

**operational
benchmarks:**

making them

fit for future
telecoms businesses

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what is an operational benchmark and why do they matter?

For Steve Jobs it was all about quality. Jeff Bezos is obsessed with customer experience. And for Henry Ford, more than 100 years ago, manufacturing success was built on a focus on time, materials and energy. These are just three examples of business leaders, and companies, who believed that adopting certain principles and approaches to running their business was crucial to delivering financial success.

But how do you embed these principles, these business philosophies, into an organization? The key to ensuring that they are rules by which a company lives and breathes, rather than a mere slogan, is to use key performance indicators and operational benchmarks to shape the work of individuals, teams and whole departments and functions.

Apple under Steve Jobs was famed for its commitment to delivering quality products. It reduced the number of its product lines from 15 to four in the late 1990s in order to have more people working on each product and to reduce cycle time for upgrades. A belief in expertise runs through the entire organization. “Its fundamental belief is that those with the most expertise and experience in a domain should have decision rights for that domain” notes [a 2020 article from Harvard Business Review](#) on the keys to Apple’s success. The article also points to a “deep immersion in detail” which “isn’t just a concern that is pushed down to lower-level people; it is central at the leadership level”.

While expertise and attention to detail are prized assets at Apple, customer focus is the obsession of Amazon founder and CEO Jeff Bezos. “The number one thing that has made us successful by far is obsessive compulsive focus on the customer” noted Bezos in one of his annual letters to shareholders. Its leadership principles are spelled out on its website: “Our unique Amazon culture, described by our Leadership Principles, helps us relentlessly pursue our mission of being Earth’s most customer-centric company, best employer, and safest place to work.”

The key to ensuring that business philosophies are rules by which a company lives and breathes is to use operational benchmarks

Data-driven decision-making sits at the heart of the Amazon organization. It is central to how the company meets customer expectations and how the performance of individuals and teams is measured.

Operator priorities

Telecoms, on the whole, doesn't really have maverick bosses like Jeff Bezos, Steve Jobs or Henry Ford who impose their characters on the companies they lead. One exception that comes to mind is John Legere, former CEO of T-Mobile US, who championed the operator's Uncarrier brand and positioned himself as an underdog railing against the antiquated and inadequate customer service and pricing practices of incumbent mobile operators.

But telecoms operators generally tend to be pragmatic. As the era of competitive telecoms markets have evolved and matured, their priorities and focus have evolved. In the 1980s and 1990s, when the mobile industry exploded into life, operators needed to do whatever was necessary to scale their business – network, operations and distribution – to meet demand. This meant outsourcing functions such as IT and retail.

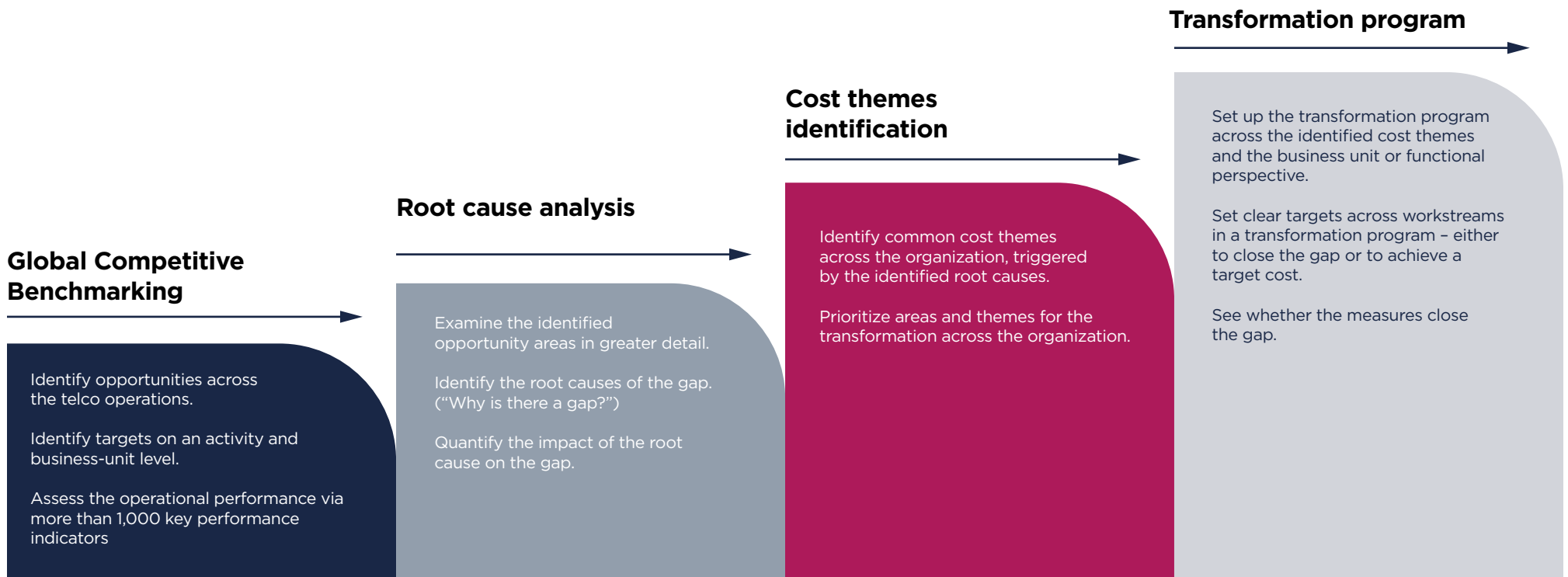
Networks were (and still are) also largely outsourced functions with operators giving one or two vendors end-to-end responsibility for installing them. Such was the phenomenal growth of the operator business that cost control was not a major focus. Customers were not unduly concerned with customer service because they were so taken with mobile phones and mobile communications that the benefits of such a new technology hugely outweighed any poor customer experience.

