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Digital transformation, data and dancing

Digital transformation is set to be one of the big talking points once again at this year's Mobile World Congress, so it is timely that our second annual survey into this area features in this issue. One of the main changes in the past 12 months is in the ownership of the strategy. When we asked operators who was in charge of digital transformation at their company in 2017, the majority answered the CTO. Our latest survey reveals it is now the CEO who is more likely to take the lead, demonstrating just how important this area has become to telcos across Europe.

One CEO who is leading from the front is Telenor Group's Sigve Brekke. He tells us about the progress of the Norway-based operator's "ambitious" digital transformation programme, from the "unfortunate" job cuts to engaging with customers on social media platforms and everything in between. It is a profound change, as Brekke explains: "You need to create an organisation that is better prepared for the fight ahead – and not just against the mobile players, but against national and global digital players. This is just the beginning of a new way of working."

Elsewhere in our C-Suite section, we talk to Orange Spain CEO Laurent Paillassot about the lift that convergence has given his businesses and to the CEO of Telefónica NEXT, Nicolas Gollwitzer, about his company's moves into data analytics and the IoT.

This issue also includes Brand Finance's annual rundown of the world's most valuable telecoms brands. There has been no change in the number one globally or in Europe, but the ranking includes a host of intrigue. We speak to the Luca Josi, Head of Brand at Telecom Italia, about what was behind a 33 percent increase in his firm's brand value, his love of Batman and dancing. "Thanks to dance as a universal language, it's possible to reach everyone in an impactful way and on all media channels in an integrated way," Josi reveals.

Many readers are likely to be perusing all the above between meetings, keynotes and tapas in Barcelona. I hope you have an enjoyable show and come away feeling optimistic about the year ahead. As always, you can keep up to date with all the Mobile World Congress news at eurocomms.com and @eurocomms.

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Opinion

Operators must change their game plan to compete in the enterprise space
By Anders Lindblad, Communications & Media Industry Lead for Europe, Accenture.

Q&A

Telenor Group Chief Transformation Officer
Morten Karlsen Sørby discusses Telenor's digital transformation strategy, the challenges it is facing, and the search for new vendors and partners to work with.

Analysis

Orange talks up innovative credentials as it looks to build on converged success
Orange deployed four top executives to London to showcase how innovative they are being in Europe, although impressive recent financial performances continue to be driven by good old-fashioned connectivity.

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European share prices

The volatility on the world stock markets in February provided an opportune time to look at the performance of seven of Europe's leading telcos in the past 12 months. They are bookended by Vodafone, currently looking to strike an asset swap deal with Liberty Global, and Altice, which has been rocked by fears over its debt pile

31 Jan 2017: **194.35p**

31 Jan 2018: **224.60p**

Change: **16%** ▲

vodafone

31 Jan 2017: **€14.32**

31 Jan 2018: **€14.55**

Change: **2%** ▲

orange™

31 Jan 2017: **€8.92**

31 Jan 2018: **€8.25**

Change: **-8%** ▼

Telefonica

TIM

31 Jan 2017: **€0.79**

31 Jan 2018: **€0.72**

Change: **-9%**

Deutsche Telekom

31 Jan 2017: **€16.16**

31 Jan 2018: **€14.13**

Change: **-13%**

BT

31 Jan 2017: **303.85p**

31 Jan 2018: **255.45p**

Change: **-16%**

altice

31 Jan 2017: **€20.28**

31 Jan 2018: **€8.65**

Change: **-57%**

Accenture: it's time for operators to trash the rulebook

The telecoms market is on the slide. Despite providing the building blocks for the digitalisation of industry, the World Economic Forum calculates the telecoms industry is a fading economic force – its share of the available profit pool has tumbled from 58 percent in 2010 to closer to 45 percent today.

Within this global decline, the gradient is steepest in Europe, where the industry's share of the shrinking pool has slumped to just 11 percent, even as Asia and the US hold steady at 18 percent and 16 percent, respectively. Meanwhile, the internet giants are taking over, ensconced in the old telecoms heartlands, in the hand and in the home.

It is a gloomy tale, and yet these dark clouds are silver-lined, reckons Accenture. "It is not that the telecoms business is a dying one," says Francesco Venturini, the company's Global Managing Director, Communications and Media. "There remains a window of opportunity for telcos to reinvent themselves as different beasts," he says.

But first they have to "trash the rulebook," he says. The market needs a clear agenda for change. Squeezed on every side, telcos are cutting costs to preserve margins and build leaner operations. Competition is getting stiffer, and smarter, all the time.

"The price war – this race to the bottom, this compression – is accelerating. The industry is presented with a conundrum – it is investing to compete, but it is diluting its margins in the process," Venturini says. "Operators today are focused on cutting costs to reinvest their savings back into dividends to reassure the shareholders, but they must start to invest in their growth strategy."

If telecoms providers do not adjust their position and broaden their horizons,

Francesco Venturini, Global Managing Director, Communications and Media, Accenture

they face marginalisation, and even extinction. "Telcos have to stop this race to the bottom, and turn it into a race to the top," says Venturini.

In truth, this downward spiral is less like a rulebook, and more of a default position, arrived in the absence of a clearer path. "There is this big mirage, this dream, that digitalisation will provide an answer. But digitalisation brings new challenges for the telecoms industry to define its new position. In the meantime, its products and services are becoming commoditised – price pressures are higher, customer loyalty is lower, and operators are focused on surviving," says Venturini.

Navigating the S-Curve

Accenture is pointing the way ahead. "There is an unmissable opportunity to rotate to a new business model – a chance for operators to re-establish a critical role in the value chain," explains Venturini. But it is a hard road, which will require foresight, fortitude, and bravery on the part of senior management within telecoms providers. "It may be painful in the short term, and impact profitability and growth."

To ensure long-term survival, telecoms providers must begin the process of building the foundations for transformation immediately. It is the only means to jockey for new position in the developing digital market place, says Venturini. He describes the market's current position as an S-curve: it is over the hill, and tailing off, he says. "There is still room for operators to grow their core businesses, just under different rules and assumptions with significantly more agility in their operator model. Most are merely fighting opex to generate cashflow. They need to find a new S-curve of growth while continuing to enable and optimise their core business. They have to identify a different end-state, and pivot towards it at the right point."

But where is this new destination? How do you orchestrate investment and transformation to navigate to the next S-Curve?

Accenture has plotted three parallel courses, with three different destinations, each offering operators a way out of the doldrums. One is a deliberate entrenchment into a vertically integrated model, the second is to drive enterprise capabilities through augmented and industry relevant network capabilities, and the last is the creation of a multi-sided platform business model.

Operators can take their pick, reckons Venturini. He maps each, in turn.

Vertical integration

The initial path retains traditional performance measures, and leads rather on a journey of amplification, which hardly veers from the present course, but nevertheless grows more vertiginous. The idea is to keep on as a "vertically integrated provider" of network services and premium content, Venturini explains. "You become the best bundler in the world and do so with a significantly addressable scaled market."

The discipline is, for example, to invest heavily in premium content and other market-leading digital products, as well as big-data analytics, until your proposition is unique and ever-more relevant, and your competitors are reduced. "You need a lock-in – in the contract, the device, the content, and future digital services" says Venturini. "The appeal comes from the fact that you have a unique value proposition, and not a me-too offer."

He suggests the market has a default setting whenever it ventures beyond its core connectivity portfolio, invariably into video, music, and gaming. "Most providers have standard offerings, so they would need to invest in devices, subsidies and content to create offers that can't be found anywhere else," he says. "This path requires significant investment so can be a risky path to take given the high costs of controlling the majority of the value chain to the consumer."

Pervasive network

The second way, according to Accenture, hooks up enterprises in industry vertical markets to the irresistible drive of the industrial internet, or what it calls Industry X.0. "It moves to a space where you provide not just connectivity but what we call 'connectivity++'," comments Venturini. "You don't just offer connectivity, cloud, and storage services, you use the fact that 5G networks are designed and built differently."

Specifically, operators make a play of a context-aware network with embedded features like edge compute, low latency, ultra-high bandwidth, low-power and slicing characteristics of next-generation networks to take a share of the fourth industrial revolution, notably in the transformation of the transport, manufacturing, logistics, healthcare, and energy sectors.

Accenture's proposed pathways are not mutually exclusive. "It's never black or white," says Venturini. But they require specialist knowledge, commitment, governance, and strong backing, making parallel navigation almost impossible. "The consumer and enterprise sectors each require heavy investment and different capabilities," Venturini says.

Multi-sided platform

The last, he says, points towards the most dramatic reinvention by altering their core proposition. Instead of straight connectivity, telecoms providers offer a "multi-sided platform" to distribute and enable new products and services. Their networks become the starting gate for the wider digital ecosystem; their insights, gleaned from the crossfire of data on their systems, bring scale and influence, and foster collaboration with the whole market.

They are reinvigorated and, consequently, their relevance in the market is greater and their place assured. But there is a catch. "Similar to a gaming console platform, it means they accept that third-party services will compete on equal terms with their own – because they own the platform," explains Venturini. "They must accept a degree of self-cannibalisation. It requires a shift in perception."

To underline this, digital ecosystems which monetise their products on top of telco networks (and perhaps even their billing infrastructure) do so with significant leverage. Telcos receive nothing from them in terms of market insight, says Venturini, anecdotally. "Most telcos will tell you they're on-boarding Netflix, which is fine, but they're doing it on Netflix's terms. Telcos have a fantastic opportunity to be the dominant leader when entering into new partnerships."

This requires a new way to operate and a more variable way of measuring business performance. "This is not necessarily an ARPU game." For example, engagement and breadth of transactions will be a better measure for multi-sided platform end state, he suggests, alongside KPIs for quality of experience and share of wallet. "It is not that ARPU becomes redundant, but the reach of the platform and number of transactions on it are more important than ARPU by itself," he says.

On the one hand, the telecoms market has the scale to be a multi-sided platform already, but it isn't always taking advantage of the opportunity. "Set-top boxes and routers could act as a central hub to control all digital devices," says Venturini. "But today, they only provide tactical functionality without building new capabilities around identity, trust, and data collection to support existing omni-channels, or more proactively, new data trading models." This is a missed opportunity as these devices have innate intelligence with significant market penetration, which telcos could leverage. "The idea is you exchange services for data – having that footprint in the home provides the telco with opportunities for much greater return."

Owning the platform requires a massive leap to new technologies - API-driven, agile and open platforms with strong identity management capabilities - and a totally different approach to competition than most telcos have had in the past. Telcos would offer business partners application software, professional services, platform provisioning and operations on a cloud-based platform. The ecosystem needs to be customer-centric and open to work. There's already fierce competition for this space. So far, none of the globally leading platforms of the digital age comes from Europe; those with early-move advantage are American or Asian.

But the future of these ecosystems has not been defined yet. Large incumbent businesses have plenty of competitive advantages from trust, brand, data, and capital to be able to shape the emerging future of ecosystems. They can become crucial partners. It really depends on whether they are fast enough reinventing their business models and realising that they are not just playing in their own industry space any more, but in a very different and much broader universe.

In digitally driven future ecosystems, the orchestrators—the operators who own the data and therefore can be the first touchpoint and define what a customer gets and when and how—they will have disproportionate power over the whole value chain. So we are not just seeing value chains merging faster than ever before, but also the shift of value across these value chains is much faster than what we have seen. This creates a huge challenge for any company or organisation who is involved in serving clients or distribution, because it requires them to reinvent their strategy at a much faster speed, looking at a much broader horizon than ever before.

