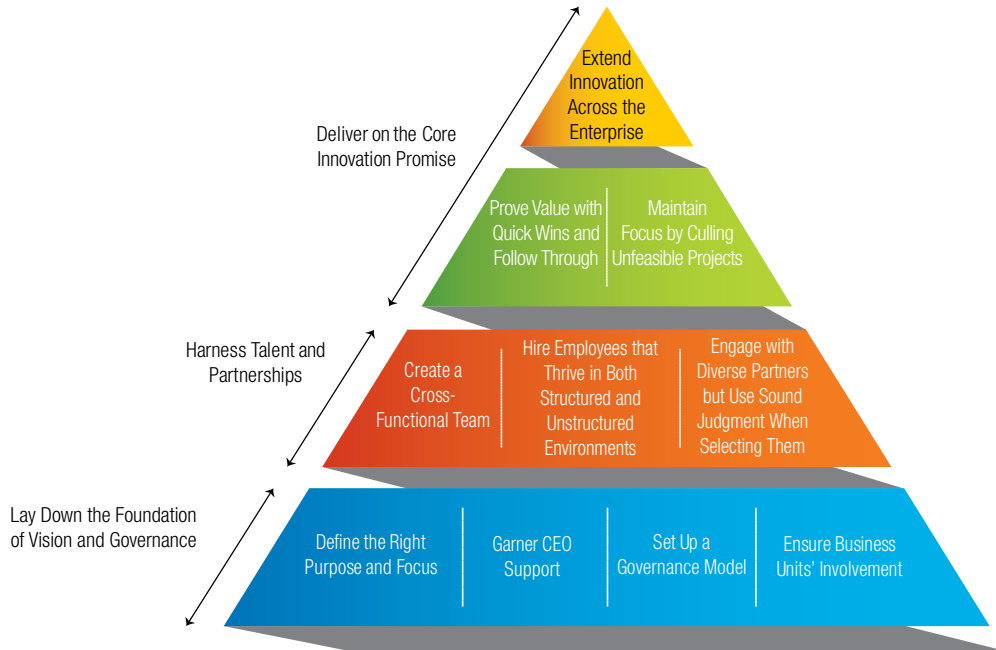
How can Innovation Centers Successfully Scale the Slippery Slope of Digital Innovation?

It is extremely challenging to make a success of innovation centers. A seasoned innovation expert and senior executive at a leading global bank told us: *"About 80 to 90 percent of innovation centers fail,*

and end up being a massive waste of resources." Such high failure rate results from a slippery slope of challenges that innovation centers must overcome to succeed in digital innovation. The challenges range from lack of leadership support and an unclear focus to companies' inability to scale the innovation at an enterprise level. Leading

companies avert these perils by factoring critical success factors into their journey. These factors broadly fall into three phases: laying down the foundation of vision and governance, harnessing talent and partnerships and delivering on the core promise of innovation (see Figure 3).

Figure 3: Critical Success Factors for Innovation Centers



Source: Capgemini Consulting and Altimeter, “The Innovation Game: Why and How Businesses are Investing in Innovation Centers”, July 2015

Conclusion: the inexorable rise of innovation centers worldwide

Studies of empires often focus on their “rise and fall”. But for innovation centers, we are witnessing a phenomenon of “rise and rise some more” as

large, established companies seek a proactive approach to competitiveness and also a strategic defense and offense around digital disruption. As the changing focus areas show, organizations are prepared to transition to the next level of their innovation empire-building. The days of limited

experimentation are disappearing quickly, and companies are reaching out far and wide to build genuine partnerships and turn creative ideas into tangible results. It’s now becoming a matter of innovating large or risk falling behind.