But as the industry has matured, and growth has slowed, operators have inevitably had to focus more on cost management and efficiency gains. That is not to say that operators do not believe in the importance of delivering a strong customer experience – every operator tracks its Net Promoter Score (NPS) or a similar customer experience tool. But when it comes to the teams that operate the network and the IT systems that support the network, the business and its customers, managing costs is very much the focus. Indeed, IT – and to a degree networks – tend to be seen as cost items for the business rather than ones which enable operators to differentiate the products and services they offer.

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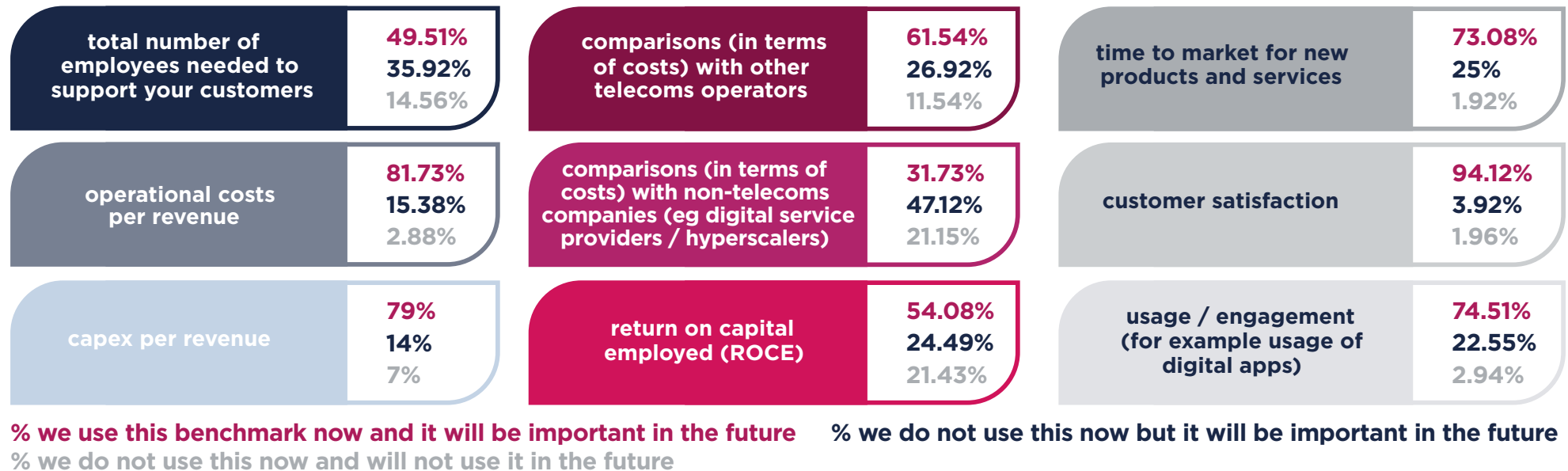
Understanding a technology function within a telecoms operator business is extremely difficult because of the complex web of systems, suppliers, integrators and outsourced functions that has arisen over a period of 20-30 years. Consulting firms such as Kearney help operators to understand whether they are getting value for money from their technology functions through benchmarking assessments. Kearney's Global Competitive Benchmarking (GCB) tool compares the cost – indirect costs, direct costs, capex and assets – of 60 activities at operators globally. Operators often use GCB as a starting point for a large-scale transformation or to measure the effectiveness of ongoing transformation programs. But GCB only compares operators' costs with each other – it does not compare their costs with companies in other sectors.