It means a new mindset, having the belief that the sum of the parts is going to be greater than the parts themselves.

Unlocking innovation to make the journey

Importantly, each of these trails starts from the same base camp, some way elevated from the industry's current position. Its general programme of simplification and virtualisation, although designed for short-term gains, will help bring it closer to this new departure point. "Those programmes are working very well, and are quite necessary," explains Venturini. "But operators have to reinvest in new growth as well."

But the short-hop to base-camp, to start along an S-curve, is not straightforward. As crucial as cost cutting is, operators must invest to bring new dynamism and intelligence to their front-office and network operations. From base camp, there should be a clear agenda for change and a sophisticated network and platform system rooted in highly agile and responsive software capabilities. This allows for the ability to provide optimization and continuous customer relevance to integrated complex functions.

Removing traditional silos in the core business using analytics, even in the event operators choose to retain, nominally, a vertically integrated model, is a first step, and a foundational investment that requires significant capital efficiency. "There are some fundamental rules: telcos are already investing in the omnichannel customer experience, analytics, and product, but they are doing so in organisational silos and not targeted to more agile ways of operating in the core business. While investing in these just to survive, they need to power new operating and business models."

This is the key foundation of a digital operation, enabling operators to combine greater automation and insight in their operations with a more collaborative approach in their business. "If you believe in this future, you need software and platform engineering skills, rather than, say, vendor management and configuration skills," says Venturini.

To back up this thinking, Accenture has built a cognitive platform called "The Brain" as a version of a future telecoms set-up at its research centre in Dublin. "This cognitive platform is not something you buy; it is something you build and evolve internally. It becomes your intellectual property and your competitive advantage. It is about how well you build products, which simultaneously increase engagement while you collect data and find correlations, and how well it feeds both automated and assistance decision making to underline a more agile, multi-faceted business. This is something every operator should own. It is the brain of their business that grows their core business while building critical foundations for the new end states."

The point is to create an environment that fosters innovation and drives significant focus on the customer experience, be they consumer or enterprise. Currently, operators have limited control over monolithic third-party solutions who may support critical business functions but do not act as business engines for either core or emerging models.

The options where CSPs must attract new ecosystems to their business or network platform, as defined in model two and three, need that control, in order to on-board services at speed, whilst preserving a consistent experience, and also to exploit data to hone its broader proposition. "A control point is to have the kind of platform that allows them to dictate terms."

A fierce and focused modernisation programme is in order. The prescription is to invest in a software-based architecture that knits together existing initiatives between product, omnichannel, and analytics, and reveals data insights that enable a more agile core business. "We call this a no regrets move as it is required regardless of which end-point a telco decides to move towards." Beyond this, operators should be bold in their commercial proposition, and subsidise traditional connectivity with new digital services. Venturini explains: "Where in the integrated model, you keep selling digital products like video or home products at high ARPU rates, the ecosystem player might consider subsidising these to build a new asset that allows them to make money elsewhere. With platform economies, you can provide services where you get data in exchange, which you use to build new products and services, or to trade with new markets, and all the time making your platform more relevant and "The Brain" of your organisation more effective."

Base camp is in sight, concludes Venturini, but the next steps are critical. A clear strategy must be formed in tandem with the simplification and investment programmes. "Operators have to ask themselves what their control points on their customer base are – whether it's the billing relationship, or the SIM card itself, or the set-top box, or connectivity and security around all of that – to be able to build towards an end-game where they are highly differentiated against more traditional and new competitors."

The biggest challenge is further down the road, he says. The pivot away from the old business model, which has underpinned the telecoms market, takes great nerve. "That's the challenge – when to make that pivot, and how to realign governance, incentives, skills. That jump takes a lot of guts, and strong, visionary management, and it will have implications on revenues and margins in the short term, meaning that the investment strategy needs to be convincing to shareholders," says Venturini.

But, what is the alternative? He concludes: "The question is whether you follow down the same path, and manage a commodity business, or choose this new growth curve for long-term viability and sustainability, so you're still in business in 10 years."

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The C-Suite

Interviews with senior execs from Europe's top operators

Telenor Group CEO: Preparing for the fight ahead

Telenor has slimmed down its operations to beef up its profits. But what's next, after all the cuts and exits? CEO Sigve Brekke talks to James Blackman about the groundwork for new growth, the intangibility of 5G, and the business of altruism

Sigve Brekke, CEO, Telenor Group

On most key metrics, Telenor is beefing up. It closed out 2017 with an 11 percent jump in EBITDA on the back of higher all-round subscriptions and heavier network traffic. But behind the scenes it is slimming down, with a developing narrative of "efficiencies" and "simplification" running parallel with its digital transformation story.

"Our digital transformation is showing results already," says Sigve Brekke, Telenor Group CEO. "We started 2017 with an ambitious digital transformation programme, to do with digitalising both the customer journey, between care and sales, and our core infrastructure. The impact of that has come through more quickly than we thought."

It has indeed, but the most notable impact of the programme has been on its bottom line, which has outrun by some margin a 0.5 percent fall in revenues last year. The sales slippage was down to reduced handset revenues, and a declining international wholesale business; the faster-falling operating expenditure, down three percent in the year, was down to cost-cutting and automation, and drove profits upwards, breaking at once a long-standing habit of ever-higher baseline costs.

"The plan was to level out opex and start reducing spend from 2018. We've done better than that," says Brekke. Sixty percent of its savings are structural, and will carry forward as the company seeks a further one-to-three percent annual reduction through to 2020. Staff numbers will reduce again, by 6,000 over three years. Brekke describes the cuts as "unfortunate", but reaffirms the

broader programme. "We want a leaner, more agile Telenor to make sure of the best return," he says.

As such, Telenor is addressing its own skills gap and cultural blind-spots. It has trained 180 of its top brass in agile working, "to learn faster and implement quicker", and has assembled a steering committee for its various transformation initiatives, with a direct line to the senior board. All staff have been set a target of 40 hours training in new digital programmes, including in product development and applied analytics.

But the efficiency drive goes further than axing staff. Telenor Sweden has cut the number of available price plans, from 335 to just 55, with supporting back-office IT systems rationalised as well; other markets will follow. A common network and IT delivery centre in Asia, part of a broader initiative to implement operational 'clusters' across its regions, will deliver 20-30 percent efficiencies.

Meanwhile, cloud migration is gathering pace, with 65 percent of its IT infrastructure, and 35 percent of its core network functions already virtualised, rising to 75 percent and 50 percent respectively in 2018. "Here, we are at forefront of what operators are doing," says Brekke. The group is targeting a 40 percent efficiency gain in core network costs.

Digitalisation

Customer engagement on digital channels has soared as well, the company says. In Norway, 70 percent of new joiners to its Family-and-Friends discount scheme have signed up online. "We've never seen such a rate on digital," says Brekke. In Pakistan and Myanmar, its starter platform for first-time web browsers, WowBox, has reached 15 million users. In Sweden and Thailand, its new digital-only MVNOs, Vimla! and Line Mobile, are enabling it to "test out concepts, and deliver better services to digital natives".

Calls to care lines in Norway have reduced by 20 percent in a year with the move to digital channels; the rate is higher, at 26 percent, in Malaysia. A third of sales upgrades and expansions in Scandinavia have no human involvement at all. "This is not just about cost," says Brekke. "It's about how we can use data to personalise offers to improve satisfaction and loyalty among customers."

Then there are the divestments, which also fall under Telenor's stated strategy of "growth, efficiency and simplification". Indeed, the balance of its portfolio has improved following its exit from India and Russia in 2017. An offer for its businesses in Central and Eastern Europe remains under review, but sales and profits are climbing here anyway. "It's a good portfolio," Brekke says.

Indeed, Telenor has achieved decent symmetry with its latest results between new growth in developing markets and "growth renewal" in mature ones, where the discipline is to offset declining legacy revenues. On one hand, Brekke points to the company's record and opportunity in emerging markets, like Pakistan and Myanmar, where just 30 percent of the population has a smartphone, and data consumption tops out at 30-40MB even among smartphone users.

On the other, Telenor's fibre acquisitions at home are outrunning its declining fixed telephony and ADSL business; richer mobile plans and buoyant enterprise sales have ensured fixed and mobile ARPU continue upwards in Norway, even as roam-like-home impacts reverberate. Similarly, the company has pursued 'growth renewal' in markets like Thailand and Malaysia, paired as "developed Asia" in Telenor's portfolio, by moving customers from pre-paid to post-paid packages, and from voice to data services.

"We see higher ARPU, lower churn, and a dramatic uptake in data – even more so than in Europe," says Brekke.

Grand vision

But there is a sense, surely, that all of this digitalisation and rationalisation – of automation and virtualisation on one side, and staff cuts and market exits on the other – is just the set-up before the play. What is the vision, really? What's the big idea? What will Telenor look like after 2020, after it has axed and automated, when 5G unleashes a new digital revolution? What then? Will Telenor be a telco, or something else?

"Well I don't know what you'll call us," says Brekke. "But we will still be in the connectivity business – that's for sure." The pace of demand and innovation is hardly slowing down, he observes. But the group's current programme of change is not a way to a new staging ground. "It's not an intermediate stage. It's a continuous improvement. We have started that journey, and will continue beyond 2020."

The point is that growth is not available to telecoms companies just through geographic expansion anymore. "That model is over," says Brekke. "You need to create an organisation that is better prepared for the fight ahead – and not just against the mobile players, but against national and global digital players. This is just the beginning of a new way of working."

His reluctance to describe a grander scheme at the outset might be because such a thing remains momentarily out of reach. The future has not been written, to borrow a Hollywood line. "Everyone talks about 5G as a technology – it is more of an evolution than a revolution," says Brekke by way of example. "It's not like upgrading from 2G to 3G, and 3G to 4G."

The operator community cannot afford to be gung-ho about its capital investments anymore, he reckons: "All of us have suffered in the last few years with increasing spectrum payments, increasing network capex, and increasing competition in the market."

He adds: "Let's not just spend a lot of money on new technologies again without the use cases in place. It is not the speed that is important. It is the latency and network slicing. Those will be the most important aspects from the start."

From the start, Nordic companies will lead the charge. Scandinavia has form when it comes to tech firsts, having introduced the world to LTE and GSM. Telenor will pilot 5G in Kongsberg, southwest of Oslo, in the second half of 2018; the trial is set to include buses, drones, and healthcare. But it's not a space race, he repeats; the applications must be grounded first.

"We will be early adopters, but not for the sake of it – not for the marketing," Brekke says.

More widely, Telenor is mapping out a digital future, and its place within it. Its pioneering spirit can be seen in its two new research labs, both in Trondheim, focused on artificial intelligence and IoT applications, respectively.

The Trondheim workflow will inform the company's analytics platform, and its efforts to automate systems and services, and serve up more relevant sales and marketing offers. "It's an open landscape; we're inviting smaller and larger firms to experiment and collaborate – because none of us are big enough to stand up against the global players in this area," says Brekke.

> "We need to be relevant to the society in which we work; it's not just about selling connectivity"

Social good

Collaboration is a sub-plot in Brekke's keynote narrative at Mobile World Congress (MWC). It is time for the industry to move beyond its traditional two-dimensional rivalries, he says, and join with internet players, among others, to advance business, and also society. He points to his company's work with Facebook.