1. Tech Times, “Ford’s Research And Innovation Center Has Become An Audition Stage For Startups’ Interface Technology”, April 2016
2. Company website; Ford, “Driving Innovation in Silicon Valley”, Accessed May 2016
3. Business Times, “UBS launches innovation centre in Singapore”, June 2015
4. The Hindu, “2015 was the biggest year for Indian Startups”, January 2016

EXECUTING YOUR DIGITAL STRATEGY – ACQUISITIONS, ORGANIC GROWTH, GREENFIELD OR PARTNERSHIPS?

“In the past, GE grew a lot through acquisitions. Recently, we have focused on the organic route. When something is new, you have to grow it. You can’t buy everything. We invested in technology and innovation to grow from within – to grow ourselves.”

– Beth Comstock

“Partnerships have helped us advance our capabilities really rapidly. We are now working with Cisco, Intel, Pivotal and many startups. A lot more partnerships are happening at GE and it doesn’t always require an ownership stage.”

– Beth Comstock

“If you can’t change fast enough you buy. The trouble with acquisition relative to organic growth is it is very expensive. Companies that have survived their startup phase are going to charge a hefty fee to be bought by a large company that hasn’t been able to innovate for itself.”

– Rita McGrath

“The new formula of success is that you don’t do it all yourself – you have to know what you have to be uniquely good at.”

– Beth Comstock

“The dilemma is if you are not good at innovation, you have to do acquisitions. But if you are not good at innovation, it’s also very hard to judge the value of the acquisitions.”

– Rita McGrath

“When you want to reimagine and carve out a new experience, and do that rapidly, you have no choice but to go Greenfield. You don’t want to be constrained in any way by the existing organization’s operating model, culture and systems. Hence the Greenfield route was a natural choice.”

– Subbra Das



15 Startups to Watch and What Their Value Proposition Can Teach Your Business



Brian Solis

Principal Analyst at Altimeter@Prophet

Brian Solis is principal analyst at Altimeter, a Prophet company. Brian has written several best-selling books on the future of business. His latest book, *X*, explores the intersection where business meets design and how businesses can architect meaningful experiences for the 21st century (Xthebook.com). He's also the co-author of several research projects on innovation with Capgemini Consulting. You can follow him at his site (briansolis.com), on Twitter ([@briansolis](https://twitter.com/briansolis)), Facebook ([TheBrianSolis](https://www.facebook.com/TheBrianSolis)) or on any popular platform ([briansolis](https://www.briansolis.com)).

In this edition, Brian shares his perspective on 15 startups to watch this year.

Every year, digital innovation maintains its amazing momentum. New technology trends emerge that captivate our attention. Existing breakthroughs that we've watched grow and develop finally tip into market proliferation. In just the last year alone, we've witnessed huge strides in augmented and virtual reality, artificial intelligence, robotics, and transportation. All of these new areas of innovation are blurring the line between science fiction and reality. Yet, they're just some of the trends changing everything in our work and life.

So, who are the companies changing the world right now? Honestly, the answer is more than we can include in one list. There are incredible companies all over the world paving the way for revolutions and evolutions in every industry. I assembled a short list of "15 Startups to Watch," but there are so many more that deserve attention.



The moment Elon Musk introduced the concept of Hyperloop - a new high-speed transportation initiative where passengers and goods are propelled in capsules through tubes via linear induction motors and air compressors - entrepreneurs and investors jumped on board. For now, two companies to watch are [Hyperloop-One](#) and [Hyperloop Technologies](#) (HTT). Hyperloop-One demonstrated an open air test in the Nevada desert recently. At the same time, HTT revealed the creation of a new composite that is purportedly 10x stronger than steel and 5x lighter than aluminum. Both companies are very young, but determined to deliver operational transportation systems as soon as 2020.

Imagine having access to all of the hottest startups and products before the rest of the world knew about them, including the major investors. That's [Product Hunt](#). It's a Reddit-like community of hyperactive users who all work in new tech in some shape or form. They submit their latest discoveries or creations and let the community take it from there. Every day, visitors "up-vote" new products, startups, apps, podcasts, books and websites to collaboratively define what's most popular that day. Because the community is so high-energy and committed, they help shape tech trends much in the same way Reddit helps push internet memes. If you want to learn more about the startup world, it's also a great place to simply hang out. For example, many entrepreneurs, investors, authors and well-known tech personalities host AMAs (ask me anything) to engage in dynamic conversations.