Global Competitive Benchmarking is the starting point for a corporate transformation



In the summer of 2022 we conducted a survey of 103 technology leaders working for telecoms operators across the world to understand how communications service providers (CSPs) benchmark their organizations today and how they expect their approaches to change in future.

What operational benchmarks do you currently use to measure the efficiency of your business?



We provided them with nine different benchmarks, six of which can be considered financial benchmarks and three of which are more about the operators' customers. Six out of ten said they used comparisons with other operators – the type of comparisons provided by firms such as Kearney. But only one in three respondents said they compared their costs with non-telecoms companies. This is not to say that they would not welcome such benchmarking opportunities. The real problem is getting the right data to make the comparisons.

“Sometimes we try to do some kind of... benchmarking [with hyperscalers] on [the] operations side to figure out how many people we really need on operations versus development, but it's difficult to get real numbers,” says Swisscom CEO Christoph Aeschlimann.

Capex is king

Four out of five respondents to our survey said they used capex to revenues and opex to revenues as operational benchmarks.

Capex levels have been outpacing revenues for many operators in mature telecoms markets in recent years. This is because of telco revenue stagnation in these countries and heavy investment that operators have been making in deploying fiber and 4G/5G networks. In competitive telecoms markets, operators that fail to invest in new fixed and mobile broadband networks risk losing customers to others.

One of the most popular financial metrics used by both CSPs and their shareholders to track underlying profitability is Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA). This does not incorporate capex and, as such, does not take into account increased spending on networks. But another financial metric, Return on Capital Employed (ROCE), which is often used in capital intensive industries like telecoms or utilities, does consider both debt and equity.

Just over half of respondents in our survey said their companies use return on capital employed as a KPI for their business. But with valuations of telecoms operators in decline, investors may start to pay greater attention to ROCE.

A September 2020 article in the Financial Times exploring “why telecoms groups have fallen out of fashion with investors” notes the heavy debt burdens weighing down many CSPs as a result of acquisition sprees and hefty network investment: “Analysts argue that companies need to be judged on return on capital employed – that is, whether they are creating value from the huge investments shareholders are funding.”

Benchmarks drive behavior

A belief in the value of EBITDA to measure the company’s underlying performance can result in certain attitudes and behaviors towards spending on technology and services. Indeed, it can create a perception that capex represents sound investment and opex is spending which needs to be constantly questioned and reviewed. In recent years many CSPs have committed to year-on-year cuts in opex – departmental belt-tightening exercises which tend to result in job losses.

In competitive telecoms markets, operators that fail to invest in new fixed and mobile broadband networks risk losing customers to others

are today's benchmarks fit for tomorrow's CSPs?

Telecoms operators today find themselves facing strong competition from a new generation of low-cost, asset light communications service providers (CSPs), and struggling to identify areas for expansion in an ICT services landscape dominated by hyperscale network operators. If CSPs are to compete with these companies, surely they need to benchmark themselves against them?

We asked our survey respondents which types of companies they should be benchmarking themselves against. Unsurprisingly, our respondents considered other telecoms operators to be most relevant in terms of benchmarking. But this means that they are not necessarily benchmarking themselves against other companies which deliver telecoms services but which do not own telecoms networks (see graphic on p.9).

CSPs have faced competition from mobile virtual network operators (MVNOs) in their retail businesses for many years. And now a new generation of so-called digital brands is emerging, using mobile apps as their route to market and which see themselves as digitally native organizations. These companies can support hundreds of thousands – or even millions of – customers with a workforce of, perhaps, 20-50 people.

The answer “other telecoms operators” was followed by three different categories of cloud-native organizations: cloud-based consumer service providers (such as Spotify and Netflix), cloud-based B2B service providers (such as SAP and Salesforce) and hyperscale network operators. Even though CSPs have come to accept that competing with these types of companies is beyond their capabilities, they do aspire to build similar in-house technology capabilities and organizational structures.

There was less belief in the relevance of professional services firms or tower / digital infrastructure companies as organizations against which CSPs should benchmark

As the telecoms operator business evolves, it may become appropriate for CSPs to benchmark themselves against other types of organizations

themselves. On the one hand this is understandable. Professional services firms such as Accenture have a business model that is based on using people to deliver value to their customers. And tower / digital infrastructure companies sell access to their infrastructure to telecoms operators and other service providers rather than the wider business and consumer community. But in future, as the telecoms operator business evolves, it may become appropriate for CSPs to benchmark themselves against both types of organizations.