"Facebook wants to connect the world. In many countries, the only way it's going to do that is with mobile networks," he says. Telenor has partnered with Facebook to offer a stripped back version of its platform to bring customers in Myanmar online.

Myanmar presents a pocket-study for technology as a social driver. Mobile penetration has gone from 10 percent a decade ago to closer 60 percent; most customers now use data, he explains. "Think how the world has opened up," says Brekke. Access to mobile services has precipitated access to banking and healthcare in certain markets. He references TONIC, Telenor's digital health service in Bangladesh, providing access to information and support, and discounts on medical services.

At industry level, the GSMA has united the operator community behind the United Nation's sustainable development goals, launched in 2015 to raise equality and protect the planet. Sustainability is a business play for the sector at large – one that will increasingly define its protagonists in the minds of customers. Telenor has lent its voice to the campaign and its technology to the fight, and has an invitation to speak about mobile as a force of social good at this year's MWC.

Brekke's keynote mixes in a number of other social causes, championed with technology, including the company's work with Unicef in Pakistan to register under-18s, who would otherwise go without education and health services. The pilot saw birth registrations in the Punjab and Sindh provinces jump from 30 percent to 90 percent in six months; the service is being rolled out more widely.

"What we do is bigger than just making money," says Brekke. "We're in the business of connecting people to what matters most to them, and of empowering societies." The opportunity for social change is greater with the incoming generation of LTE technologies. Opportunity knocks for the mobile industry to lead the planet into a new era of sustainability. But this is business, and not altruism.

"As operators, we need to be relevant to the society in which we work; it's not just about selling connectivity. We want to be a part of society's growth. If we want to have improved regulatory frameworks, for example, we need to prove we are bringing something back," explains Brekke.

"If we want to have protections in the countries where work in, we need to show we are a part of society's growth. If we want to be seen as a good guy, long term, then this is an area where we have to come together. And there are very few industries that can have a bigger impact on this than mobile." ec

Telefónica NEXT CEO: In search of Germany's most granular data

Nicolas Gollwitzer tells Marc Smith about his plans for Telefónica NEXT, an emerging business unit focused on data analytics and the Internet of Things

One of Telefónica's latest attempts to move beyond traditional telecoms services has been quietly making progress in Germany, where the operator launched a standalone business focused on data analytics and the Internet of Things in November 2016.

Telefónica NEXT sells anonymised mobile network data and associated analytics to the enterprise market, and has developed an IoT platform for non-SIM-based connected devices.

The self-described corporate start-up's CEO, Nicolas Gollwitzer, tells European Communications his 150-strong team has a clear goal – to give companies insights into their customers and how their products are used.

The analytics part of the business is focused on two key verticals – retail and transport. The operator uses the five billion data points that its mobile network, the largest in Germany, generates each day to predict the likes of population flows and even air quality.

It has worked on around half a dozen projects to date, including Pro-Train in Berlin. This three-year project, funded by the German Federal Ministry of Transport and Digital Infrastructure, brings together eight different partners in an attempt to provide travellers with information such as alternative routes when there are delays.

On the retail side, NEXT acquired Berlin-based start-up Minodes last year to help it deliver bricks-and-mortar retailers with analytics-based insights about their customers, such as how long people stay in front of different types of merchandise. The company also collects personal data from subscribers via an opt-in app called O2 More Local that enables retailers to send them SMS-based offers.

The CEO says he wants to give traditional retailers "some ammunition back" as they battle the likes of Amazon who "know their customers much better".

Nicolas Gollwitzer, CEO, Telefónica NEXT

Building on the work it has done in these two fields, NEXT has launched a new division that will anonymise the data of other businesses. Gollwitzer cites the likes of insurance companies, automotive firms and other telcos as potential customers.

Students of Telefónica will recall previous attempts by the operator to sell customer data in Germany had to be withdrawn in 2012 over privacy concerns. "These are challenges of the past," Gollwitzer responds. "Since we introduced our anonymisation platform we only run analytics on anonymised data so all these issues in the past are gone." The CEO claims his company is "one of… if not the only company who can offer anonymised data on a very granular level."

Finally, NEXT's IoT play is based around a platform called geeny that connects discrete manufacturers and their devices to some 500 developers who want to create apps and services around them. The former get a digital offering to take to market, while the latter get a cut of the sales.

Gollwitzer says its platform "cuts the link between devices and services" by letting people "focus on things they are good at". Moreover, he says: "The market for connected devices that don't have a SIM inside is much bigger than that where there is a SIM required." Geeny has already signed up its first few companies, the CEO says, and although he won't reveal who they are, he says those focused on connected devices in the health, fitness, pet and assisted living markets are who NEXT is targeting.

As ever with telcos, these initiatives all sound very laudable but struggle to be taken seriously as they invariably fail to make any serious cash. "It is still early days and while we are making money it is not overall a huge contributor to Telefónica Germany," Gollwitzer admits. The CEO says the foundations have been laid and if the model can succeed in Germany, home to "the strictest data protection laws on the globe", it could be rolled out elsewhere.

"The ambition is to grow this business very aggressively and in two, three or five years time to become a sizeable part of Telefónica Germany's operations," he adds. With Telefónica Germany's revenues on a downward spiral, now would be a good time to prove the doubters wrong. EC

Orange Spain CEO: The benefits of convergence and diversification

Orange is now the second largest operator in Spain with its strategy of convergence and new services. Orange Spain CEO Laurent Paillassot instructs James Blackman in the art of juggling multiple brands in support of multiple disciplines

Laurent Paillassot, CEO, Orange Spain

Laurent Paillassot, Chief Executive of Orange Spain, arrives at this year's Mobile World Congress (MWC) in Barcelona on the back of a bumper year for the French firm's Spanish business, claiming growth on practically every score.

Its customer base increased by 48 percent in the year for fibre connections, and 25 percent for 4G lines; its revenues were nine percent higher, topping €5 billion, and its profits climbed 15 percent. Orange is now the clear number two in the Spanish market, ahead of Vodafone but behind Telefónica.

Spain, followed closely by France, is the leading European country in terms of leading edge broadband infrastructure. Twenty million Spanish households have been passed with fibre, and population coverage for LTE stands at 97 percent.

Orange Spain now has the largest FTTH network and biggest base of any business within the Orange Group. Naturally enough, it gets primary support from Paris to grow its infrastructure, and has set a target to make fibre available to 14 million Spaniards by the end of 2018, and 16 million by 2020.

Convergence, pegged to its high-performance infrastructure, has been everything for Orange Spain. "Our strategy is on value creation leveraging our very high-speed broadband infrastructure, focusing on convergence, and differentiating the value propositions of our portfolio of brands," says Paillassot.

The 2015 acquisition and 2016 integration of broadband player Jazztel has turbo-charged its performance, and seen the Spanish market at large become the poster child for FTTH in Europe. Paillassot calls the integration of Jazztel "instrumental" to the company's "growth dynamic" in Spain.

The €3.4 billion deal for Jazztel and its 1.5 million broadband subscribers saw Orange draw level as a multi-play brand. It had been left isolated in its second largest market when Vodafone acquired cableco Ono for €7.2 billion in 2014. Telefónica has been pushing discounted bundles of fixed and mobile services alongside. The Jazztel deal instantly provided Orange Spain with the firepower to develop its convergence strategy.

"The synergies not only have overpassed our expectations, but have happened very rapidly," Paillassot says. "More importantly, the decision to maintain the brand and to reposition Orange and Jazztel in different segments is allowing us to have a more sophisticated competitive approach."

Indeed, its maintenance of four distinctive brands in the Spanish market has gone against the consensus view that multi-brand operators should consolidate their lines. Orange Spain proves a multi-brand convergence strategy works. It has allowed the company to reach all customer segments – with Simyo at the no-frills mobile-only end, Amena and Jazztel offering more convergence and higher value, and the house brand sitting on top.

Convergence lowers churn, Orange reckons, by as much as 40 percent; branding different value propositions avoids cannibalisation. Through its work in Spain, Orange has concluded convergence provides a platform from which to launch new services, and has made converged services available in every European country in which it operates.

"Convergence is very mature in Spain, more than any other European country," explains Paillassot. He points to a recent poll by the CNMC, the Spanish regulator, which gathered the opinion of 9,000 individuals in 5,000 homes across the country. More than half of households take quad-play packages, covering fixed and mobile telephony and fixed and mobile broadband. Almost a third take another service, invariably television, as well.

"Spanish users value the possibility to contract all the telecom services in a unique offer from a single operator," says Paillassot. A sideshow of this maturity is the rate of convergence between operator companies in the market, with Vodafone acquiring Ono, Telefónica taking Digital+, and Masmovil moving on Yoigo, among the consolidatory precursors to Orange's Jazztel deal.

"I don't see an immediate need for further moves," Paillassot notes.

Bigger bundles

The future is bigger bundles, he reckons. Orange Spain's smart home proposition, launched last year, has been well received as part of a "complete telecommunications offer", he suggests.

It is the first of the group's operating companies to launch smart security for the home, via a partnership with security company Tyco. For €30 per month, customers get an alarm system, with app-based controls and a direct line to Tyco's service centre, as well as professional installation.

It reckons more than 40 percent of its broadband customers are interested in smart home services in general, but that only eight percent take security services already; affordability, one of the selling points of its own home security solution, is a barrier for the rest, it implies.

The Orange solution features programmable door and window sensors, allowing users to create scenarios to protect and monitor their premises, whether they are home or away. A central panel also allows users to integrate additional camera devices. Orange says further plugs, thermostats, lights and other smart-home sensors will be allowed onto the platform as well.

Security is the first in a new line of solutions related to the smart home and connected objects, it says, for both Orange Spain and the wider group. Future candidates are automation, generally, as well as energy, appliances, healthcare, and entertainment. "We are currently assessing the Spanish market potential and the maturity of the different value propositions," says Paillassot.

On the home entertainment front, Orange is backing a preferred recipe of content aggregation. Its TV offer in Spain is based on cross-platform access and superior image and sound quality, thanks to a high-performance decoder supporting 4K television and Dolby Atmos.

Paillassot claims it has "the best content beyond football" – and inclusive of it, naturally. "Football is very important with more than 60 percent of TV sales included as part of the football offer. Our commitment is to offer the best television content in a very flexible way, giving all options to our customers," he says.

The message is football is king, but it has every angle covered when it comes to content. In total, Orange has 30 channels in Spain, and claims an a la carte catalogue including the likes of Netflix and Wuaki and 3,500 additional on-demand content options.

> "Convergence is very mature in Spain, more than any other European country"

Rival Telefónica, meanwhile, is backing itself to become the leading provider of Spanish content, committing €70 million to four productions this year, with another 10 scheduled for 2018 with new investment. Telefónica has been honing its TV offer with foreign titles and live sports since the purchase of Canal+; its adventures in content production are brand new, however.

Nevertheless, Paillassot thinks his company has the right strategy. "Orange has chosen an open model, positioning itself as an aggregator and distributor operator open to third parties' collaboration. We believe there are specialised companies producing content with higher quality that what we could produce, and our commitment is offering our customers the best content that is available," he says.

Beyond content

Distribution of content extends to its smart home platform, too. Orange has just announced a new digital assistant, developed with Deutsche Telekom, to take on Amazon's Echo range in the home. The product, called Djingo, will allow customers to interact with Orange content and services by voice or text, including control of television functions and connected devices, and access to online information and services.