In an era of social media, the entire ecosystem for content, from product to consumption to community, has been upended. While many different social networks offer platforms for users to share their ideas, creativity and content, few facilitate the monetization of that work. Patreon hopes to solve that problem by offering creators a platform to earn recurring venue. It operates a bit like Kickstarter where creators, musicians, poets, painters, photographers, et al., design a home page and create subscription packages to earn support. In times where artistry's value is compromised by disruptive models, Patreon is a refreshing way to empower artists to build and monetize engaged communities.

This is yet another one of those “Uber of...” startups but wow if it doesn't really nail one of life's everyday challenges. Because of apps like Uber and Tinder, I believe that consumers are becoming accidental narcissists. They're taught to expect things (products, services, information, people) to come to them on demand. [Filld](#) is basically an on-demand app for gasoline. Need fuel while you're at work or home and don't have time to hit the station? Then open up the app, select your location, choose your fuel type and leave your cap open. The service will arrive within a specific window and take care of the rest. Depending on where you live, there are other options too, including WeFuel and Purple.



This one I'm sure is going to sound strange, but give it a minute. If you've ever communicated with someone who lives an active digital lifestyle, GIFs^a are a normal way of sharing thoughts and reactions without having to explain them in your own words. More so, GIFs make the moment that much more exceptional. Giphy is a search engine for GIFs to help you find the right one for the right moment quickly. But that's not the only reason why it's on this list. It's a platform for bringing people who communicate via GIFs together. It's everyone from everyday media to bloggers to digital storytellers to me and you. More so, it's a community for GIF creators and fans. This stands to become something much more and perhaps an aggregator for other mainstream social networks.

^a GIF is an image format that allows creation of short video clips and animations

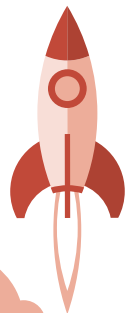
Apple's most innovative app of the year in 2015, [Workflow](#), is a very creative solution to complex or semi-complex tasks. Workflow offers a visual, drag and drop way of connecting apps and actions together to automate things you do on your device. If you're familiar with "If This Then That (aka IFTTT), it's a DIY way of automating the things you often do that require multiple steps. You can then turn those processes into an app so you can launch it directly. There's also a gallery of complex or popular workflows for you to use and further customize.



[Postmates](#) can be described as either the Uber for your favorite local businesses or the UPS for on-demand delivery logistics. It's actually both. If you want something delivered from a supporting local store, use the app. At the same time, Postmates offers an API and platform for local retailers, from small businesses to Starbucks and Wholefoods, to allow you to order your goods and have Postmates fulfill the order.

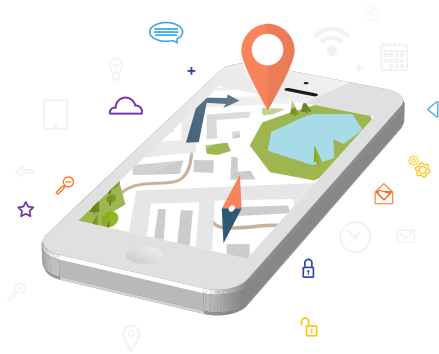
Sano Intelligence is building a wearable sensor that measures metabolic activity. Founder Ashwin Pushpala set out to build a device that continuously monitors blood glucose level in what's described as a completely painless manner. The challenge with glucose monitoring is that diabetics have to test glucose levels by pricking their finger for a drop of blood several times per day. Then they insert a strip into a machine to get a read out. In an Uber-ized, GIF-driven world - where half of Silicon Valley either wears an Apple or Android watch - clearly there are other ways to do this. Specifically, Sano is developing a small patch that continuously monitors your bloodstream. Essentially it's monitoring for abnormalities and then alerts you and your doctor accordingly when attention is needed.

