AlixPartners
when it really matters

TECHNOLOGY, MEDIA & TELECOMMUNICATIONS

JANUARY 2018

The TMT revolution: ride the wave—or drown in it

At a glance

1

A shape-shifting industry

- TMT is poised for even more tremendous growth, but this industry has a high mortality rate.
- Disruptive technologies and business models make a splash initially and build momentum, but then their growth levels off.
- A few winners emerge, leaving far more losers littering the landscape.

2

Costly complexities

- As TMT players mature, their operational complexities multiply—such as how to manage data security and use data to make decisions.
- Many businesses will need to completely reinvent themselves—and keep doing it—to stay relevant.

3

The **CODE** action framework

- The **CODE** framework can help TMT players ride the growth wave in their industry—instead of getting pulled under.
- To implement the framework, companies **connect** their products and services to deliver the same quality of experience across all their offerings.
- They **open** their business model to convergence opportunities.
- They **defend** themselves from privacy and cybersecurity threats.
- And they **engineer** intelligent systems for data collection and analysis.

Since the mid 1990s, market capitalization in the global technology industry has rocketed from $3 trillion to $13 trillion at a compound annual growth rate of 7.6%. Thirteen trillion dollars is already a jaw-dropping number—and it's expected to hit $17 trillion by 2020.[1]

The fast and furious growth has been fueled by exponential increases in computing power, ever-cheaper data storage, and plentiful bandwidth—which have driven parallel growth in the new media and telecommunications industries as well. Market demand has played a big role, too, with consumers using technology in virtually everything they do.

That potent combination of technology advances and market demand has enabled an army of tech-savvy startups that are wielding radical new business models to transform themselves into major corporations. And they seem to do it overnight. Their success has reinvented a wide range of previously nontech industries—from retail, lodging, and transportation to advertising and temp-worker hiring. (Think Amazon, Airbnb, Uber, TaskRabbit, Google, and Facebook.) Indeed, in the past 20 years, tech companies have increasingly occupied the top five publicly traded companies by market cap globally. But the forces shaping the technology, media, and telecommunications (TMT) industry are also posing serious challenges for established players in that industry.

EVEN THE BEST IDEAS AREN'T EVERGREEN

The TMT industry is poised for even more tremendous growth in the next decade. But that doesn't mean industry players should get complacent. The arena is dynamic and risky, and the mortality rate is high. Disruptive technologies and business models may make their splashes and gather momentum, but eventually, their growth starts leveling off. Then a few winners emerge, and the landscape becomes littered with far more losers.

The pattern is all too familiar:

- **Phase 1: Disruption.** A radical idea captures the imaginations of entrepreneurs, incumbents, and investors, who all start devoting resources to it. Market cap and revenues start climbing as demand for the new offering intensifies. Businesses work to generate hefty profits so they can invest in scaling up the operations and processes they need in order to grow and compete.
- **Phase 2: High growth.** What used to be a hot idea isn't so hot anymore. The product life cycle shrinks, and time to market becomes critical for staying competitive. Big companies snap up the smaller startups to acquire intellectual property, technologies, and capabilities. Small companies offering no unique value starve for resources, and many end up filing for bankruptcy.
- **Phase 3: Consolidation and commoditization.** Products and services become commodotized as big companies mass-produce them. These larger businesses acquire any smaller survivors to eliminate competitive threats and expand their portfolios or operating footprints. The big players build up scale through consolidation and start dominating the market.

Consider the TMT landscape today (figure 1). On-premise software and hardware companies, along with wireless service providers, have matured and undergone considerable consolidation. Companies specializing in areas like cybersecurity, digital media, and advanced manufacturing are enjoying brisk growth. And those focusing on the latest disruptions—such as artificial intelligence and smart cities—are just starting out. The newer sectors are highly fragmented, with many winners emerging.

[1] Capital IQ and AlixPartners analysis

> In the past 20 years, tech companies have increasingly occupied the top five publicly traded companies by market cap globally.

But as they mature, they too will likely experience the same consolidating and plateauing that the older sectors have already gone through. And many will fall by the wayside, unable to maintain their momentum in the face of powerful forces reshaping their industry.