Djingo debuts in France in the summer, and in Spain before the year's out. It will also work with Orange's new banking services, another "key area of diversification," according to Paillassot, who was formerly Deputy CEO of French bank Le Credit Lyonnais and helped Orange hone its banking proposition before taking charge of the Spanish business.

Orange Bank offers current and savings accounts, plus an AI-based virtual assistant based on IBM's Watson. It allows contactless mobile payments, instant balance checks, and SMS money transfers.

The AI assistant is the "first point of contact" for customers. Additional products, such as credit and insurance, will be added "gradually".

It launched in France in November last year and had signed up 50,000 customers in the first three months. Paillassot expects Orange Bank to launch in Spain next year.

Such innovation is hard won in a difficult climate. Paillassot hopes the telecoms industry can join together at MWC to impress upon regulators the need for a conducive and open trading environment, so Europe's operators can compete with their US and Asian peers as a new era unfolds for telecoms.

"I hope the European stakeholders will continue discussions on both how to create an investment-friendly environment for the new generation networks and how to reach a pragmatic approach on net neutrality that will not jeopardise our ability to compete head-to-head with operators from other continents," he says. ec

Empirix: The future won't wait

New operator business models require a complete rethink of performance monitoring and management, writes Franco Messori, CSO and CTO at Empirix, provider of IntelliSight, the smart end-to-end customer experience and performance assurance platform for telecoms service providers.

Without question there will be some clear topics that will dominate this year's Mobile World Congress. Most notably these will include all forms of network virtualisation/software-defined networking and 5G - and the accompanying need for a new concept in network architecture: one which allows for the growing diversity of traffic and service scenarios that are emerging. Interoperability, open source and automation will be high on the agenda too, as operators strive to follow and stay on the right side of the emerging opportunities and profitable revenue streams.

To do this, they must not only have the technology building blocks in place, but also the ability to provide the calibre, responsiveness, flexibility yet consistency of service that is essential in an all-IP world – a world where service consumers are as likely to be 'things' as people.

Yet operators could be forgiven for struggling to deliver this more dynamic approach to provisioning and managing their infrastructure and services. As much as they may recognise the need for greater integration and fluidity between their diverse network and service operations, the technology hasn't been readily there to support them in delivering this.

Vendors may have some great products for network performance monitoring, service quality assurance, diagnostics, and various manifestations of analytics, but in most cases these solutions have been designed and positioned for a specific application and therefore function in silos. The trouble is that operators now need an analytics approach that extends across the entire communications process, and the current scenario does not generally support this.

Placing customers at the centre

Although the industry has recognised the need to move beyond network-centred operations monitoring (NOC) to a more service-centric approach (SOC), the real core to all of this monitoring and assurance activity must be the customer or user, whether a person or, in the context of the Internet of Things, a machine or device. Unless all efforts result in the expected overall experience, and continue to meet users' evolving requirements, investments will simply be another cost and complexity for the business to manage.

Getting to a holistic customer-centric perspective for network and service management demands a single platform where all respective monitoring, management and service assurance capabilities come together and are consolidated to form a single, integrated, inter-related/cross-correlating view. As well as giving operators the holistic overview they so badly need now, this also offers them a chance to rein in some costs, simplify their control panels, and scale their activities exponentially.

It's a need we identified at least three years ago, giving Empirix a considerable market advantage. We saw tier 1 operators struggling to make sense of and take decisive, useful action from the huge data lakes they had created as a facilitator for deeper analysis. Although they had everything at their disposal, there was a catch: they couldn't readily see what linked the data they were looking at – how one event intersected with another.

Exposing the joins

Without a clear, at-a-glance understanding of how network flow was affecting the business or the customer, operators weren't able to turn their insights into customer experience improvements, or stem revenue and profit leakage. To turn their operational insight into something beneficial and competitive, operators need the ability to make smart correlations between the data and at speed. At a practical level, they require a way to create logical links between the network/service and customer behaviour and compare this to the expected quality of experience (QoE).

Empirix IntelliSight filled that gap, providing the unprecedented ability for operators to extract new value from existing company data via a single, fit-for-purpose platform and single, consolidated service view. One which spans wireline broadband and wireless networks, and physical as well as public and private cloud provisioned services.

This is a winning formula that our competitors are only just catching up to. In the meantime, we are moving forward again with the next advances made possible by this holistic operational insight: namely the ability to act swiftly in response to emerging service/customer experience issues based on the insight presented; and to increasingly automate more of the processes involved in spotting, diagnosing and resolving problems. To this end, Empirix has recently introduced a further level of intelligence to the IntelliSight platform, in the form of Analysis, Decision and Automation (ADA).

It's not what you know, but what you do about it…

Empirix IntelliSight ADA builds on the existing ability to evaluate network, service, applications and customer QoE by combining all of the relevant data insights, to enable intelligent, real-time (or near-real time) actions.

The decision function determines

what to do when analytics reveal why a particular key performance indicator or QoE-Index is not aligned to expectations. This might generate a single action or a list of actions.

These can be implemented manually or fed straight through to IntelliSight's Automation capability, which is integrated as part of software-defined or self-organising network systems and activated using script integration engines such as Ansible, Jira, Ruby or JavaScript. This in turn will trigger automatic changes in configuration, resources allocation or mapping, traffic routes, quality of service class, or changes in the access authentication process.

Our aim with all of this is to redesign the way service providers harness operational, assurance, marketing monitoring and management platforms to provide a more responsive, user-centric experience that is in line with what is expected and needed, and with what has been promised. It is about closing the loop, so that good insight gives rise to a consistently good experience, in the process reducing costs, churn and revenue/margin erosion. Without this, operators are missing an important trick.

Predictive problem-solving

It is no coincidence that Empirix is also a leader in diagnostics and troubleshooting, capabilities which must also adapt in line with the increased complexity involved in today's communications service chains, leading to highly involved scenarios which can no longer be managed manually if operators are to have any hope of honouring their QoE promises.

IntelliSight is ideally placed to help here too, providing timely, consolidated intelligence which helps reduce the number of repair tickets and the time to root-cause discovery. Again, this is not just about using data efficiently, but combining complete data with supplementary intelligence. In this case, it's a unique knowledge library supported by machine learning. Within the next few months, it will involve the application of artificial intelligence engines to predict and prevent problems and maintain greater service continuity.

Customer-centric service assurance, end-to-end performance management, and smart, real-time problem-solving will be a huge priority for operators in 2018, and Empirix continues to be ahead of the curve.

Framing 5G expectations

By the end of this year, we expect to roll out a 5G customer experience index which combines network and service metrics with those measuring the wider customer experience, in context. We're already piloting this with a couple of major international tier 1 operators, and it will be the only index of its kind, combining measures suited to the diverse services 5G is designed to support through its promise of high density, high speed and low latency – a potentially significant spectrum of services which in turn demands a range of different quality measurements. This will be crucial in building confidence in 5G services as operators begin to announce products, as well as for charging for services of course.

Operators have much to think about in 2018, not least how they will reorganise themselves to become more customer-centric, responsive and cost-efficient. As ever, technology progress is just one aspect of the challenge.

Certainly service providers can't afford to miss out on the new opportunities that new technology advances are opening up to them, as will become abundantly clear at this month's MWC.

www.empirix.com

Franco Messori, Chief Strategic Officer and SVP for Product Management at Empirix in Modena, Italy, is an authority on network architectures, protocols and communications. As Empirix's CTO, he is responsible for driving the development of the company's multi-service fabric-based system architecture, ESA and for the NFV-based vESA, as the monitoring and analytic framework for all-IP physical and virtualised networks and services.

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THE

Most Valuable Telecoms Brands

2018

European Communications and **Brand Finance** showcase the most valuable telecoms brands in the world in 2018

AT&T, Deutsche Telekom continue to dominate, Altice is one to watch

Lorenzo Coruzzi and Vinchy Chan, Analyst and Consultant respectively at Brand Finance, discuss the stories behind the most valuable telecoms brands in the world in 2018

European Communications: AT&T maintained its position as the leading telecoms brand in the world, despite its brand value falling over the past 12 months. How would you assess its performance?

Coruzzi, Chan: AT&T experienced negative revenue growth of -2.2 percent year-on-year in 2017, mainly due to the loss of postpaid subscribers as lower prices for unlimited plans failed to attract customers in a saturated US market. AT&T has now decided not to disclose their full-year revenue forecasts. When they did not achieve their 2017 revenue forecasts, the share price dropped substantially and we might assume that this is why they do not want to repeat this moving forward.

Despite a fall in brand value due to this lower revenue base, AT&T remained the largest and most reliable network provider in the US and is planning for the future. It is involved in new 5G network investments and is also participating in tests for vehicle-to-everything (V2X) networks.

By assisting in a pilot programme with other companies to use in-vehicle cellular technology and roadside cellular base stations to communicate over its 4G network, AT&T is demonstrating the potential of V2X technology to improve vehicle safety, enable autonomous driving and better traffic management.

Deutsche Telekom increased its brand value as it was once again the most valuable brand in Europe. What did it get right?

Deutsche Telekom reported great revenue growth this year, up 13.5 percent. The company is doing well in the US where in the last four years it gained customer loyalty thanks to strategic pricing and a competitive network. It held its own against AT&T, Verizon and Sprint, the other big American players, achieving an astonishing first place in all the eight categories covered by the OpenSignal Report in August 2017.

In Europe, the 5G revolution will be the next territory in which Deutsche Telekom could further dominate. CEO Tim Hoettges has said the company is not just focusing on data packages but directly on the “solution” space – exploring new lines of business other than just straight connectivity.

Given its predominance in Europe, the brand has further strengthened this year, and its brand influence is significant to customers’ decision making, reflected by ‘Preference’ scoring at a nearly full mark. In addition, a notable improvement in ‘Recommendation’ suggests that the brand has done relatively well in customer acquisition and retention by offering the right products.

TIM and Iliad were two of the big movers in Europe, with their brand values rising 33 percent and 40 percent respectively. Why did these two brands perform so well?

A big marketing and ad campaign followed TIM’s rebranding and the launch of a new corporate identity. The Italy-based operator went from portraying itself as a simple telephone operator to a technological player offering innovative products and services through the development of enabling platforms, from fixed and mobile ultra-broadband networks to cloud computing through to next generation IT.

The proof of this is in its project to make San Marino the first state in Europe to get a 5G connection. In addition, after five years of declining revenues, 2017 was a year of recovery for TIM with growth of +14.9 percent.

Iliad owns Free Mobile in France and Israel’s Golan Telecom, which both performed well. Free Mobile’s brand value, up nearly 40 percent, is driven by improved brand strength and growth in reported revenue. The former has been boosting the latter and, with significant investments made to roll out 4G services in France, the brand is expected to grow faster than its peers.

Which other European telcos stood out and why?

A1 Telekom Austria Group benefited from the continued rebranding of its subsidiaries as A1. The aim is to improve international visibility, recognition and deliver an integrated customer experience. This "one brand strategy" will facilitate cooperation and group-wide leverage of present resources while enabling the company to face the new challenge of digitalisation in a more efficient way. It will be interesting to see if the new corporate identity will be strong as well as flexible enough to be successful in all of its markets.

Vodafone unveiled a major brand revamp in October 2017. Do you expect this to reverse a few years of declining brand value at the UK-based operator?