sano
intelligence





Medium



When Twitter co-founder Ev Williams left, he did so with a new but familiar plan that was the opposite approach to brevity. Rather than hold people to 140 characters, he created a platform for long-form sharing called Medium. For those who don't remember, Ev and company built one of the earliest blogging platform, Blogger, which was later acquired by Google. This time around, Medium set out to provide a media platform for thoughtful content creators and a social network to bring people, shared interests and conversation together around content. The platform aimed to democratize media and publishing for everyone (which was, essentially, the original promise of blogs and social media). But with its clean and elegant design, the simplicity it offered in creating and publishing content, and a strong network of thoughtful and prolific users, Medium is a media platform and a democratized media outlet at the same time. It's lured some of the most influential people in every industry to share their thoughts, experiences, views, reactions, et al., to important moments, events and news. Medium has also thrived by creating a variety of popular channels that feature hand-selected content from its staff of editorial curators.

The paradox of choice can be time consuming and even overwhelming. Spending time searching out products or options and then reading countless reviews to narrow decisions is taxing at the very least. Co-founded by Garret Camp (co-founder of Uber) and former Zynga executive Robin Chan, [Operator](#) is a pioneering entrant to the emerging concierge category. Operator balances human capital and AI to create "operators" as a service for everyday consumers. Operator looks and feels like a messaging app but it's essentially a personalized shopping service. You simply say what it is you need and an operator begins to work on it for you. Essentially it combines the functionality of a task rabbit, virtual assistant, chat bot and personal shopper to help you find or do what you're in the market for. Chan shared the premise for Operator to Techinsider recently, saying "We always dreamed of this as a routing layer or switchboard for goods and services."



French startup [Snips](#) is an app that organizes your meeting locations, reservations and recent visits so you can find everywhere you need to be in one simple place. Once you install the app, Snips goes through pretty much everything on your phone to learn all it can about you. And it continues to do so the more you use it. The goal is to allow Snips' AI engine to seamlessly connect the dots between what you want to do and how to do it. In its initial incarnation, the app aims to help you while you're on the move. You can instantly find any location you need, from meeting addresses and reservations, to a friend's house or local restaurant/bar. Automatically, Snips will show you every way you can get to your destination. Over time, Snips will learn how you move through your city and suggest where you might be heading next. The app also keeps a timeline of where you've been. Note, the company is very serious about personal data and privacy and insists you and only you are in control.



I've been watching AR darling MagicLeap for a couple of years now. They're not alone in the game nor are they the only one to watch in this space. Meta is also making incredible leaps in an augmented and real world. And by incredible, I mean groundbreaking. Based in my home city of Redwood City, [Meta](#) has developed an innovative headset that promotes a 90-degree field of view with the type of design and usability attention to detail that you might expect to see from Apple. But it's more than a headset (tethered to a PC). It's a complete ecosystem that also allows for developers to build applications that enable complete immersion. For example, rather than interacting with a large monitor, the entire headset field of view becomes the screen. You can also maneuver through the applications using natural gestures rather than having to learn new behaviors. More so, the platform recognizes those gestures to not only navigate objects but also grab, move and manipulate them. This is 'Minority Report' but in real or augmented life. Developers are building apps now for almost every industry you can imagine, ranging from manufacturing, design, engineering, medicine, modeling and education.

No customer will ever claim that they “loved calling customer service!”. Unfortunately, many of us have reluctant relationships with companies we do business with. Think about your wireless or cable provider or any airline for that matter. The thought of having to call them to complain, get support or cancel the service creates an incredible and unnecessary amount of anxiety in all of us. Until companies figure out that customers are important and that call centers are not cost centers (they’re investments), there’s a startup that’s ready to help you. Meet [@Service](#). Using the app, consumers tell @Service the problem that they’re having, provide details/documents, their goals, and the app then reaches out to the business on your behalf. They make no guarantees, they take on “reasonable” cases, but they do save you the hassle of spending your valuable time, energy and emotions having to deal with broken systems and inhumane contact centers.