Which types of companies should operators compare themselves with in terms of operational metrics in the context of becoming techcos?

	extremely relevant	quite relevant	not relevant
 hyperscalers / public cloud companies	36.11%	54.63%	9.26%
 other (best in class) telecoms operators	76.85%	18.52%	4.63%
 cloud-based enterprise service providers (e.g. Salesforce)	31.48%	54.63%	13.89%
 cloud-based consumer service providers (e.g. Netflix)	40.74%	46.30%	12.96%
 companies in other verticals	25%	44.44%	30.56%
 professional services firms	25.23%	39.25%	35.51%
 tower / infrastructure companies	25.93%	38.89%	35.19%

Diversifying businesses

Many tier-one CSPs are expanding their capabilities in the delivery of end-to-end services in sectors such as cybersecurity and cloud management. Their role in the delivery of edge computing services is more likely to be as systems integrators than as a provider of computing infrastructure or platforms.

Some CSPs are building specific IT services capabilities in vertical sectors. Australian telco Telstra, for example, has ambitions to be a leading provider of IT services to the healthcare sector. But on the whole such businesses are not yet the profit generators operators would hope for. CSPs' managed and IT services businesses today operate with EBITDA margins in the range of 5%-10% compared with closer to 20% for some of the leading professional services firms.

Tower companies have come to the fore in the telecoms industry in recent years as CSPs across the world have either sold off or spun out and sold their passive mobile infrastructure businesses. There has been strong investor appetite in these businesses and this has sparked intense debate about whether CSPs should separate out their entire network businesses to generate shareholder value.

But for the time being, there are very few examples of CSPs that have entirely separated out their network and services businesses (sometimes called a netco-servco model). They include Danish telecoms operator TDC, which now comprises two companies, TDC Net (the netco) and Nuuday (the servco). More recently, Italian telecoms group TIM has committed to a structural separation.

The more companies that successfully separate out their network and services businesses, the greater attention there will be on CSPs that do not. And even if most CSPs remain integrated, the recent dip in their share prices, and their longer-term stagnation, means that shareholders will want to see a clear commitment to operators driving efficiencies in their networks and services.

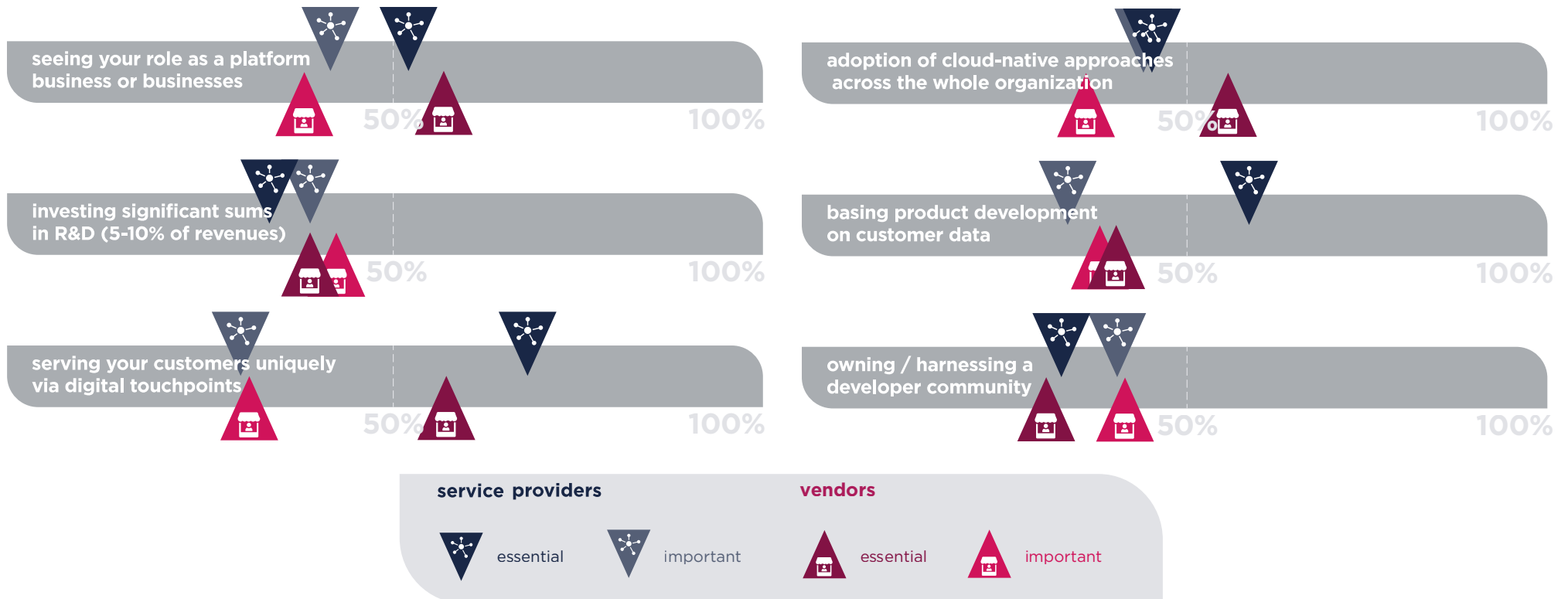
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From telco to techco