Vodafone's largest advertising campaign in its 33-year history saw it unveil a new strap line and visual identity. Focusing on the theme of optimism about the future, the new strap line asks: "The future is exciting. Ready?" It will be interesting to see whether this will have a positive impact on next year's equity metrics. The new campaign will only deliver if Vodafone keeps up with product innovation to deliver its "future" promise.

Last year you picked out eir in Ireland as one to watch. Its brand value duly increased 6.9 percent, but what impact do you think the recent move to ditch its Meteor brand and Iliad taking a majority share in the company will have?

eir continues to provide excellent services to customers and is investing €1.6 billion in fixed and mobile infrastructure in order to respond to increased demand in Ireland. The launch of Wi-Fi calling and improved customer experience should help the company achieve its financial goals and retain customer equity.

Iliad has transformed the French market during the past decade, disrupting the established operators Orange, SFR and Bouygues Telecom with aggressive pricing and targeted investments. The Irish market is different than the French market so it will be interesting to see if Iliad deploys similar strategies in an effort to gain even more market share.

Which brands should we look out for over the next 12 months?

Altice is the company to watch: the company's share price fell off a cliff due to a negative surprise in its Q3 2017 earnings results. One of Altice's most important brands, SFR, has been struggling to improve customer net adds in both mobile and fixed. Customer retention has suffered due to poor brand perception. At the same time competitors in France are fighting hard; Orange continues to invest in its fibre infrastructure and brand building while Bouygues is adopting a strategy of ultra-aggressive promotion.

Yet Altice has committed to increasing its investments in customer service and network in France. We are also watching how Altice will restore its value proposition and differentiate itself to lead the competition with a new brand strategy. They are embracing a "masterbrand" strategy and we'll see the results by mid-2018; not all of the group's sub-brands will be rebranded, but it will be interesting to see which brands will be effectively kept and how the rebranding will impact Altice's brand value.

Its US businesses are more stable and this is expected to help the company's overall brand performance. ec

Deutsche Telekom celebrates highest brand value in its history

Deutsche Telekom cemented its position as the most valuable telecoms brand in Europe and extended its lead over its closest rivals. The operator saw its brand value rise 10.2 percent last year to reach $40.15 billion. Orange surpassed Vodafone to take second place behind its Germany-based rival, but its brand is worth almost $18 billion less.

In a statement, Deutsche Telekom said: "Since its relaunch in 2008, the brand has seen continuous growth in value, increasing by an impressive 352 percent."

It highlighted the "long-term investments in network quality, innovation and customer service" that it had made over the years, which form the basis for the increase in brand value alongside "positive business development".

Top 100 Global Telecoms Brands

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
1	AT&T	United States	82,422	-5.3%
2	verizon	United States	62,826	-4.6%
3	中国移动 China Mobile	China	53,226	13.9%
4	NTT Group	Japan	40,872	0.8%
5	Deutsche Telekom	Germany	40,152	10.2%
6	xfinity	United States	26,121	-0.2%
7	中国电信 CHINA TELECOM	China	23,979	36.3%
8	orange	France	22,206	3.2%
9	SoftBank	Japan	18,928	-8.2%
10	vodafone	United Kingdom	18,744	-14.1%

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
11	au	Japan	16,626	-1.7%
12	Spectrum	United States	13,396	-14.9%
13	Telstra	Australia	12,436	13.6%
14	BT	United Kingdom	11,494	0.5%
15	China Unicom	China	11,479	22.7%
16	Movistar	Spain	11,415	13.4%
17	Bell	Canada	10,830	11.8%
18	Sky	United Kingdom	10,162	-2.0%
19	TIM	Italy	8,656	33.3%
20	O2	United Kingdom	8,637	-11.1%
21	Rogers	Canada	7,887	14.3%
22	Etisalat	Uae	7,702	39.7%
23	Telus	Canada	7,701	17.3%
24	Sprint	United States	7,455	-15.7%
25	3	United Kingdom	7,347	15.4%
26	Centurylink	United States	7,075	10.3%
27	Telenor	Norway	6,855	-4.3%
28	SK	South Korea	6,701	28.1%
29	Airtel	India	6,660	-13.7%
30	STC	Saudi Arabia	6,651	7.0%
31	Swisscom	Switzerland	6,201	-6.5%
32	Claro	Mexico	6,085	12.1%
33	SFR	France	5,793	-0.3%
34	Chunghwa	China	5,507	50.1%
35	KT	South Korea	5,252	3.2%
36	Telkom Indonesia	Indonesia	5,168	19.2%
37	EE	United Kingdom	4,686	7.1%
38	Telia	Sweden	4,281	-7.2%
39	Optus	Australia	3,946	19.0%
40	UQ Communications	Japan	3,767	140.3%
41	Telcel	Mexico	3,539	-0.4%
42	Dish Network	United States	3,437	-25.2%
43	Singtel	Singapore	3,426	30.5%
44	Ooredoo	Qatar	3,369	8.5%
45	MTN	South Africa	3,252	9.3%
46	AIS	Thailand	3,211	48.5%
47	Viettel Telecom	Vietnam	3,178	18.3%
48	KPN	Netherlands	3,134	-6.4%
49	LG U+	South Korea	3,029	15.7%
50	Free Mobile	France	2,964	39.7%
51	Virgin Media	United Kingdom	2,814	-29.8%
52	Bouygues Telecom	France	2,699	19.5%
53	Wind	Italy	2,680	13.0%
54	Du	Uae	2,641	30.8%
55	Frontier Communication	United States	2,379	-31.8%

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
56	Telefonica	Spain	2,369	-4.1%
57	Axiata	Malaysia	2,354	-8.9%
58	Tracfone	United States	2,328	41.0%
59	Proximus	Belgium	2,272	1.4%
60	PLDT	Philippines	2,140	-17.2%
61	KDDI	Japan	2,132	-54.2%
62	Shaw	Canada	2,114	-6.2%
63	Vivo	Brazil	2,099	1.6%
64	Zain Group	Kuwait	2,082	-11.0%
65	Taiwan Mobile	China	1,994	28.7%
66	MTS	Russia	1,986	33.8%
67	Turk Telekom	Turkey	1,907	-27.2%
68	Altice	Netherlands	1,887	N/A
69	Turkcell	Turkey	1,841	-6.0%
70	Optimum	United States	1,803	6.2%
71	UPC	Switzerland	1,743	-3.6%
72	Idea Cellular	India	1,660	-14.7%
73	A1 Telekom	Austria	1,654	76.8%
74	Telmex	Mexico	1,617	-4.3%
75	Megafon	Russia	1,572	44.4%
76	Tigo	United States	1,517	-2.7%
77	Globe Telecom	Philippines	1,496	15.5%
78	Maxis	Malaysia	1,462	6.9%
79	Windstream	United States	1,420	10.0%
80	Videotron	Canada	1,364	135.4%
81	VNPT	Vietnam	1,339	84.4%
82	Tele2	Sweden	1,298	31.2%
83	HKT	China	1,293	33.7%
84	TM	Malaysia	1,230	1.2%
85	DiGi	Malaysia	1,228	-1.3%
86	TDC	Denmark	1,219	-7.7%
87	Ziggo	Netherlands	1,216	-21.7%
88	TRUE	Thailand	1,210	45.6%
89	BCE	Canada	1,203	11.8%
90	Far Eastone Telecommunications	China	1,161	6.2%
91	Telenet	Belgium	1,078	14.9%
92	Starhub	Singapore	1,053	23.8%
93	Elisa	Finland	1,035	7.4%
94	AOL	United States	982	N/A
95	Oi	Brazil	977	-10.9%
96	Beeline	Russia	953	-24.5%
97	Mobily	Saudi Arabia	952	-30.3%
98	FASTWEB	Italy	895	11.4%
99	Safaricom	Kenya	890	28.9%
100	Entel	Chile	859	-6.7%

Top 100 European Telecoms Brands

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
1	Deutsche Telekom	Germany	40,152	10.2%
2	orange	France	22,206	3.2%
3	vodafone	United Kingdom	18,744	-14.1%
4	BT	United Kingdom	11,494	0.5%
5	movistar	Spain	11,415	13.4%
6	sky	United Kingdom	10,162	-2.0%
7	TIM	Italy	8,656	33.3%
8	O_2	United Kingdom	8,637	-11.1%
9	3	United Kingdom	7,347	15.4%
10	telenor	Norway	6,855	-4.3%

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
11	Swisscom	Switzerland	6,201	-6.5%
12	SFR	France	5,793	-0.3%
13	EE	United Kingdom	4,686	7.1%
14	Telia	Sweden	4,281	-7.2%
15	KPN	Netherlands	3,134	-6.4%
16	Free Mobile	France	2,964	39.7%
17	Virgin Media	United Kingdom	2,814	-29.8%
18	Bouygues Telecom	France	2,699	19.5%
19	Wind	Italy	2,680	13.0%
20	Telefonica	Spain	2,369	-4.1%
21	Proximus	Belgium	2,272	1.4%
22	MTS	Russia	1,986	33.8%
23	Turk Telekom	Turkey	1,907	-27.2%
24	Altice	Netherlands	1,887	N/A
25	Turkcell	Turkey	1,841	-6.0%
26	UPC	Switzerland	1,743	-3.6%
27	A1 Telekom	Austria	1,654	76.8%
28	Megafon	Russia	1,572	44.4%
29	Tele2	Sweden	1,298	31.2%
30	TDC	Denmark	1,219	-7.7%
31	Ziggo	Netherlands	1,216	-21.7%
32	Telenet	Belgium	1,078	14.9%
33	Elisa	Finland	1,035	7.4%
34	Beeline	Russia	953	-24.5%
35	FASTWEB	Italy	895	11.4%
36	Freenet	Germany	777	13.2%
37	Play	Poland	696	-5.2%
38	Sunrise	Switzerland	676	-0.7%
39	Plus	Poland	659	9.4%
40	Rostelecom	Russia	633	-12.4%
41	Drillisch Telecom	Germany	564	34.1%
42	Mobistar	Belgium	549	-2.5%
43	TalkTalk	United Kingdom	541	-17.0%
44	Nos	Portugal	494	27.7%
45	Meo	Portugal	481	18.4%
46	eir	Ireland	472	6.9%
47	Dna Oy	Finland	463	21.8%
48	SES	Luxembourg	451	8.2%
49	BASE	Belgium	420	-1.2%
50	PT Empresas	Portugal	363	31.7%
51	Yoigo	Spain	346	-15.6%
52	Liberty Global	Netherlands	323	-27.3%
53	C&W Communication	United Kingdom	308	N/A
54	Intelsat	Luxembourg	290	2.8%
55	Colt	Luxembourg	279	6.1%