Eventually, today's most exciting startups will become established companies that stand on (seemingly) safe shores and watch as newer, more-disruptive ideas come like waves in the ocean. To ride those incoming waves, they'll have to leave the safety of the shore and paddle hard into the water—making just the right moves to reach the wave before it crests. Otherwise, they'll be pulled under because no TMT player—regardless of its sector or its place on the maturity curve—can afford to relax.

NEW COMPLEXITIES, NEW CHALLENGES

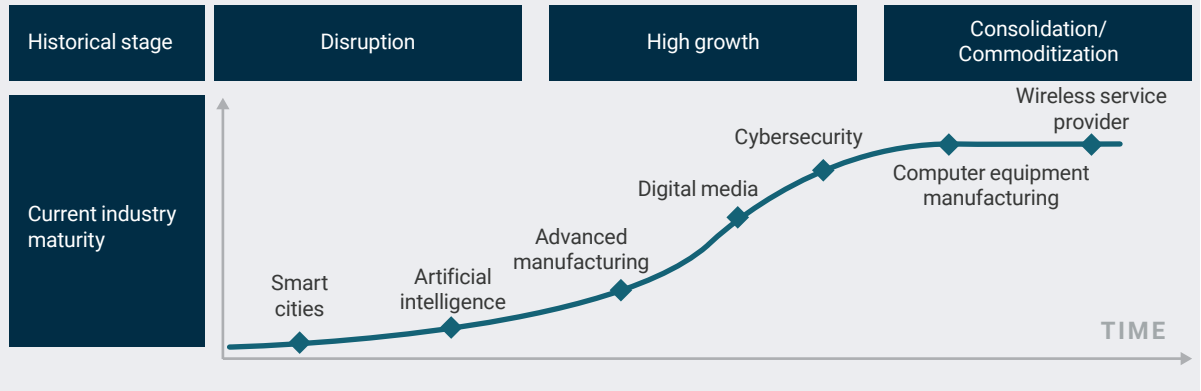
As TMT players travel along the maturity curve, they not only grow and attract new kinds of competitors, but they also bring new complexities into their businesses. Those complexities emerge in four ways, shaped by relentless innovation in technologies like social media, online marketplaces, augmented reality, artificial intelligence, and cloud-based computing:

- Buyers and sellers today converge and interact in portals integrated with everyday life.
- Virtually any information can be available almost instantly, anywhere.
- Data security has become more critical than ever.
- Knowing how to use ever-larger volumes of data to make predictions and business decisions has become mere table stakes for those seeking to play in this game.

All of these trends pose serious challenges to established TMT companies. Their aging R&D engines must run faster than in the past and draw on a new blend of competencies to accommodate increased product variety and get their offerings to market faster. Meanwhile, their sales and marketing organizations must work together more closely than ever to release new products and services without cannibalizing existing ones.

But all of this costs money, and as new revenue-generating functions eat up more resources, companies often get pushed to slash costs in their back-office functions.

FIGURE 1: DIFFERENT TMT SUBSECTORS ARE IN DIFFERENT PHASES OF THE MATURITY PROCESS—BUT ALL OF THEM MAY EVENTUALLY BECOME VULNERABLE



