



SCALING UP AGILE AT TELCOS

By Chris Matthey, Franck Luisada, Jean-Baptiste Bearez, Erik Lenhard, David Martin, and Brandon Walsh

AS AGILE HAS EXPANDED beyond its origins in software development, telecommunications companies have actively explored taking agile ways of working beyond their software delivery teams. Approximately two-thirds of telcos globally have run agile pilots or developed portfolios of agile teams. But only a few have made the transition to agile at scale—applying agile to the operations of a full business unit, to their network delivery, or to the enterprise as a whole.

It's not for lack of results. Around the world, we have seen telcos increase process development speeds while reducing costs by 20% to 50%. Some have increased release cycle times for new products by a factor of ten and reduced marketing expenses by 60%. In other industries, companies that have fully transitioned to agile have reduced development costs by 15% to 25%, improved customer satisfaction, multiplied their return on digital investment by three to four times, accelerated new product delivery by 200% to 400%, and achieved better than 90% employee engagement. (See Exhibit 1.)

Telcos are at a tipping point for agile deployment. A fundamental change in the way of working is about to take hold. (See Exhibit 2.) But many leaders are unsure whether now is the right time to make the transition—or, if it is, where they should start or how they should roll it out. For many telcos, the decision means either embracing agile or being left behind.

The Challenges to Agile in Telcos

All companies encounter plenty of hurdles and risk falling into various traps when trying to scale up agile. These include taking half measures or ending up with a two-speed organization or ways of working that are agile in name only. Because of the telecommunications business's structure and features, telcos face a set of industry-specific challenges, including those related to team structure, vendor management, risks and interdependencies, consistency, and culture and leadership. This last hurdle is especially high because many telcos have been doing business in much the same way for decades.

EXHIBIT 1 | BCG Clients Have Seen Significant Positive Impact from Agile

	TYPICAL BENEFITS....	...FOLLOWING A FULL AGILE TRANSFORMATION
Time to market	<p>2x–4x acceleration in delivery¹</p>	<ul style="list-style-type: none"> • Team prioritization of and focus on the highest-value features • Shortened cycles leading to product launches
Products and features	<p>3x–4x customer satisfaction and return on digital investment</p>	<ul style="list-style-type: none"> • Close collaboration between business and IT • Rapid incorporation of customer feedback
Delivery efficiency	<p>15%–25% reduction in development cost</p>	<ul style="list-style-type: none"> • Faster implementation cycles • Reduced program/project management overhead
Productivity	<p>4x velocity²</p>	<ul style="list-style-type: none"> • Reduction in waste and errors • Minimization of technical debt through continuous improvement
Employee engagement	<p>>90% employee engagement</p>	<ul style="list-style-type: none"> • Attraction and retention of superior talent • Greater job satisfaction among high performers

Source: BCG case experience.

¹Observed acceleration after a typical 1.5-to-3-year transformation.

²Velocity is an agile metric for the units of work that a team can complete over a given time period; observed productivity increase after a typical 2-to-3-year transformation.

Historically High Costs of Failure. Telcos are accustomed to making big bets, and the cost of betting wrong can be high. If the network goes down, even for a few minutes, the reputational impact is severe, and the implications for the business can be serious. Revenue growth is so hard to come by that many telcos focus primarily on retaining customers and protecting the near-term revenue base. These priorities, combined with high capital expenditure costs (such as for network upgrades) and long payback periods, have led to a high intolerance for risk.

This orientation cuts hard against a basic tenet of agile: approaching new initiatives with a test-and-learn, fail-fast mindset. Traditional telcos tend to see failure as too expensive and recovery periods as prohibitive. Moving from a waterfall approach to project management, which involves detailed long-term planning, to fast cycles, which focus on releasing minimum viable products that are designed to permit (and even encourage) failure and incremental learning, involves a paradigm shift for the organization. Such a shift requires not only the engagement of the agile teams but also buy-in from top management and from the rest of the organization. In telcos it can be

particularly challenging to get leaders comfortable with taking risks and empowering their teams to make decisions to the degree required to foster an agile way of working.