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
56	Cyfrowy Polsat	Poland	273	1.7%
57	Bics	Belgium	264	32.1%
58	Inmarsat	United Kingdom	247	-15.4%
59	Eutelsat Communications	France	246	7.1%
60	OTE	Greece	236	14.7%
61	Cosmote Group	Greece	219	-16.1%
62	Euskaltel	Spain	206	43.1%
63	Cellnex Telecom	Spain	199	51.6%
64	Yousee	Denmark	178	8.5%
65	m:ts	Serbia	161	-17.0%
66	The Utility Warehouse	United Kingdom	153	-46.0%
67	Telekom Slovenia	Slovenia	139	21.9%
68	POST Luxembourg	Luxembourg	138	95.6%
69	Kyivstar	Ukraine	101	-12.9%
70	Sure	Isle Of Man	91	64.0%
71	LMT	Sweden	76	8.9%
72	Vivacom	Bulgaria	67	31.9%
73	Kcom	United Kingdom	63	13.8%
74	Tango	Belgium	61	3.9%
75	Telindus	Belgium	56	-10.3%
76	Gamma Communications	United Kingdom	52	8.6%
77	GO	Malta	51	78.6%
78	m:tel	Serbia	50	-13.5%
79	Netia	Poland	49	-15.5%
80	BH Telecom	Bosnia And Herzegovina	48	6.4%
81	Mas Movil	Spain	42	-5.8%
82	Fullrate	Denmark	42	0.9%
83	Midas	Poland	42	-4.7%
84	DigiMobil	Cyprus	36	-78.8%
85	Tiscali	Italy	35	-6.7%
86	Cytamobile-Vodafone	Cyprus	31	12.7%
87	NextGenTel	Norway	30	-9.3%
88	Eurona Wireless	Spain	29	47.5%
89	pepephone.com	Spain	28	N/A
90	Avanti	United Kingdom	25	N/A
91	TT Mobile	Russia	24	N/A
92	Tattelecom	Russia	23	41.8%
93	KC	United Kingdom	23	16.5%
94	MOTIV	Russia	22	19.9%
95	Siminn	Iceland	19	N/A
96	Monaco Telecom	Monaco	19	N/A
97	Ukrtelecom	Ukraine	17	N/A
98	Ecotel Communica	Germany	15	N/A
99	HT Eronet	Bosnia And Herzegovina	15	N/A
100	Bashinformsvyaz	Russia	15	-60.1%

Top 10 Telecoms Vendors

Rank 2018	Brand	Domicile	Brand value (USD $ millions)	Brand value change (yoy)
1	HUAWEI	China	38,046	50.8%
2	CISCO	United States	19,411	-6.4%
3	NOKIA	Finland	8,397	70.8%
4	Qualcomm	United States	6,826	-0.1%
5	ERICSSON	Sweden	4,560	-9.6%
6	ZTE中兴	China	3,521	22.7%
7	CORNING	United States	2,140	34.1%
8	Juniper Networks	United States	1,204	-3.4%
9	HARRIS	United States	1,044	-21.0%
10	ARRIS	United States	935	-1.7%

Methodology

Definition of Brand
In the very broadest sense, a brand is the focus for all the expectations and opinions held by customers, staff and other stakeholders about an organisation and its products and services. However when looking at brands as business assets that can be bought, sold and licensed, a more technical definition is required. Brand Finance helped to craft the internationally recognised standard on Brand Valuation, ISO 10668. That defines a brand as "a marketing-related intangible asset including, but not limited to, names, terms, signs, symbols, logos and designs, or a combination of these, intended to identify goods, services or entities, or a combination of these, creating distinctive images and associations in the minds of stakeholders, thereby generating economic benefits/value."

However, a brand makes a contribution to a company beyond that which can be sold to a third party. 'Brand Contribution' refers to the total economic benefit that a business derives from its brand, from volume and price premiums over generic products to cost savings over less well-branded competitors.

Brand Strength
Brand Strength is the part of our analysis most directly and easily influenced by those responsible for marketing and brand management. In order to determine the strength of a brand we have developed the Brand Strength Index (BSI). We analyse marketing investment, brand equity (the goodwill accumulated with customers, staff and other stakeholders) and finally the impact of those on business performance. Following this analysis, each brand is assigned a BSI score out of 100, which is fed into the brand value calculation. Based on the score, each brand in the league table is assigned a rating between AAA+ and D in a format similar to a credit rating. AAA+ brands are exceptionally strong and well managed while a failing brand would be assigned a D grade.

Approach
Brand Finance calculates the values of the brands in its league tables using the 'Royalty Relief approach'. This approach involves estimating the likely future sales that are attributable to a brand and calculating a royalty rate that would be charged for the use of the brand, i.e. what the owner would have to pay for the use of the brand—assuming it were not already owned.

The steps in this process are as follows:

1. Calculate brand strength on a scale of 0 to 100 based on a number of attributes such as emotional connection, financial performance and sustainability, among others. This score is known as the Brand Strength Index.
2. Determine the royalty rate range for the respective brand sectors. This is done by reviewing comparable licensing agreements sourced from Brand Finance's extensive database of license agreements and other online databases.
3. Calculate royalty rate. The brand strength score is applied to the royalty rate range to arrive at a royalty rate. For example, if the royalty rate range in a brand's sector is 0-5% and a brand has a brand strength score of 80 out of 100, then an appropriate royalty rate for the use of this brand in the given sector will be 4%.
4. Determine brand specific revenues estimating a proportion of parent company revenues attributable to a specific brand.
5. Determine forecast brand specific revenues using a function of historic revenues, equity analyst forecasts and economic growth rates.
6. Apply the royalty rate to the forecast revenues to derive brand revenues.
7. Brand revenues are discounted post tax to a net present value which equals the brand value.

The Batman-loving brand man making TIM dance to a new tune

Luca Josi tells Marc Smith why he's only satisfied with a 33% rise in the company's brand value

Luca Josi has a surprising response when asked about the brand he most admires outside of telecoms. The Head of Brand Strategy and Media at Telecom Italia (TIM) thankfully avoids the stock answers of Apple or Facebook, instead choosing Batman, of whom he has been a fan of since he was a child. In particular, Josi says he admires the way the superhero's logo has evolved to remain modern given it first appeared in 1939.

Surprisingly for an incumbent telco, TIM is a much newer entity having been created, in its current guise, in 1994. The operator does trace its roots back to 1925 when Mussolini's fascist government created a company called Stipel to run Italy's phone network.

But fast forward to the present day and the company is building on a 2016 rebrand that, most visibly, saw Telecom Italia become TIM. The wider aim was to better align the business with two key telecoms trends – innovation and convergence – as Josi explains in his description of what the brand stands for today. "TIM focuses on quality in terms of technology, fixed and mobile convergence, exclusive and distinctive content, entertainment services and customer centricity," Josi says.

With typical Italian flair, the company chose the medium of dance to communicate to customers what the new brand is all about. "We have developed a distinctive and original communication format based on dance that… has an increasing viral success, generating aggregation and engagement," says Josi. "Thanks to dance as a universal language, it's possible to reach everyone in an impactful way and on all media channels in an integrated way: TV, print, web, out of home, in-store."

Allied to improving financials – TIM saw revenues and EBITA jump 5.3 percent and 5.7 percent respectively in the first nine months of 2017 – the operator was one of the best performers on Brand Finance's ranking. Its brand value grew by 33 percent, meaning TIM jumped ahead of O2, Telenor and Swisscom to become the seventh most valuable telecoms brand in Europe.

With one eye on a higher ranking next year, Josi says he is "satisfied" with the improvement. "The next step will be to improve and innovate the brand experience [by] identifying action areas which can implement a quality customer relationship across all touch points," he explains.

The pressure is on amid significant upheaval in the Italian telecoms market. Wind Tre arrived in 2017 and Iliad is expected to launch a low-cost provider this year. They join established players Swisscom-owned Fastweb and Vodafone in battling TIM for the hearts and minds of Italian customers.

"In a constantly evolving market consisting of brands that come in, aggregate, change with changing customer needs and new technologies, it is necessary to respond in a timely, strategic and original way," Josi says.

"Creating an effective communication strategy is essential in a context where users themselves are the creators and influencers of content. It is important to define what to say, how to say it and whom to say it to, building a unique and differentiated relationship." Specifically, he notes the importance of storytelling and real time marketing.

Unsurprisingly, Josi is less forthcoming about the impact that TIM's well-publicised internal struggles might have had on the new brand. France-based mediaco Vivendi has built up a majority stake, leading to brickbats between the two parties and the Italian regulator about who really controls the operator. The CEO left last year and the Chairman was demoted in the fallout. "The things you refer to do not affect the strength of the brand," says Josi when this is put to him.

TIM's performance on the Brand Finance ranking would bear this out, but Josi is not keen on sharing any key takeaways with his peers. "If I had a teaching, and this represented a competitive advantage, I could not share it," he says.

Just liked the caped crusader's real identity, some things must be kept a secret. EC

Red Hat: Culture, code and collaboration

Jim Whitehurst, President and CEO, Red Hat, shares his thoughts ahead of Mobile World Congress

So, you're taking to the MWC stage this year – can you give us a sneak preview?

I'll be giving a keynote presentation on Tuesday morning, as part of the session on "The Foundations of The Digital Economy". Based on the premise that the digital economy will continue to transform how we do business, the session will look at how to put the right foundation in place for it to flourish.

I'll be addressing how telco organisations – which have the opportunity to be the beating heart of the digital economy – can create a more dynamic, open culture and rethink their innovation model to thrive. How, in a volatile, uncertain world, they can reshape traditional structures and processes, and instead optimise to be more agile, resilient and innovative.

I'll share a vision of how to deal with change in the face of disruption.

What is Red Hat's role in the mobile and telecoms space?

One hundred percent of telcos in the Fortune Global 500 rely on Red Hat*. Traditionally this relationship has revolved around the datacentre, in the IT domain, where we have deep expertise working with organisations across industries, around the world. Now with telcos making the move to cloudify networks and virtualise network functions, Red Hat is stepping in as a trusted partner supporting their network modernisation strategies.

We're building close collaborations across the ecosystem to deliver solutions from the network core to the edge, and have some exciting stories about how our customers are working to address the rising demand for data and grow their share of the digital economy.

What's open source doing for the telco industry?

Open source is a key driving force for today's innovation across industries and societies. We believe open source is a core building block of the modern telco network and ecosystem, helping organisations transform their infrastructure to be more agile and ready to face change.

However, it's a new area for many in this industry, and it's a learning curve. We are having many conversations with operators and vendors globally to help them navigate and benefit from open source. They know they can tap into open innovation and are seeking to understand better when and how to consume open source code, and where and how to participate in open communities.

We see more operators taking an active role in driving open innovation, for example through initiatives like ONAP or OSM, to develop enabling technologies for virtualised networks.

What else is Red Hat showcasing at MWC this year and where can we find you?

At MWC this year, exhibiting in Hall 2 at stand 2G40, we'll be showcasing a number of our technologies supporting telco transformation and we'll bring the business benefits to life via demos with some of our partners and customers. These will focus on how we are helping to enable innovative services such as IoT, data analytics, machine learning and self-optimising networks, as well as diving into the latest advances in foundational infrastructure, looking at NFV, multi-access edge computing (MEC) and virtualised IP headend, radio access networks (vRAN) and content delivery networks (vCDNs).

You can expect to hear about some fresh collaborations and customer use cases, plus learn more about ongoing projects, such as how Red Hat is behind T-System's AppAgile cloud service; how we are helping the likes of Orange, Verizon, Three UK and Altice get NFV into production; how Red Hat OpenStack Platform is supporting the NFV solutions of network equipment providers; how we are helping Swisscom virtualise its live TV network; and delivering OpenStack clouds for Turkcell, Fastweb and more. We look forward to seeing you there!

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**Red Hat client data and Fortune Global 500 list, June 2017*

Special report

DIGITAL TRANSFORMATION

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Telcos have two choices when it comes to improving the skillsets of their workforce - hire new talent or retrain existing employees.