Faced with this supreme challenge of both finding new revenues and cutting costs, many telecoms operators are seeking to reinvent themselves, to change their DNA and become more like the digital-native organizations that dominate today's technology landscape. The term "telco to techco" is often used to describe this reinvention.

But what exactly is a techco? We asked our survey respondents – both CSPs and their technology suppliers – to consider six functions or characteristics of techcos and to say which ones they considered to be most important.

Which traits do you associate with being a techco?



Many of these traits were seen by our respondents as either essential or important. In some cases operators already have these characteristics embedded as part of their medium-to-long term strategies – they include serving customers uniquely (or predominantly) via digital touchpoints and adopting cloud-native approaches across the organization.

But when it comes to the adoption of platform business models or basing product development on customer data, these represent aspirations rather than genuine strategies for the vast majority of CSPs. Similarly, building a developer community is an ambition for a small percentage of operators but not part of any corporate plan.

As technology leaders consider how they must transform their organizations they face a number of questions that go to the very heart of how telecoms operators function and the role of technology. They include:

- Which technologies, functions, assets and capabilities generate value for the organization?
- What is the relationship between the technology that we acquire, build and integrate on the one hand and, on the other, the new services and value propositions for our customers?
- What skills and functions do I need to insource?
- How do I extract maximum value from my vendors?
- Do I need to change how I procure technology to fit with this new approach?

As they wrestle with these questions it becomes clear pretty quickly that many of the tried and tested approaches, principles and beliefs need to be revisited and, in some cases, overhauled.

Difficult conversations may be needed with other parts of the organization – for example, the lines of business and the finance and procurement functions. Such conversations are intended to assess the value – measured in terms of revenues, costs and customer experience – that technology brings to the business.

As technology leaders consider how they must transform their organizations they face a number of questions that go to the very heart of how telecoms operators function

“What is the total cost of ownership today? What is the business value? What is the total cost of ownership going to be tomorrow?” asks Verizon Global CIO Shankar Arumugavelu. “It may be higher than what I’m doing today. But it’s going to be significantly higher business value I’m going to get out of that. That is the discussion you sit and have with the business units and the CFO.”

Opex trends

As operators embrace cloud-native approaches and principles, how and where they invest will necessarily change. These changes include:

- Migration of applications and workloads to the cloud and, in some cases, a public cloud-first policy
- A desire to insource technology expertise
- A preference for procuring software services rather than licenses and a more agile approach to procurement more broadly.

Taken in combination, these new approaches to technology development and procurement will result in an increase in opex levels. This comes at a time when many CSPs are committing to year-on-year reductions in opex. Vodafone, for example, has announced that it will be cutting operating costs by 1 billion euros over the next three years.

Increasingly this will require a transition from a simple cross-departmental cost-cutting exercise to one that is based on automating processes and benefiting from the resulting headcount reduction. Digitization and automation was one of the three initiatives – the other two being group-wide streamlining and simplification and energy consumption – referenced by Vodafone in its cost-cutting announcement.

“What is the total cost of ownership today? What is the business value? What is the total cost of ownership going to be tomorrow? That is the discussion you sit and have with the business units and the CFO.”

Defining automation goals

Deriving benefits from automation is pretty near the top of every CSP's to-do list, although it is more pressing for some (such as Vodafone) than others. But having a clear idea – or at least a vision – of what can be achieved from automation is a different matter entirely. Is automation primarily aimed at securing efficiency gains and eliminating manual operational roles? To what extent might it also represent an investment in delivering better digital experiences for customers?

Without defining a clear set of strategies and goals for automation – and a set of KPIs and operational benchmarks to help CSPs track their progress – there is a risk that a hasty, ill-conceived and unstructured approach will store up future problems and inefficiencies for the business.

An automation maturity model is a good place to start. This should involve mapping out current processes to identify what can be streamlined. This may involve improving or eliminating some processes before they are automated.

One particular challenge for CSPs is the fragmentation of business-critical processes across multiple software systems and teams. As a result, prioritization is an important part of the process of goal-setting. Recurring processes, for example, are prime candidates to be first in line for automation.