Ha. If you’re thinking what I’m thinking when you hear the name, it’s not that at all! [Burner](#) is a new startup that lets people create new “burner” phone numbers for voice, SMS, and MMS communications. While this isn’t new, burner phones were often linked to dubious dealings, but this is about helping people control privacy and conversations in ephemeral engagements/scenarios. For instance, Burner is gaining big traction among buyers and sellers on ebay, Craigslist and Airbnb hosts who’d rather not give out their personal numbers. Oh, it’s useful for Tinder and other dating apps too (you scoundrels!) Here’s where the service gets even more interesting. Like all good platform plays, Burner introduced plug-ins for Slack and Dropbox so that small businesses or entrepreneurs can use them for online customer support and feedback lines. What does that look like? For example, with Evernote, users can create an auto-reply bot so if an Airbnb guest texts “what’s the wi-fi?,” it can respond automatically. Users can connect their number with Dropbox to auto-save voicemails and messages with pictures, route and reply to text messages, and sync with Google and back-up your texts and contacts to a spreadsheet even when you burn the number.

Visiting a doctor is never an appealing prospect, but Heal can take some of the pain out of it, [Heal](#) is an app that allows people to find doctors and specialists who do house calls on-demand. The ambitious new service already has a network of 100 (and growing) doctors in Los Angeles County, Orange County, San Francisco and Silicon Valley who offer house calls at a flat rate of \$99 per patient. Most Anthem and Blue Shield PPO members are typically charged the same co-pay as when they go into their doctor's office. This type of approachability has the power to change the practice of medicine from one of being arduous and something that you have to do when you're really sick, to that of being preventative and even proactive. Imagine people willingly getting their health checked to bolster their fitness regime. Imagine people who get that flu shot just because it was easy. It's apps like this that start to change behavior in ways that benefit the user...and the app.



The logo for Lola, featuring the word "lola" in a lowercase, blue, sans-serif font with a trademark symbol.

Travel startups go back to the days of Web 1.0. And just when you think that you've seen it all in travel sites and apps, here comes [Lola](#). Lola is part of a new breed of intelligent agent-powered services that combines artificial intelligence and human power to provide personalized, concierge-like level of personalized travel. Think Kayak, travel agent, and personal assistant all wrapped together with an elegant UI. In fact, the co-founder of Lola is the co-founder of Kayak. While AI will over time learn and then predict behaviors in travel so that information can be accessed quickly (flight changes, for instance), the app is also enabling agents to focus on providing exceptional customer service. In an interview with [VentureBeat](#), co-founder English vocalized a recurring theme with many of today's startups...service. "What we're doing now with Lola is we're not bringing back the old school travel agent," he explained "We're trying to reinvent the travel agency."

What do you think of this list? What did we miss? Let us know by contacting us at: brian@briansolis.com

THE IMPORTANCE OF A LONG-TERM STRATEGY IN TODAY'S UNCERTAIN ENVIRONMENT

"The importance of a long-term strategy is to give people something to hang on to and act as a broader guide during times of uncertainty."

- Rita McGrath

"It is actually more important than ever to have a long-term strategy."

- Rita McGrath

"Successful companies understand what their purpose is, the 'why', and they don't get caught up over the long term in the 'what'. I call it 'freedom within a framework', a strategy that tells you where you are going."

- Mark Jamison

"You still need to have a vision of where you want to go or understand your differentiation. But you have to be much more adaptable. Maybe your vision stays the same, but how you get there may change faster than you could have imagined."

- Beth Comstock

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Digital Transformation Review

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