TATA COMMUNICATIONS
TRANSFORMATION SERVICES

TCTS: Orchestrating the human connection

Previously, the telecoms industry was focused on building ubiquitous and seamless networks to meet the needs of connectivity; going forward, its focus will be on building on-demand, agile and service-ready networks. The prospects have changed for operators with this strategic shift. Instead of fighting for scraps, as they struggle to serve up ever increasing rate of data usage, they are in a position to transform the networks to serve the needs of a digital society.

"All the networks in the last 20 years have been designed around ubiquity, to serve the spiralling demand for mobility," says Harkirit Singh, Global Head of Solutions, at Tata Communications Transformation Services Limited (TCTS). "Those requirements have been met, and will be over-served by 5G. The new era is about building use cases to take advantage of the available capacity and building on-demand, self driven networks to connect the digital ecosystem around human beings – monetising the ever evolving digitisation of human interactions to machines."

Indeed, the game dynamics have shifted. Take a tier-one operator in a major European market with 20 million subscribers and 35-40 million machine connections, says Singh. "It's talking about 50 million machines by 2020 – in reality, it's going to surpass that target, and pass 100 million," he explains. "Meanwhile, the human subscription base for the operator won't change that much."

Operator revenues from machine connections will rise as emerging technologies foster new innovation. "Most of these machines are connecting on 2.5G right now, in small data bursts; as 5G and cellular IoT come of age, different use cases will emerge and different applications will serve them, taking advantage of the high capacity and low latency characteristics of the technology," says Singh.

New applications

Applications become more important in terms of the volume of connections, at least. In the end, these machines are networked and programmed to support society at large. "The infrastructure is designed to serve us; we are its masters," Singh says. Health and wealth, in that order, are the surest measures of progress, he reckons.

These metrics represent a litmus test for incoming technologies, as well; the success of LTE-based services comes down to how they make society healthier and more prosperous.

5G, and its hetnet of complementary communications technologies, will place each person at the centre of their own digital ecosystem, supported by an expanding roster of inter-connected "things", which cross-pollinate contextual data to attain unknown insights about our circumstance and condition. "It becomes very intimate, and that intimacy creates new use cases," says Singh.

For now, contextual decision-making remains a biological process, and a slow one. In today's world, for example, it takes until the passenger in a car notices the driver's discomfort before an alarm is raised and an ambulance arrives. However, tomorrow, a sensor in the traffic light will predict a heart attack before it occurs – and will call an ambulance, passing on the health records, and notifing the family.

Singh widens the focus, and places

telecoms right at the centre of the picture. "This whole service provider domain will do everything for you – your healthcare, your banking, your shopping – and it will do it in real-time, in the immediate context of your digital activity," he says. "That is where we are headed, and it's not even 10 years away."

Strategic pillars

5G affords operators a chance to reinvent themselves, again, as champions of a new wave of content and services. "Operators will be in the best position they have been for more than a decade," says Singh. But it is a fierce exercise for them, just to limber up and stay in the contest, requiring discipline in their function and approach.

Fortunately, TCTS has a transformation framework for operators, based on the five pillars of change: connectivity, virtualisation, analytics, automation, and security. Developed with knowledge partners Ovum, the telco transformation framework ranks operators for their digital maturity against each of the above criterias, and offers a two-tier support around technical and cultural change. The company already working with a couple of tier-one operators in Europe.

Singh reflects on the state of the market: each pillar requires urgent attention, he says. "Operators have just started on this journey; they are on a path. No one is there yet." TCTS takes clients through each pillar, in turn. Thematically, however, the two bookending its blueprint for change – connectivity and security – might be considered together as guiding principles, which everything else supports.

Connectivity provides the range in the TCTS "topology" for network design, says Singh. The ability to assign bandwidth through network slicing, the primary utilisation of 5G, will allow operators to provide dedicated communications channels. In the circumstances, where critical infrastructure and services are in play, future networks must guarantee constant availability. Percentage population coverage is an obsolete measure, notes Singh.

He advocates fibre as the default transmission technology for backhaul communications. Nothing else provides complementary bandwidth to support next generation services, he says. "As it stands, wireless is supported by multiple different backhaul technologies; all of those will go," he explains, pointing to the rate of investment in both terrestrial and sub-sea fibre. "The only thing that will survive is fibre."

In a way, network security, the last pillar, is the flipside to this challenge of network availability. These are the first promises an operator makes to its customers – to connect and protect their data – and everything else serves these ends. In the 5G era, these commitments are greater, as network availability becomes a matter of life-and-death, and network security becomes a persistent threat. TCTS recommends a security strategy around digital identity and automation to create resilient networks-of-the-future.

Deep strategy

In between these two pillars, TCTS considers the back-end. If connectivity provides the range, software provides the depth in its network modelling, as well as the stretch and bend. "Mass connectivity has to be autonomous and self-fulfilling," says Singh. Five years ago, operators kept little more than a user's essential information in HLRs in their networks.

Compute and storage requirements have escalated since, as computing has gone mobile. "Networks will require a huge amount of compute and storage in order to make sense of all the data and services," Singh says.

So far, most operators' cloud initiatives are just first steps, he observes, linked to radio control functions in the core network. "There's nothing happening on the access side," he says. "There is a huge gap there." The innovation is yet to catch up. The arrival of the 5G new radio (NR) standard will make virtualisation of access functions a reality.

More challenging, the operator community remains entrenched, or else caught between two stools, occupied by legacy RAN specialists and modish TOSCA and YANG programmers. "Most operators just don't have the personnel – and when they do, there is this clash between the hardware-centric and software-centric mind-sets, resulting in organisational chaos around the network engine," says Singh.

Hyper-automation

There are other, more other technical concerns. Analytics and automation, underpinned by new techniques in AI and machine learning, are essential for this "hyper-connected, hyper-virtualised infrastructure to breathe autonomously". It allows the underlying technology to fly through the gears, processing contextual data in real-time to gain new insights on our personal and public lives.

Singh says: "Autonomous operations become the key to the success of a digital service provider. To run effectively, there has to be a layer of analytics, and AI, giving rise to automation. Big data analytics has to be in place to crunch numbers, define patterns, and make decisions. Automation is created from that – from the analytics, after these deeper neural learning connections have been made."

He gives a network management example, where a base station shows signs of failure. The operations centre detects the issue, and orchestrates a response, coordinating with a qualified engineer in the vicinity. Whether it is the over-riding service or the underlying technology, telecoms providers have the means to predict outcomes and automate responses, observes Singh.

Through analytics and automation, operators can create order from the incoming chaos in their networks; more than that, they can spin-off services that solve problems and provide answers. Singh concludes: "The entire system has to be highly automated, and highly attuned. Operators have to go through this paradigm of hyper automation. That will only happen if their infrastructure works as a unified platform."

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Q1 survey: The journey evolves as telcos progress

European Communications' second annual digital transformation survey reveals CEOs are becoming more hands-on, as the key challenge remains scale, complexity and time

The good news is that just shy of three-quarters of respondents to our survey, 73 percent, agree with the direction and focus of their company's current digital transformation efforts. Although one said there was "more talk than action" and another thought the strategy "should be more aggressive", the overall response was positive.

A key metric, how digital an operator's internal systems and processes are, also appears to heading in the right direction. When asked to rank how digital the likes of BSS are, respondents gave a weighted average score of 2.8 out of 5.

Customer experience remains the key aim of operators' digital transformation strategies, with 85 percent of respondents choosing it – exactly the same percentage as when we asked the same question last year – from a long list. Reducing opex jumped from the fourth most cited aim 12 months ago to second in the list this year, highlighting the growing importance of attaching financial KPIs to operational change.

To boot, operators are sure that digital transformation strategies will deliver an improved financial performance in the long term. When asked how convinced they were that what their company is doing will boost the top and bottom line, respondents gave a weighted average score of 3.5 out of 5.

There was much less certainty about which of the aims will be easier to achieve, however. Implementing automated/real-time processes was voted the easiest aim to achieve this year, replacing a reduction in the number of vendor partners, which topped last year's poll. However, it was also selected as the third hardest goal to achieve.

> "Operators are sure that digital transformation strategies will deliver an improved financial performance"

Improving customer experience was voted as the hardest to achieve, according to respondents, who promoted it from third place in last year's survey. But it was also selected as the third easiest goal to achieve.

It seems there is, at best, two different schools of thought at operators, at worst a worrying level of confusion. The hope is that with digital transformation still a nascent discipline, more clarity will emerge over the year ahead.

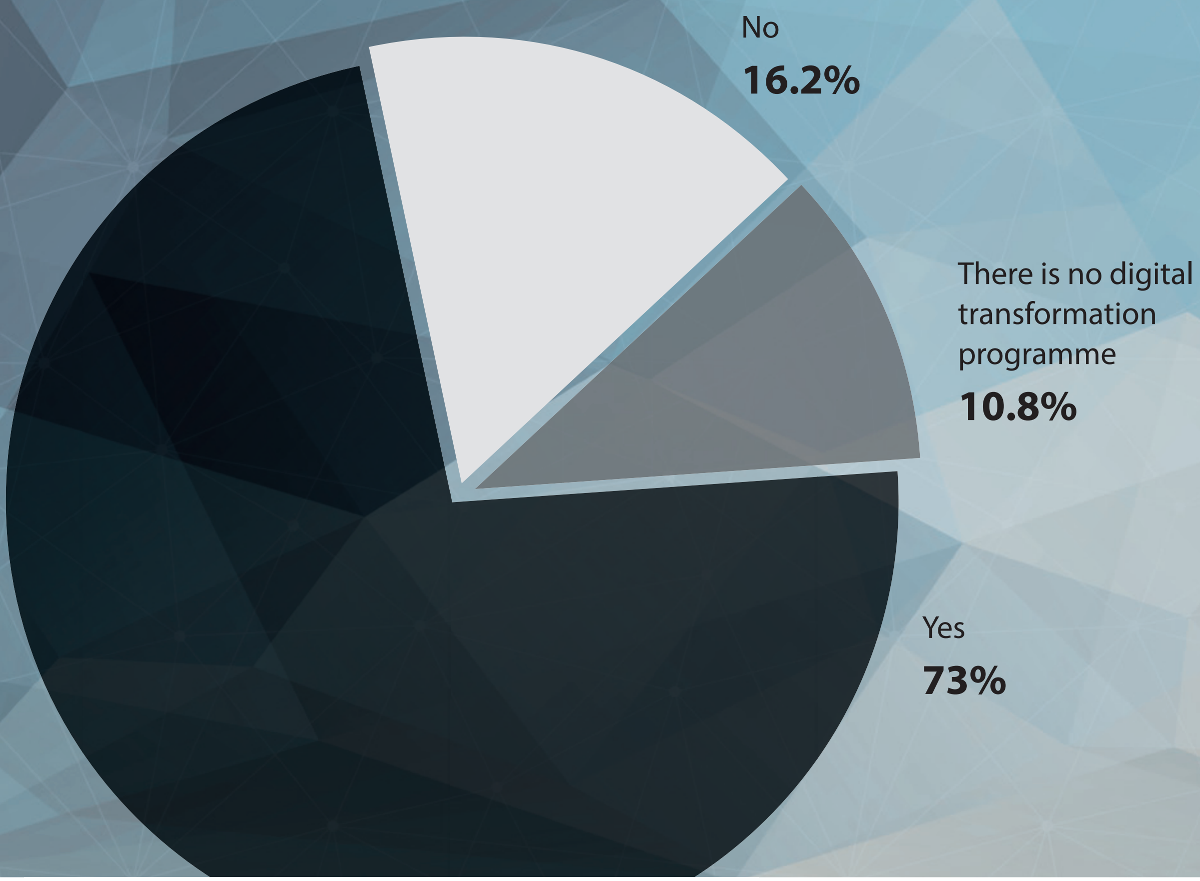
The need to cut through the confusion could be behind a change in ownership internally. When we asked operators 12 months ago who was in charge of their digital transformation strategies, the majority, 26 percent, said the CTO. This year, however, it is the CEO who is more likely to be in charge, pushing CTOs down into second place.