Source: Gartner's Hype Cycle for New Technologies, AlixPartners analysis

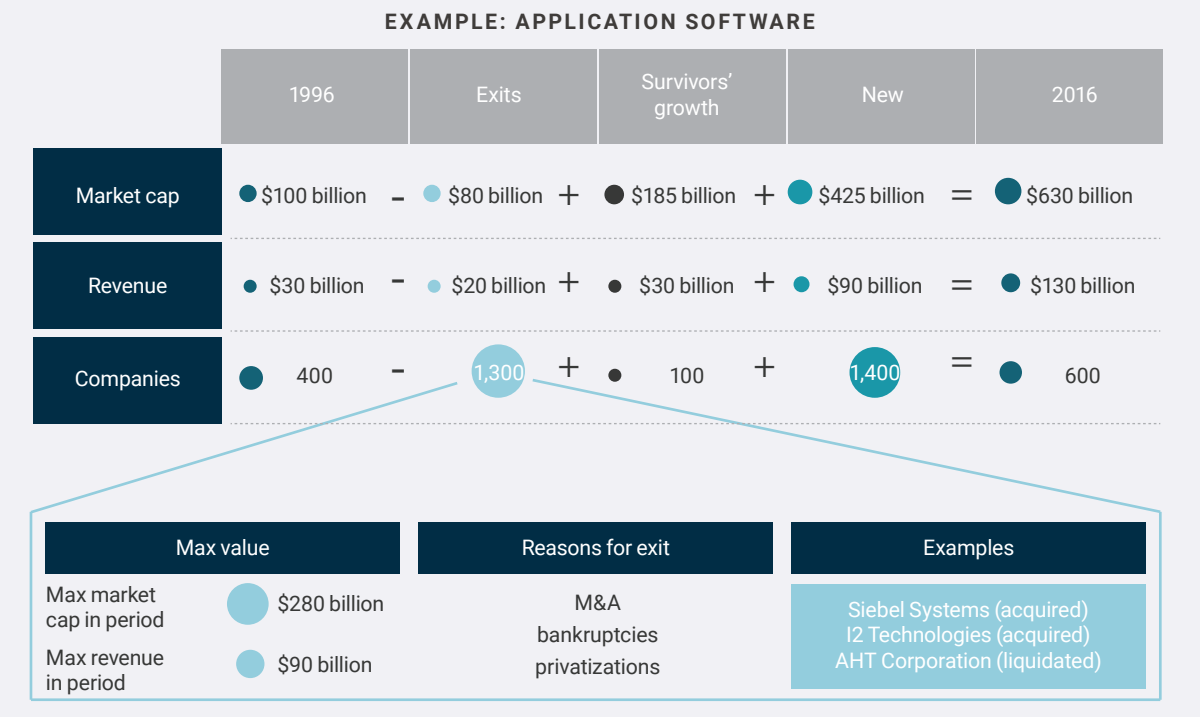
> During the previous two decades, players in the traditional, mature sectors—such as hardware, software, and telecom—have seen slower growth than have the new players fielding disruptive ideas.

As those cost pressures increase, companies can fall prey to operational inefficiency, which can spell doom for profit margins and growth efforts—ultimately even putting companies at risk for bankruptcy or acquisition. Traditional TMT players can become especially vulnerable to operational inefficiency because they have to invest heavily in assets critical to their longtime business models. Examples are silicon chip manufacturing facilities and enterprise application and data warehouses that have large data centers that are costly to maintain.

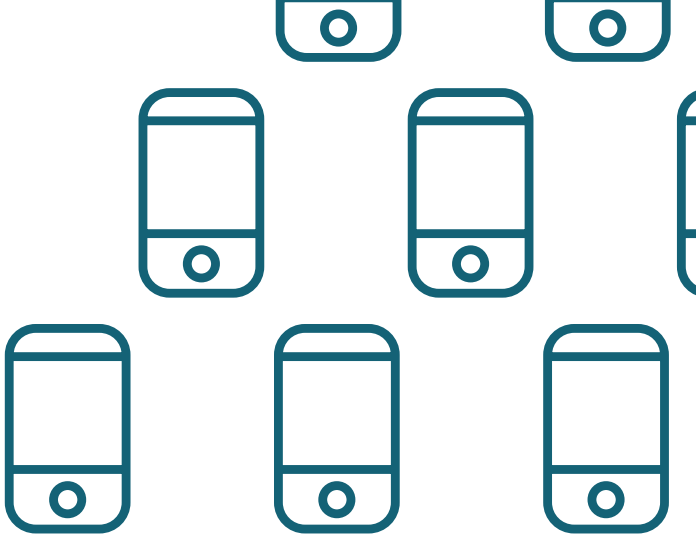
RIDING THE WAVE—NOT DROWNING IN IT

This perfect storm of flattening growth, intensifying competition, and deepening complexity has compelled major changes in the TMT industry. During the previous two decades, players in the traditional, mature sectors—such as hardware, software, and telecom—have seen slower growth than have the new players fielding disruptive ideas. And the number of incumbents active in the industry has plummeted. Some of them were acquired through consolidation, and others went bankrupt after failing to attract needed capital from investors who were skeptical after watching their disappointing IPOs.

