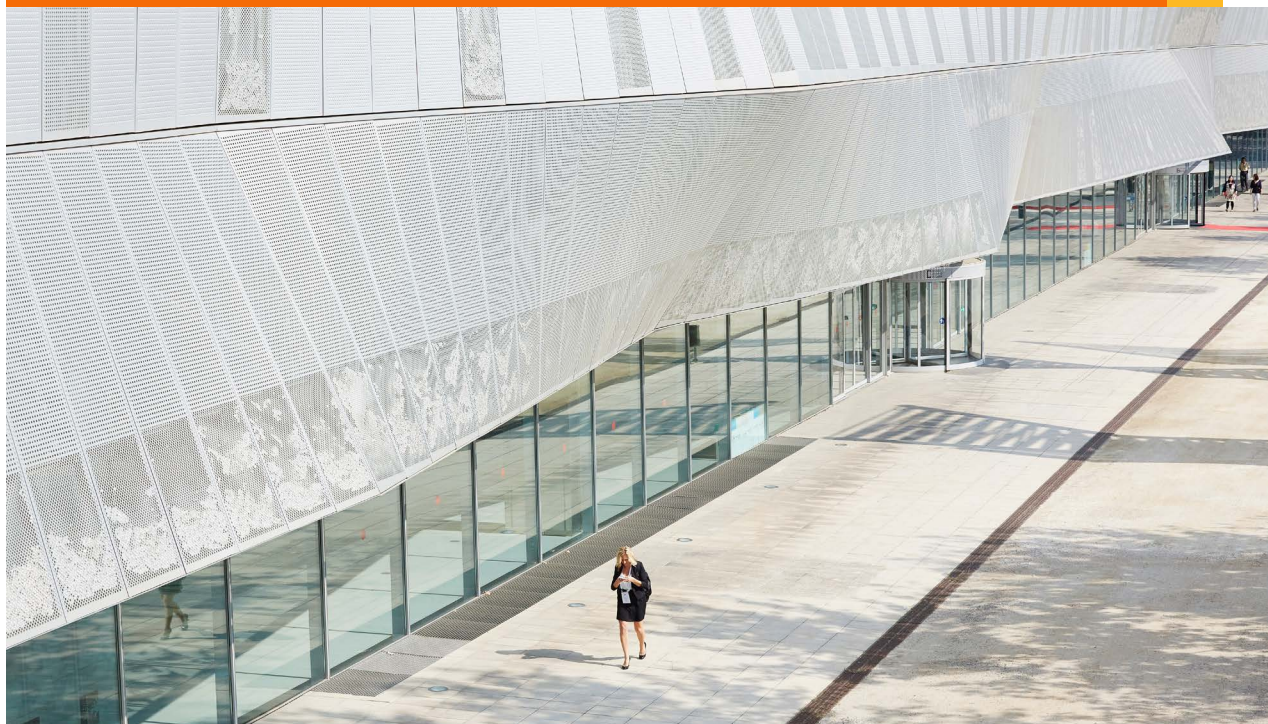


Software greases the wheels

From products to services:
A survival guide for technology, media
and telecommunications companies

February 2017



The technology, media and telecommunications (TMT) sector continues to evolve. In the six years since Andreessen Horowitz's Marc Andreessen first wrote that, '*software is eating the world*', the rapid disintegration of the products-focused business model has been matched only by the quickening pace of advanced technology adoption.¹ And all indicators suggest that this trend will only accelerate in the coming years.



Software is the grease that turns the wheels of TMT – and increasingly, for non-TMT companies as well. Companies that best use technology to meet the growing customer demand for streamlined, consistent outcomes will win. Those that struggle to adapt will crumble in their wake.

But moving to a services-focused business model, driven by technology, can be challenging for TMT companies. In our 2017 CEO survey, 54% of TMT CEOs said that technology has completely reshaped their industries in the last 20 years (compared with 27% of the cross-industry average), and 47% of TMT CEOs said that technology has completely reshaped their industries in the last five years (compared with only 20% of the cross-industry average).² And this evolution isn't slowing down anytime soon. While CEOs from all industries agree that technology will significantly impact competition in the next five years, 43% of TMT CEOs (compared with 23% of all CEOs) said that technology will again completely reshape future competition in their sectors. *Completely reshaped*: not slightly altered; not 'significantly impacted'. Furthermore, since large TMT enterprises often lack the organisational or cultural tools to quickly pivot in response to technological change, the stage is set for new digital companies and startups to challenge their supremacy.