In the final chapter we explore what future operational benchmarks should look like. We identify eight new approaches to operational benchmarks to help CSPs transform their organizations and create value for their customers.

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what should future operational benchmarks look like?

The realities of competing in today's telecoms and ICT markets and the need to drive greater efficiencies necessarily shape the operational benchmarks that CSPs need to adopt. But at the same time, when it comes to metrics and benchmarks specifically applied to technology functions, it's important that CSPs see technology as more than just a function whose costs need to be managed. Technology holds the key to unlocking new capabilities and revenue streams. It can be a differentiator for a telecoms operator.

We have identified eight new approaches to operational benchmarks that CSPs should adopt – particularly if they are looking to transform the very fabric and nature of their organizations and how they create value for their customers.

1. Benchmarks for a software organization

While the commitment to building in-house software capabilities varies hugely, there is a clear trend towards recruiting new skills and retraining existing employees. If they are to be successful – this is not the first time that CSPs have tried to insource their technology – they will need to borrow some of the KPIs adopted in the wider enterprise IT market. These may include:

- Cycle times for developing, testing and launching software
- A clear and transparent approach for testing the quality of code – particularly when partnering with third-party vendors
- Targets for the in-house development of software
- Targets for the reuse of application components

Technology holds the key to unlocking new capabilities and revenue streams. It can be a differentiator for a telecoms operator

- Targets for the adoption of open APIs (and for vendor conformance to these APIs)
- Reduction in spending on integration, as more of this is insourced and as a function of the transition from software customization to software configuration.

In addition to these specific KPIs or benchmarks, CSPs may need to adopt a governance program to ensure that small, autonomous and self-governing teams work within common technology frameworks that enable flexibility, openness and scale. Some are also introducing “golden rules” to help give a common purpose and sense of direction and prioritization to their technology teams (see graphic below).

2. Benchmarks to measure business value

In our conversations with technology leaders for this research report the concept of value was a recurring theme. But what do we really mean by value? The term Total Value of Ownership (TVO) was coined by Gartner in 2003 as a methodology to analyze and measure the value of IT investments. It can be used to value the other benefits that may flow from an IT investment and which may offset the total cost of ownership.

This is particularly apposite to CSP adoption of open APIs and the building of capabilities such as network-as-a-service (NaaS). In both cases the starting point is investing in capabilities to simplify the integration of technology assets and components. But they can also be exposed to customers and developers as CSPs try to create additional value.

“Whatever we’re building internally, we also have the mindset that we could expose it externally,” says Atilla Tinic, CIO of start-up US mobile operator Dish Wireless. “When we consider network-as-a-service, the starting point – the initial justification for investment in NaaS – is that by exposing a technology as a service it makes it easier to integrate other technologies and systems. But NaaS can also be seen as a product capability because these services can also be exposed to customers.”