FIGURE 2: AS MARKET CAP HAS GROWN IN THE SOFTWARE APPLICATION SECTOR, A SHOCKING NUMBER OF COMPANIES HAVE EXITED THE PLAYING FIELD



Sources: S&P Capital IQ, all companies with application software as a primary industry, 1996–2016 data



Take the software application, or apps, sector (figure 2). Market capitalization in this industry grew by a factor of six from 1996 to 2016—from $100 billion to $630 billion. But during that same period, more than 1,300 companies exited the sector because they were acquired (75% of them) or declared bankruptcy or experienced similar situations (25% of them).

Clearly, companies can't assume that a fast-growing market cap means ongoing safety. To stay competitive—let alone alive—as they travel along the industry maturity curve, tech companies will have to keep reinventing themselves. They have to be able to recognize when their markets begin to undergo major change, and then they have to make the business model transformations essential for preparing for and adapting nimbly to those shifts. Only then can they position themselves in the best place possible for the future.

Some TMT players have managed that feat. For instance, Apple transformed itself from a personal computing company into a company that has competed, by turns, in the music, mobile phone, tablet computing, and watch industries. Microsoft shifted its business model from sales of operating systems to sales of cloud services. IBM divested its hardware businesses in favor of software and services. And some of the big telcos like AT&T and Verizon are getting into media and advertising.

A success story...

One leading computer hardware company that we worked with saw PC and laptop sales volumes collapse as consumers began to embrace tablets and smartphones. Meanwhile, the emerging cloud-computing business was further constraining growth in the company's traditional market. The company then took steps to prepare for the new future it saw coming.

It shifted its business model toward the more profitable enterprise software business. It also shored up its innovation/R&D pipeline and made its organizational structure as efficient as possible. For instance, it set up a transformation program that included innovating in advanced insights and analytics. The company ultimately went private. By revitalizing its competitive strategy and revamping its business model for greater scalability, it improved its profitability significantly. Those gains helped position the company to successfully acquire another firm in the tech industry, and today the company boasts one of the largest market caps in the industry.

...and a cautionary tale

A security software company saw its market changing in B2B. In that arena, enterprise licensing was no longer the main source of income, and competition had intensified. Things were also changing in B2C. There, prices for security software had plummeted, and consumers could buy it easily—without having to limit themselves to offerings from only the big brand names.

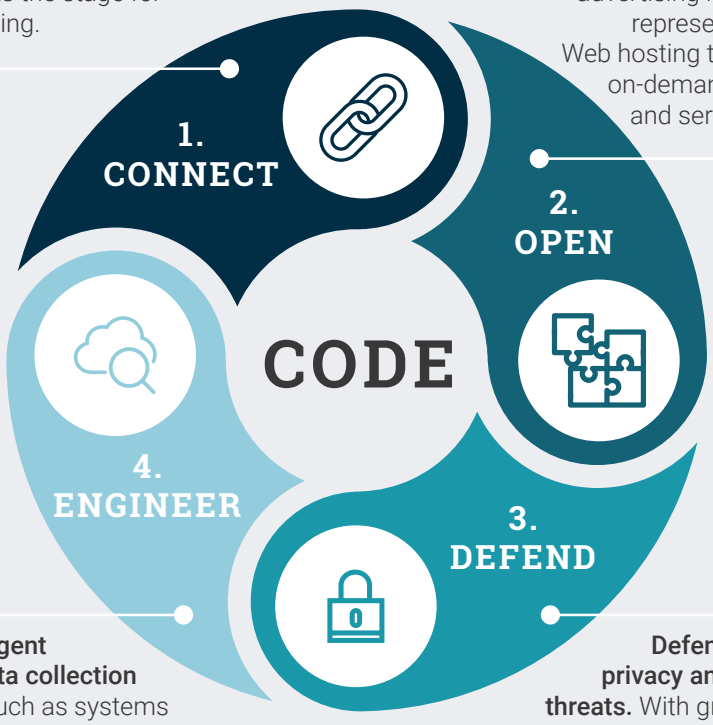
But the company did virtually nothing to prepare for the change. Its primary problem was the legacy technology systems it had inherited, which it neglected to integrate and optimize as a way of gaining flexibility and agility. The business thus had a bad case of operational inefficiency. The company was acquired by a tech giant but didn't perform well for the new parent. It was sold to another player several years later.