We are already seeing this play out as old-line companies from non-technology industries increasingly move into TMT services through acquisitions. According to *The New York Times*, investments by non-technology companies in technology startups grew to US\$125 billion in 2016, from just US\$20 billion five years ago. The *Times*, citing Bloomberg data, also noted that the number of technology companies sold to non-technology companies in 2016 surpassed intra-industry acquisitions for the first time since the internet era began.³ Wal-Mart, General Motors, Unilever and others are amongst the non-technology giants that made startup acquisitions last year. General Electric's new tagline, 'The Digital Company. That's also an industrial company', is one of the clearest signs yet of the breaking down of industry walls by digitalisation and how software is 'becoming the oxygen' for all companies – established or emerging.⁴



A blueprint for business transformation

Many of the TMT companies we work with around the world are moving to a services-focused business model, driven by technology. This transformation in how they sell and what they sell requires massive changes in corporate structure, operating platform, control systems, talent, risk management and even tax strategies.

We believe that those firms that just ‘ease their way’ into this change will not only be less competitive, but may also leave money on the table.

Our experience is that those who commit holistically to products-to-services transformation with swift, decisive action not only will win market share, but will likely have a significant increase in returns and stock price appreciation to boot.

While the considerations will be unique to each company, we have identified four guiding principles that together provide a blueprint for executive decision-making.

1. Optimise your current position

Over the next decade, platforms that integrate automation with Internet of Things (IoT) ecosystems will be vital to success for many TMT companies. And some of the most ubiquitous emerging technologies will be those that simultaneously embrace **consumers**, **producers** and **suppliers**. The result? The distinct behaviours and expectations of these groups will be simultaneously amplified as part of technology transformation. Companies will therefore have to think critically about their place in the value chain and how this will evolve.

Cross-sector convergence will be key to growth for many TMT companies, allowing them to enter new markets and diversify their revenue streams. But it can also be a threat as companies from other sectors develop their own technology solutions and experiences. That means that TMT companies have to reconsider and potentially reshape their technology, processes, talent and customer experience. Can these core elements be integrated to transform the company’s connection with the customer and path to market? Is there value in creating a new cloud-based platform to control the user experience end-to-end?

While the urge to fully control the value chain is hard to resist, the effort to optimise market position should be focused on a company’s core capabilities and the customer outcomes that these support. To best execute on these outcomes, many companies will need to structure themselves to be open and integrated with ‘megahubs’ or ecosystem platform drivers – companies like Amazon and Alibaba that have the clout and capabilities necessary to broker partnerships, curate or develop content and orchestrate a holistic user experience.

*After a three-year transformation, featuring speed and simplification, stock price increased **162%***



Business model

New customer expectations in response to cloud-based startups

Add customers; up-sell products across portfolio

Push upgrades; generate revenue for incremental features

Curb piracy (estimated 40% piracy prior to transition)



Product offerings

Redefined value proposition

Developed underpinning software-as-a-service (SaaS) platform

Prioritised, rewired, integrated products for bundling

Focused 100% of roadmap on SaaS

Source: PwC analysis

2. Mobilise and monetise models

Simplicity and speed are the twin pillars of successful products-to-services transformations. The continued acceleration of technology advancement has shrunk innovation cycles, making it critically important for TMT companies to have an internal platform that allows for quick, yet strategic, pivots.

TMT companies can successfully transform to a services-focused model through technology by developing new channels for their intellectual property that (1) create better experiences for customers, (2) generate new revenue streams and (3) don't lock the company into

- capital,
- infrastructure,
- and architecture platforms that prevent fast pivots.

To achieve this, IT and business operating models must unite to create a single digital operating model. This also requires adapting service models for business through monetisation of core data, value-added services, cost savings through scale, as well as moving fixed assets to consumption-based models. Continued growth in cloud computing and subscription-based sales models will further move TMT companies towards an anything/everything-as-a-service model. In keeping with the move towards owning the customer relationship, this will allow TMT companies to innovate faster by having a direct connection to the customer.