Governance

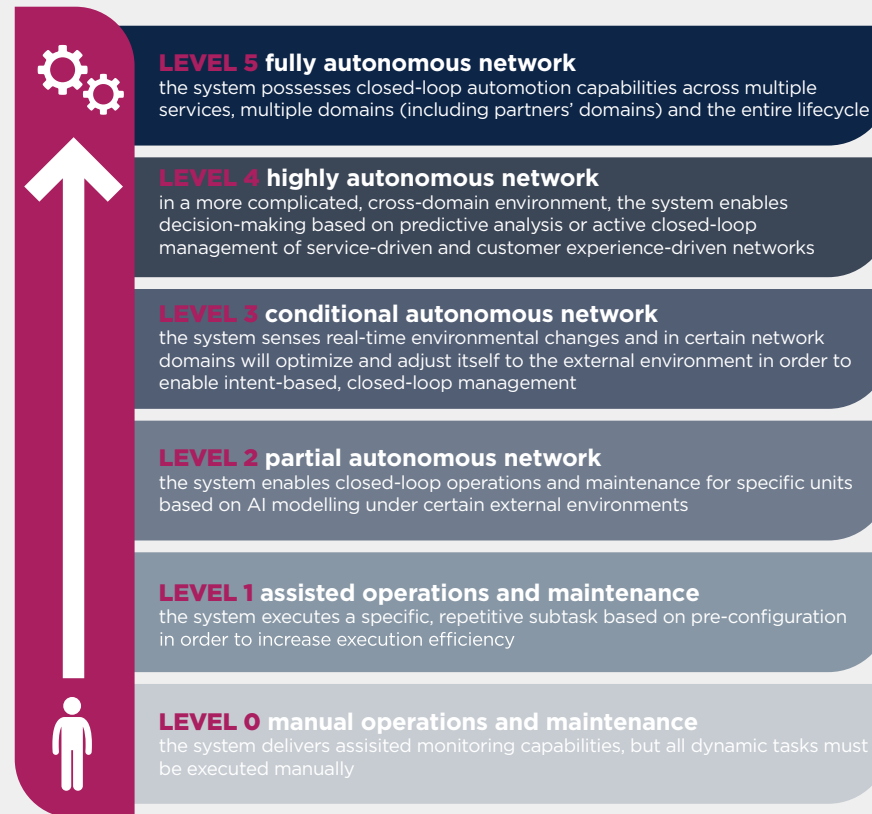


3. Benchmarks, KPIs or targets for automation

Automation is a priority for every IT and network organization. Building an overall strategy with clear goals, priorities and targets will be important to avoid a haphazard approach that risks embedding existing (inefficient) processes and the duplication of processes across different teams and systems.

automation maturity modelling

- CSPs are building out a roadmap for the automation of operations across their network and IT teams
- but how do they benchmark their progress and drive best practice between functions and departments?
- some CSPs are now seeking to build automation maturity models where they score their level of automation across different processes and teams



4. Benchmarks that avoid a capex versus opex divide

The belief that capex creates long-term value for the CSP business while opex is a cost to be managed down is one that has always existed in telecoms operators. But attitudes are starting to change. There is a growing realization that for operators to a) become more agile organizations that are able to capitalize on market opportunities and address challenges and b) extract maximum value from their vendor partners they need to change what technology and services they buy and how they buy it. Creating specific new operational benchmarks to help with this process is challenging. It may be more of a question of working with the finance function to look differently at indirect costs.

The CTIO of one central European CSP explains how his organization is already approaching this. “We have an agreement with finance, with the CFO, to move away from our traditional approach of how we look at indirect costs,” he says. “If we look at salaries, in the past we have had a target to reduce [them]. This made it impossible to in-source [technology development] because we had targets to reduce indirect costs and this basically meant staff costs. So now we have moved from looking only at indirect costs to looking at contribution margin. This means we can increase our salary costs because these people are working on capex-able stuff and the opex impact is neutralized.”

5. Benchmarks to prioritize customer experience

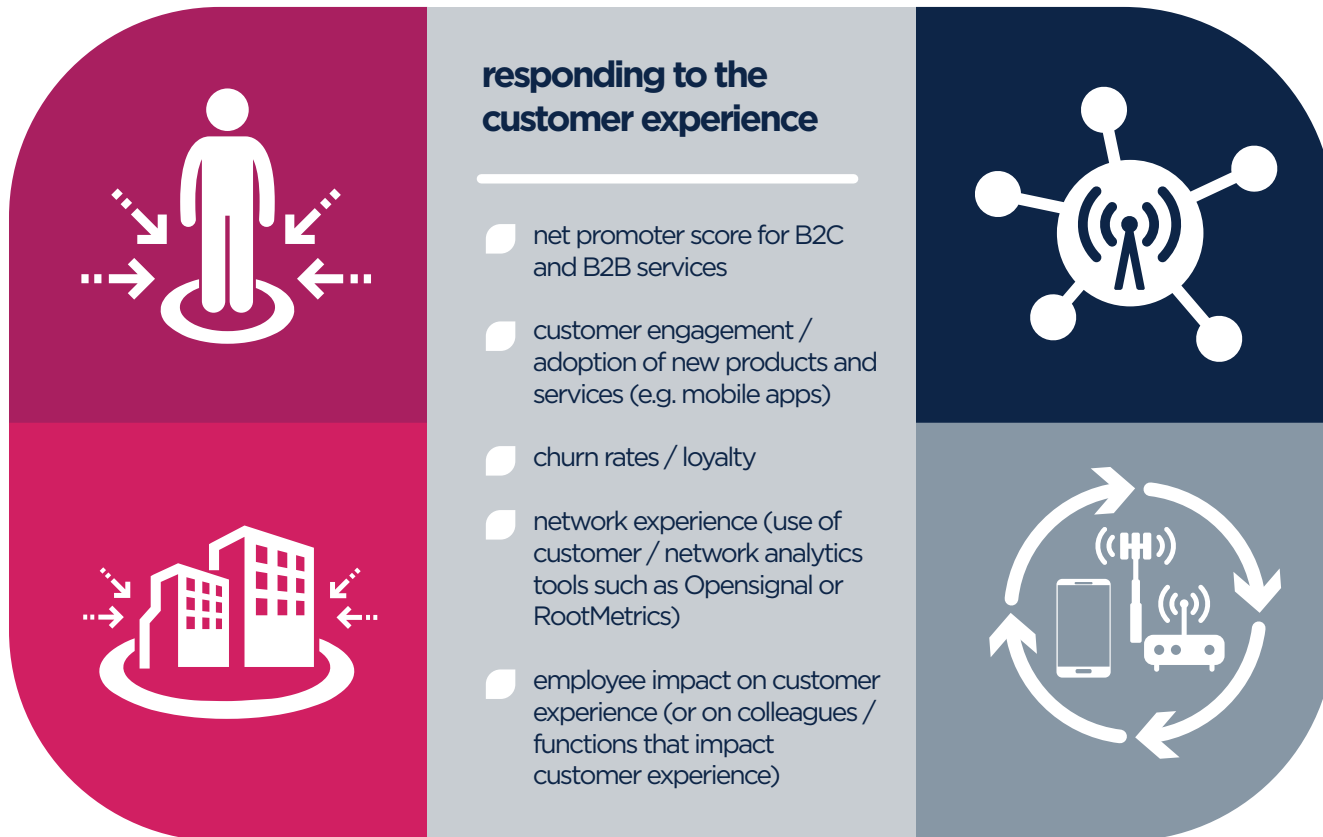
Most CSPs say that delivering a stronger customer experience is a priority. But when it comes to benchmarking their performance – typically through the use of Net Promoter Score – their focus tends to be more on gradual improvement (from a low base) and comparisons with their competitors. They are nowhere close to competing in terms of customer experience with leading digital brands.