CODE: A framework for action

Drawing from what we see in the market and from our work with clients, we believe that mastering the CODE action framework can help TMT companies ride growth waves rather than getting pulled under them.

Connect your products and services. You can't afford to be a one-hit wonder. Today's fickle consumers demand the same quality of experience across all of the offerings they buy from any one company. For instance, offering services like payments, entertainment, or transportation without everywhere connectivity sets the stage for losing, not winning.

Open your business model to convergence opportunities in the TMT space. Integrate what used to be separate services, products, and features into one seamless and uniquely compelling bundle. Telecom providers that bundle media with service and that build advertising revenue streams represent one example. Web hosting that morphs into on-demand infrastructure and services is another.

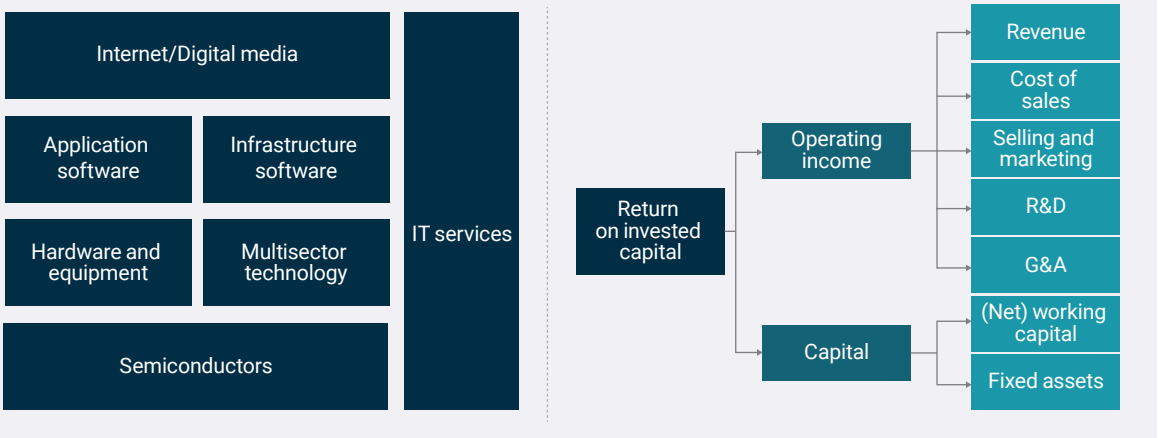


Engineer intelligent systems for data collection and analysis, such as systems that support machine learning. Design a sophisticated program for managing and analyzing rapidly growing data sets. For instance, build and use algorithms that adjust themselves based on outcomes and decision making—without the need for human intervention.

Defend yourself from privacy and cybersecurity threats. With great data comes great responsibility. Technology companies, which collect and deploy vast volumes of confidential business information and personal information, are especially vulnerable to security breaches.

Defining the right c-suite agenda to implement such moves is challenging because the effort affects all aspects of a company's operating model and organizational design. What's more, how a business tackles making those changes depends on the business's unique context, individual needs, history, and sector or subsector. There's no one-size-fits-all answer. Still, no company can afford to shy away from the work if it hopes to successfully ride the growth waves rolling toward its shores. With that in mind, following are quick previews of ways companies in various TMT subsectors can successfully implement the CODE framework.

FIGURE 3: ASSESSING ROIC HOLISTICALLY HELPS COMPANIES MAKE SMART TRADE-OFFS TO REMAIN COMPETITIVE IN A CHANGING BUSINESS ENVIRONMENT



Source: AlixPartners analysis

Implementing CODE: quick previews for TMT subsectors

To implement the CODE framework—Connect, Open, Defend, and Engineer—companies must make savvy choices about how they'll configure their operating model. Those choices will vary widely from company to company depending on such things as the sector or subsector a company competes in and whether the objective is to drive top-line growth or manage bottom-line cost. But all companies can benefit by holistically assessing return on invested capital (ROIC) (figure 3). Why? Companies must make trade-offs in determining how to best compete, and a comprehensive assessment across the ROIC tree can help them make those trade-offs when needed so they can scale effectively and adapt to changes in their environment and markets.