An excellent case study on how to manage this transformation and remain competitive can be seen in the experience of one computer software company. Over a three-year span, this company embarked on a complete overhaul and focused 100% on developing a software-as-a-service (SaaS) platform that prioritised, rewired and integrated products to create meaningful solutions. Its go-to-market strategy included tiered pricing, incentives to migrate existing customers, winding down support for legacy products to force migration, and shifting its channel strategy to enable distribution and cut costs, among other moves. This company also amped up support to onboard users and upgraded R&D for continuous delivery.

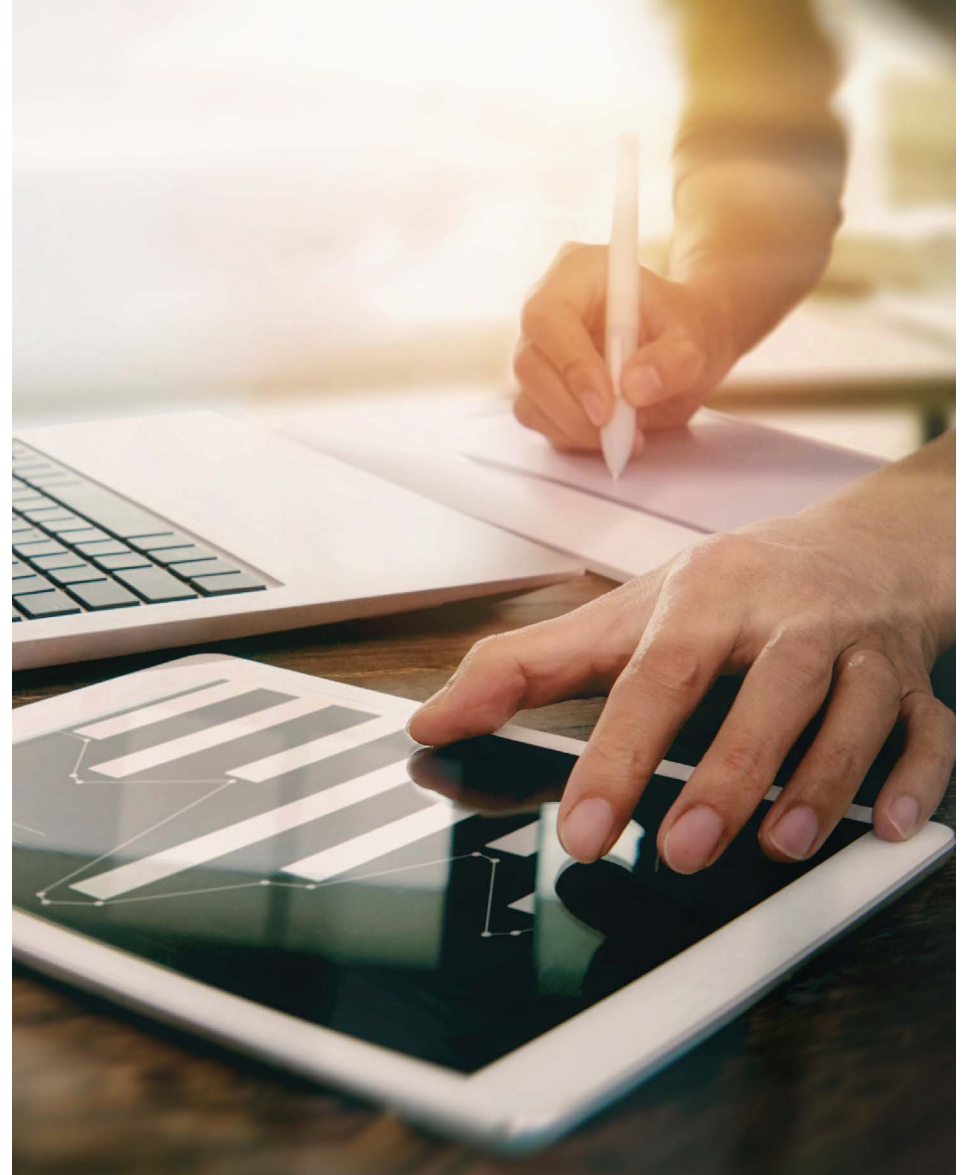
Most importantly, it secured the approval of its board and shareholders before embarking on the transformation. The result: Despite declines in revenue and profitability, the company still grew its total enterprise value and stock price over the transformation timeframe.