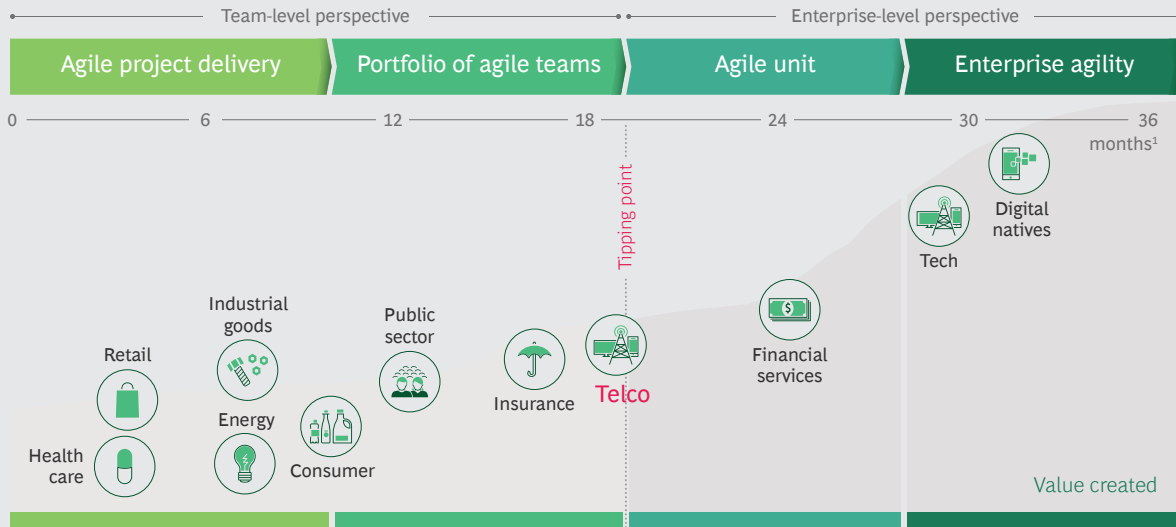
Legacy IT Systems and a Broad Network.

The complex technology landscape in telecommunications creates challenges in and of itself. Incumbents typically have old and interrelated IT systems, which can complicate efforts to expose application programming interfaces and resolve integration issues. One telco in Asia Pacific recently threw a 40th birthday party—complete with cake and champagne—for one of its systems that was still an operational part of the stack! While many industries need only broadly consider IT architecture as an enabler of change, telcos must plan around the full stack, considering the network, data link, and physical layers simultaneously.

Outsourced Support and a Broad, Organized Labor Force.

Partners or vendors manage many layers of the telecommunications stack—and for agile to be successful, all of them need to be involved in the change, which can create thickets of complexity that must be cut through. In addition, telco workforces (or large parts of

EXHIBIT 2 | Telcos Are at the Tipping Point for Full Agile Adoption



Source: BCG case experience.
¹Actual timing may vary significantly.

them) are in many instances unionized, and an agile transformation quickly runs up against negotiated work rules and other labor contract constraints. A full transformation requires alignment with vendors and partners as well as amendment of union contracts. This adds complexity to the transformation and can slow it down significantly, since many such agreements and contracts must be renegotiated every few years.

Large Interrelated Portfolios. Telecommunications products are significantly more integrated than products in industries such as banking or insurance, and this complicates any effort to introduce organizational change. For example, although the customer journeys for mortgages, credit cards, and checking accounts are not entirely independent of one another, they are significantly less integrated than is the customer journey for mobile service, devices, internet access, and fixed-line service. In an agile environment organized around cross-functional teams, tribes, and squads, this interrelatedness amplifies the need for a high degree of coordination and collaboration. This need extends to very careful coordination during product design and release planning to ensure proper sequencing of new product offerings and

customer journeys, so as to reduce complexity, confusion, and rework.

How to Plan Around the Challenges to Jump-Start Your Transformation

Each company has its own starting point and circumstances, but telco organizations can gain a head start in overcoming the obstacles described above by taking a systematic approach to designing their agile transformations.