Internet/Digital media

Companies seeking to become—and remain—the next Google, Facebook, Pinterest, or Twitter can benefit by focusing their operating models on big-data analytics combined with lean go-to-market approaches. For instance, on the operating income side of the ROIC tree, they'll have to boost revenue by capitalizing on consumers' shift to mobile technologies—scaling revenues profitably by taking advantage of such features as self-service and automation. As for the capital side of ROIC, they'll have to focus on managing their content and audience and outsourcing noncore capabilities when applicable.

Your c-suite agenda: Make sure your company's operating model supports a profitable business model. Channel your resources toward acquiring, developing, and retaining talent in product and sales across your core business—as well as for future bets. Take advantage of automation, and orchestrate the channels needed to optimize audience reach and boost your go-to-market productivity as assessed by such metrics as daily active users and customer lifetime value.

Application software

For businesses aiming to be as great as Dropbox, SAP, Salesforce.com, or Sage, the maxim today is "Grow through software as a service—or die." To enhance their operating incomes, companies can make such moves as implementing self-service access to reduce cost of sales and designing a software-as-a-service (SaaS) offering with features that attract and capture small-enterprise and medium-size-enterprise customers. On the capital side, companies can move their R&D and IT to the cloud and adopt SaaS for key functions, thus becoming both leading users and leading sellers of cloud-based application software.

Your c-suite agenda: Build your SaaS offering in place of or alongside your traditional offerings. Refocus your sales force around SaaS, including designing the right incentives and training programs. Reconfigure your cost structure as needed to prepare for fighting low-overhead rivals that were "born in the cloud."

Infrastructure software

The Oracles, Red Hats, Citrixes, IBMs, and Microsofts of the world are excelling by embracing the cloud with seamless public, private, and on-premises offerings. Aspiring infrastructure software giants must do the same. Key operating income moves will include using bleeding-edge development and infrastructure tools such as agile programming and platform as a service to slash cost of sales—including R&D—and delivering outcomes, not just software, to clients. As for capital, becoming leading users and sellers of cloud-based software is a must, including adopting SaaS for key functions.

Your c-suite agenda: Futureproof your offerings portfolio against a cloud-first world of both public and private clouds while maintaining your on-premises offerings. Sustain your lead in open-source offerings by providing world-class services. Build a cost structure that prepares you for a future in which more customers will likely transition to a public cloud.

Hardware and equipment

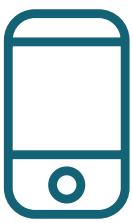
Companies aspiring to become the next Lenovo, Foxconn, HP, Dell, or Cisco will have to establish solid competitive positions during a time of extreme change and will have to improve their margins by boosting productivity to unprecedented levels. Critical tactics on the operating income front will include achieving step-change reductions in component costs through such technologies as 3-D printing and by luring top R&D talent away from digital-blur companies that offer products covering multiple sectors. As for capital, companies can work to achieve best-in-class cash-conversion cycles and shift to virtual or shared workplaces—among other moves.

Your c-suite agenda: Sharply differentiate your offerings by showing how they help customers combat commoditization and cloud trends. Bring in talented engineers who can extend your company's core advantages, especially in the area of cloud-based software that enables computing to be applied to multiple hardware systems. Design a cost structure that puts you in fighting trim, that will enable you to move quickly to capture new opportunities, will equip you to parry new threats—and that will help you generate enough margin to fund your competitive strategies.

Multisector technology

Players in this arena are astonishingly diverse—from Medtronic, Sony, and Vizio to Huawei, Canon, and LG. But they all succeed by pushing boundaries, such as by innovating beyond their core businesses to create alluring, new consumer devices. And they fatten their margins by driving productivity across sales and operations to new heights. Depending on their product or service focus, companies that want to emulate those leaders can make operating income moves such as strengthening their digital marketing prowess, including supporting programmatic buying. They can also build consumer devices that (1) simplify the Internet of Things as its complexity grows alongside massive volumes of data and (2) link to the mobile ecosystem to provide consumers with simple, central solutions. On the use-of-capital front, as with their hardware and equipment peers, achieving a best-in-class cash-conversion cycle and shifting to virtual or shared workplaces constitute smart moves.