This company's transformation journey underscores a new business truth: Shareholders now judge management teams by their boldness and ability to futurecast. The industrial internet isn't about playing it safe. It is about experimenting with new models and monetising risks.

Tech *startup* **investments** *by non-tech companies*



2011 - US\$20B
2016 - US\$125B



3. Focus on customer outcomes

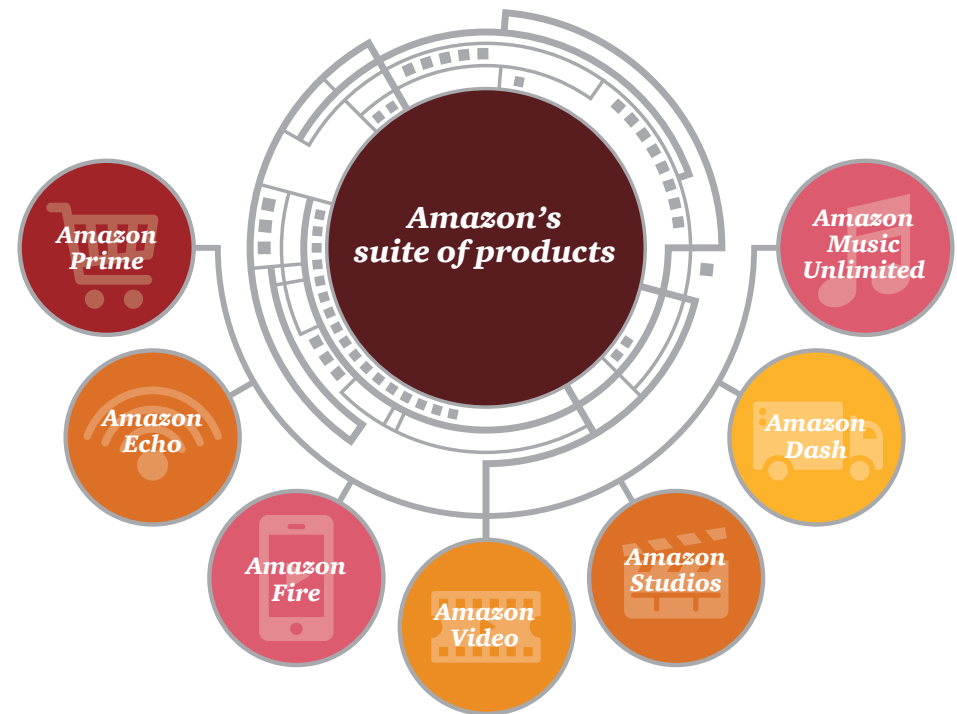
With customers demanding a trusted, one-stop shop for a suite of related services, many companies that had focused too narrowly on small slivers of the customer experience are being left behind.

This kind of blurring of traditional segments can be seen in Amazon's move to craft a complete, connected home experience via the Echo, Fire, and Prime devices and services, or in entities that unite content and distribution, such as the potential merger of AT&T and Time Warner.

This trend, coupled with the mobility and ubiquity provided by smartphones and cloud, is forcing TMT companies to take a hard look at the types of outcomes they want to provide users in the future. As their core product becomes increasingly commoditised, they will need to become overall experience and outcome companies, seamlessly handling multiple touch points across the customer journey that previously weren't in their purview.

TMT companies are focused on getting better at understanding data at an individual level – and moving closer to the end customer creates a virtuous cycle of influencing behaviour and driving demand. Netflix, with its 76,000 micro-genres of movies and TV shows, is an exemplar of using data to create customer-centric, personalised experiences.⁵ Combined with its ad-free model, Netflix has created the ultimate outcome, in turn winning the affection and loyalty of its subscribers.

The future will be won by TMT companies that can help users cut through the clutter with superior discovery platforms, harnessing the power of data and user insights to enhance services, personalisation, and decision-making. For Siemens, focusing on and investing in their cloud-based, open IoT operating system, MindSphere, has been a game changer in this regard. This technology enables Siemens to deliver the innovative outcomes their customers demand by transforming manufacturing through automation and data exchange. Customers are thereby able to iterate faster, increase efficiency and quality, and enhance flexibility in production.