Options for setting more ambitious benchmarks include:

- Comparing themselves with companies in other (traditional) sectors. For example, banks have built strong digital experiences – with high customer take-up – and have, arguably, overtaken telecoms operators.

There is a growing realization that for operators to become more agile organizations and extract maximum value from their vendor partners they need to change what technology and services they buy and how they buy it

- Embracing a broader set of customer experience KPIs – for example, churn, loyalty, customer lifetime value, usage of digital apps and channels, and customer engagement.
- Making the delivery of a stronger customer experience part of the remuneration / rewards package for the whole workforce.



6. Benchmarks for employee satisfaction

There is a race for talent within telecoms and the broader tech sector. And employee retention – when it comes to new skills – needs to be as big a focus as recruitment. When it comes to technology strategy there is a strong case to be made for measuring employee satisfaction – the extent to which technology teams endorse technology choices and decisions.

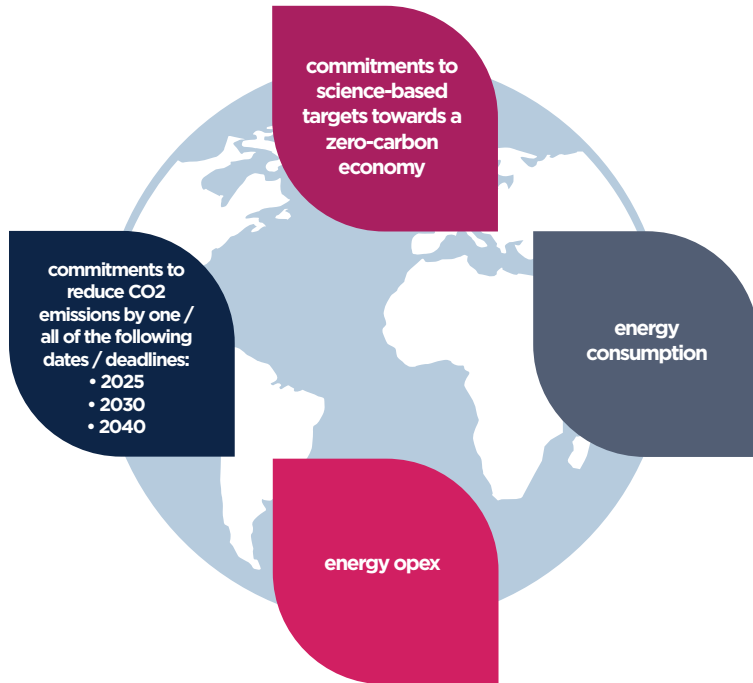
Employees



7. Benchmarks for sustainability

This area is a growing focus for telecoms operators. Commitments to achieving specific goals and timetables now take up a large section of annual reports. As such they need to be factored into any technology strategy or investment.

Environment and sustainability



8. Benchmarks that look beyond telecoms

Benchmarking with companies in other industries is extremely difficult because of the complexity and specificity of the telecoms business. But this does not mean that specific functions cannot be benchmarked. Customer experience is a good example.

But CSPs might also be able to benchmark their entire services organizations against, for example, MVNOs or new digital brands. To do this they will need to isolate those IT functions which are specific to the services business rather than the ones which support the overall business or sit between the network and the services function.

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