Value principles over process. At its heart, agile is a set of values. People talk about sprints and scrums and tribes, but the principles of iterative, empirical, cross-functional, customer-focused, continuous improvement are what make agile powerful. How companies should apply these principles depends on what they need to accomplish, given their particular history, technology, maturity, and culture. For example, an agile team using the scrum methodology typically works in time boxes or sprints of one to two weeks. But there is no rule that says sprints can't be longer or that all teams need to be scrum teams. In the telecom sector, given the high costs of failure and companies' large base of interrelated fixed assets, it often makes

sense to lengthen sprint duration or embrace a multispeed approach to agile with sequenced sprints among teams.

For example, one team might develop a feature of a digital customer-facing app after a two-week sprint, but another might need several months to work out a major enhancement or adjustment to an operations or business support system. An Asian telco applied a two-speed approach because the complexity of its tech stack prevented the network team from executing sprints at the same speed as the product team. Another company maintained a two-week sprint cycle but used feature tags to hold off on releasing the final activation until all of the work was complete and integrated across the dependent systems.

For telcos, the highly integrated nature of building out products makes coordination critical and makes standardization of some elements of the taxonomy—such as work breakdown and life cycle management—essential. Aligning on a few KPIs allows leaders to better understand what is going on, so they can help teams make decisions. Comparing the progress of different teams can help in surfacing issues and targeting solutions. Adopting a consistent approach to agile ensures that individuals can move among teams without having to relearn practices each time.

Plan around the stack. Companies do not need to have perfect IT systems in place before starting the agile journey, but they should invest continuously in improvement. Owing to the interconnected nature of the IT stack and most telcos' heavy reliance on legacy IT systems, planning around the stack is essential. Generally, the more digitally mature the stack, the easier the agile transformation—but every telco has a different starting point, and before a full agile transformation can take place, leaders should carefully consider the maturity of the stack and plan on that basis. Forward-looking telcos start by looking at their digital stack's targeted architecture and then plan the tech upgrades and the agile transformation together. Because of the sensitivity of

network technology, some companies continue to manage this area in a traditional way, integrating an agile approach to the most sensitive software and technology tasks only very late in the transformation process.

Over time, most telcos have outsourced some or all of the layers of the stack. As a result, the digital transformation requires additional planning and potential partnering with multiple organizations to upgrade individual layers, each of which demands its own nuanced approach. Each layer demands careful consideration and planning from a broad group of internal experts and external partners and vendors, as well as from the agile transformation team, in the context of an overall plan that integrates and sequences all layers, taking into account that each piece will likely move at its own speed. For example, the physical layer (hardware) may require long planning times, large capital expenditures, and engagement with local governments and business partners to upgrade the infrastructure throughout the network, all of which can translate into a multiyear process. Meanwhile, other layers, such as data, can move forward much more quickly.

Embrace cross-functionality. Cross-functional teams, squads, and tribes are another fundamental feature of agile. Because of their customers' interdependent customer journeys, telcos need to embrace this cross-functionality more broadly than most other companies do. To ensure that they have an end-to-end view of a technical change, companies should include upstream functions such as product, marketing, and sales channels in teams composed predominantly of technical staff, as well as downstream functions such as security, channel and change readiness, and networks. Often, increasing the number of voices in the room can slow the cycle and increase the time required to reach consensus. To ameliorate this tendency, planners should carefully assign, communicate, and adhere to decision rights. This cross-functional capability increases in importance as products and services become more interconnected.

Labor contracts may constrain a company's ability to construct cross-functional teams and to assign personnel to work in them. Consequently, the company may have to bring agile to the bargaining table when negotiating new labor agreements.

Moving to Scale—Fast

Recognizing and planning for the telco-specific hurdles involved in moving to agile can help smooth and speed the transformation process. But once the planning is in place, demonstrating success is largely a matter of leadership and determination. How companies select and execute their first few agile tribes—groups of teams

tasked with solving specific problems or needs—is where the agile rubber meets the road.

We have worked with several telcos recently that passed the test, establishing agile tribes, creating a track record of accomplishment, and accelerating the start of their transformation. Such success is most often achieved through careful selection of the first tribes to be created, with an emphasis on predictability and transparency of information, rather than on velocity of transformation. For their stories, see our upcoming article, “How One Telco Is Moving to Agile at Scale.”

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