Your c-suite agenda: Sharply differentiate your offerings by developing a clear product road map and assessing the competitive landscape. Bring in talented engineers who can extend your company's core advantages, especially in the area of cloud-based software that enables computing to be applied to multiple hardware systems. Design a cost structure that puts you in fighting trim, enables you to move quickly to capture new opportunities, equips you to parry new threats, and helps you you generate enough margin to fund your competitive strategies.



> Even though the TMT industry has shown astonishing market-cap growth—and is poised for more—players in this arena shouldn't expect that growth to carry them to a secure future.

Semiconductors

To compete against leaders in this sector—including Intel, Texas Instruments, Samsung, TSMC, and Q—companies will have to transform their go-to-market approaches so they can capitalize on the Internet of Things opportunity. At the same time, they'll have to excel at SKU (stock-keeping-unit) management. Essential operating income tactics will include boosting revenue by achieving competitive scale—whether through organic or inorganic growth—and managing cost of sales by offsetting commodity-price volatility through hedging. On the use-of-capital front, keeping inventory under control as product offerings and SKUs increase will be imperative.

Your c-suite agenda: Capture new opportunities that are presented by the Internet of Things and that guarantee competitive scale for your company. Effectively manage your SKU portfolio by using the right techniques, and carefully plan your R&D resources. Transform your operating model so it centers on selling solutions to multiple industries while keeping your costs under control.

IT services

IBM, CSC, and Atos know how to capitalize on tech-enabled business opportunities while minimizing the impact from the decline and commoditization of legacy business-process-outsourcing businesses. For companies aiming to excel in this sector, savvy operating income actions will include aggressively growing their digital transformation services such as digital marketing and mobile analytics as well as effectively managing the retention and use of expensive data, security, and mobile technology talent. With regard to the capital side of the ROIC equation, effective tactics include scaling fixed-asset infrastructure such as data centers so they'll flex as client demand changes.

Your c-suite agenda: Aggressively grow your differentiated digital-transformation-services portfolio and your delivery capability. Manage volume and margin decline in your legacy or commoditized business-process-outsourcing business by proactively presenting alternatives to your clients. Embrace—and provide internal incentives for—smaller and shorter delivery phases that each exert a measurable impact on your company's operating model and the model's ability to adapt to change.

In light of these realities and the multiple challenges facing them, progressive TMT executives should take time now to consider questions like the following—and explore their answers. Where does our company stand on the TMT industry maturity curve?

- What should we do now to position our company for success in the future? What should we do in the near future?
- How will we have to change our business model and operating model to continue growing as we travel along the maturity curve?
- What new forms of complexity are confronting our business today, and what challenges do they pose for us in key functions within our organization? What steps can we take to manage the impacts of those complexities?
- In what ways might we be vulnerable to operational inefficiency—and what steps could we take to avoid falling into the operational inefficiency trap?
- What do M&A patterns look like in our industry today? How can we protect ourselves from exiting the industry through acquisition—if being acquired is not one of our objectives?
- How is our industry changing, and what impacts will those changes have on the future business landscape? What actions should we take now to prepare to navigate that future landscape?
- Of the four components in the CODE framework—Connect, Open, Defend, Engineer—which seem(s) most difficult for our organization to implement? Why? What must we do to overcome such difficulty?

In the future issues of this series, we will continue discussing topics that are critical for private investors focusing on value creation in TMT. We look forward to the conversation, and we hope you'll stay tuned. **A**

CONTACT THE AUTHORS:
Luca Ridolfi and Douglas Tsang.

FOR MORE INFORMATION, CONTACT:
Francesco Barosi
Managing Director,
Global co-lead, Technology, Media & Telecommunications
+1 312 286 7829
fbarosi@alixpartners.com

Eric Benedict
Managing Director,
Global co-lead, Technology, Media & Telecommunications
+44 7774 172 668
ebenedict@alixpartners.com

ABOUT US

In today's fast paced global market timing is everything. You want to protect, grow or transform your business. To meet these challenges we offer clients small teams of highly qualified experts with profound sector and operational insight. Our clients include corporate boards and management, law firms, investment banks, investors and others who appreciate the candor, dedication, and transformative expertise of our teams. We will ensure insight drives action at that exact moment that is critical for success. When it really matters. alixpartners.com