Transform now to thrive in a highly interconnected,
technology-first
future.





Gartner predicts that by 2018, more than half of large companies globally will compete using advanced analytics and proprietary algorithms.⁶ Further, the maturation of emerging technologies such as artificial intelligence, augmented reality, blockchain, robotics and the IoT will drastically change the TMT landscape in the near term. Companies that can strategically leverage these technologies to link their core capabilities with customer outcomes will hold the keys to success.

While this is a challenging prospect, the good news is that customers across TMT companies are showing both a willingness to share their personal data and pay for premium services. TMT companies can harness these two trends to refine and optimise their offerings. Together, the promise of creating a customer experience so specialised that it has a direct and immediate impact on revenue generation is real.

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4. Build a technology 'lingua franca'

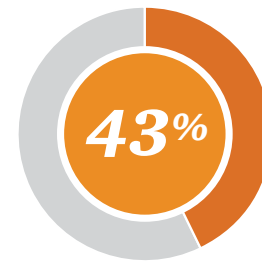
PwC has been conducting its *Digital IQ Survey* for more than a decade, and one thing has remained constant: Executives are concerned that they don't have the right talent in place to handle the rapid pace of technological disruption. The strategic picture is understood at the board level and in the C-suite, but frequently there are obstacles on the journey to implementation. It's hard to develop a cohesive and unified digital vision when the majority of technology spending – for TMT companies it is 73% – is happening outside of IT budgets.⁷

To truly drive transformation, colleagues must learn to collaborate and become accustomed to major interdependencies. Put another way, TMT companies must build a 'lingua franca' among their talent so they can build a baseline of knowledge about technology and transformation. This facilitates the seamless collaboration and increased efficiency vital to moving at the speed of technology.

We're already seeing the shift take place. Seventy-three percent of TMT CEOs (compared with 65% of CEOs from all industries) have already embedded digital training into their learning programmes.⁸ And CEOs from all industries are starting to understand that building a technological 'lingua franca' is an organisational imperative, taking the lead in establishing the needed 'tone at the top'. More than two-thirds (68%) of CEOs surveyed for our Digital IQ study said they are their companies' champion for digital. Four years ago, that number was only 57%.

Importantly, as companies develop an innovation infrastructure, they will also need to account for the risks and costs associated with emerging technologies and software-driven services. While future success won't be possible without becoming open, connected and networked, it is crucial that CEOs understand the related cyber and data-privacy threats, and that the right service partners and protections are in place.

47% of TMT CEOs said technology has **completely reshaped** their industries in the last five years.



Meanwhile, 43% of TMT CEOs said technology will **completely reshape** future competition in their industries over the **next five years**.



Looking ahead

It's imperative that TMT companies prepare now for the seismic shifts that are collapsing and transforming industry ecosystems and value chains. In the deeply interconnected and 'smart' world of the future, customers will increasingly demand speed and simplicity – the most direct and trusted route to a desired outcome.

The next few years will be crucial in determining which TMT companies stay ahead or get left behind. As emerging technologies and software become the lifeblood of business, and as industry walls continue to break down, transforming to a services- and outcomes-focused business model will be the way forward not only for TMT, but for all industries.

While there's no easy solution to the challenge of services-based transformation, what's important is that bold decisions are made now and are relentlessly pursued.



Endnotes

1. Marc Andreessen, “Why Software is Eating the World?” *The Wall Street Journal*, August 20, 2011.
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3. Leslie Picker, “For Non-Tech Companies, If You Can’t Build It, Buy a Start-Up,” *The New York Times*, January 2, 2017.
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5. Vincent Lanaria, “Netflix Has More Than 76,000 Micro-Genres Of Movies And TV Shows: Here’s How To Unlock Them,” *Tech Times*, January 9, 2016.
6. Gartner press release, “Gartner Says More Than Half of Large Organizations Will Compete Using Advanced Analytics and Proprietary Algorithms by 2018,” January 28, 2017.
7. PwC, *2015 Global Digital IQ Survey*, 2015.
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