The CEO is arguably best placed to tackle the biggest challenge operators face. For the second year running this was the scale, complexity and time that digital transformation takes. More pertinently, with a lack of strategy/leadership cited as the second biggest challenge it is important CEOs stamp their authority on proceedings to ensure there is a clear company-wide strategy.

Another key challenge is having a workforce that is skilled enough to deliver what is required. Almost one in seven respondents said they had been enrolled in a digital transformation programme. Broadly they are happy with what they have learned thus far – they returned a weighted average of 2.9 out of 5 when asked how satisfied they were.

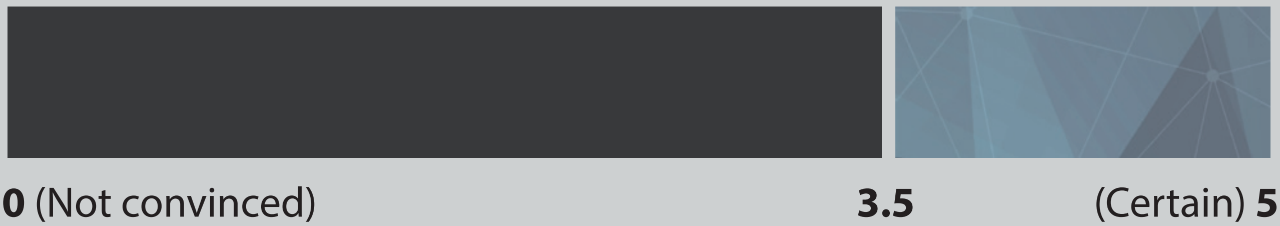
Seventy four operators took part in our online survey between December 2017 and January 2018. ec

Do you agree with the overall direction and focus of digital transformation efforts that your organisation has implemented thus far?

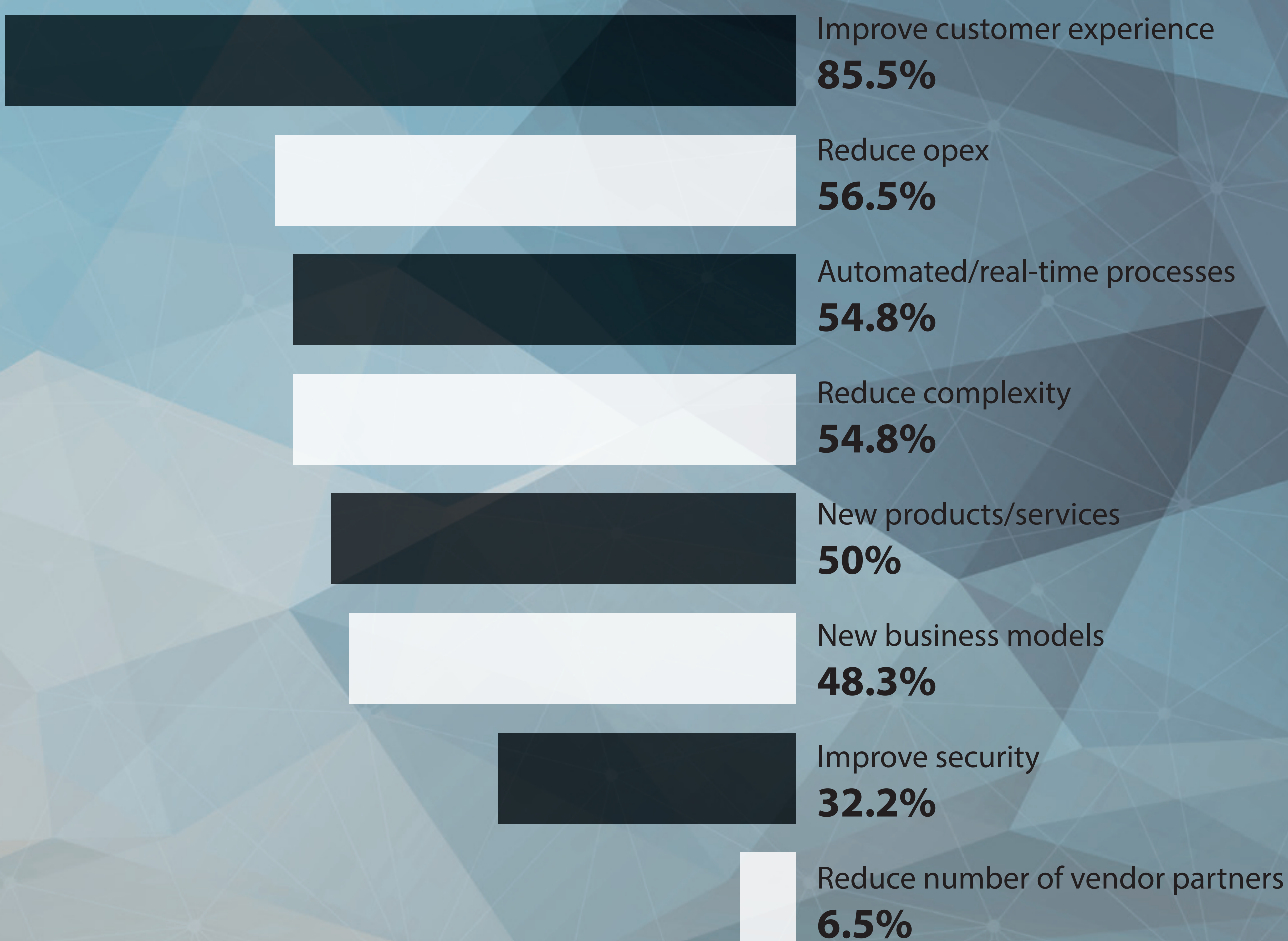


In terms of your organisation's internal systems and processes, how digitally transformed would say they are at the current time?

How convinced are you that the digital transformation efforts your organisation is making will deliver an improved financial performance in the long term?

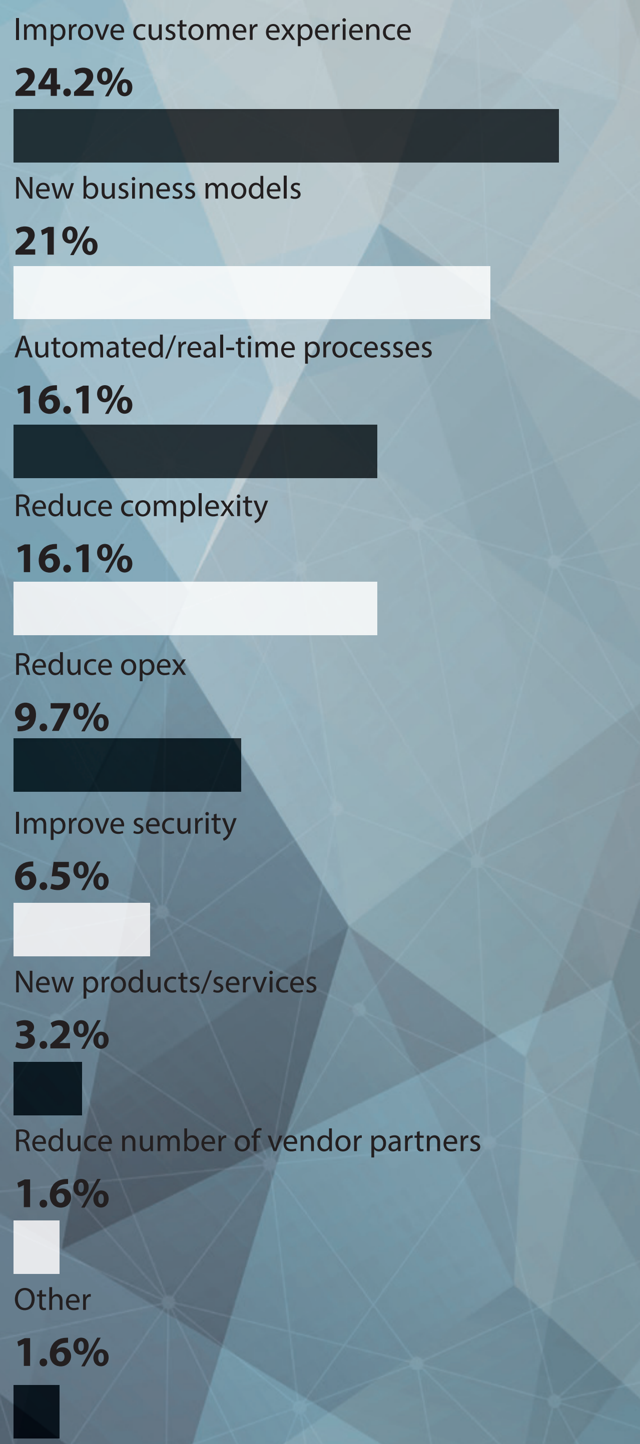


What are the key aims of digital transformation at your organisation

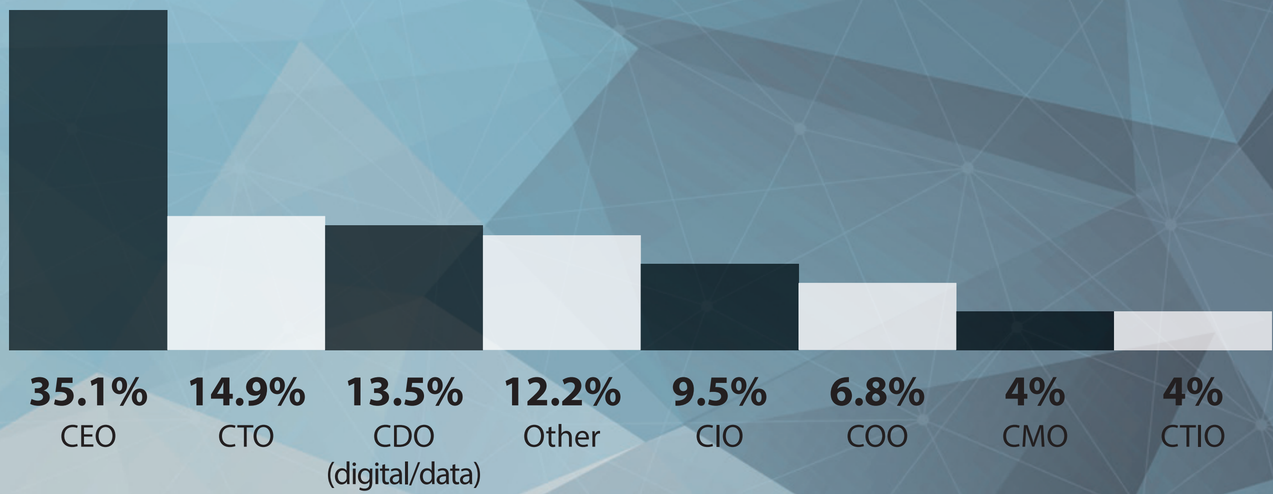


Which of these aims do you think will be THE EASIEST to achieve?

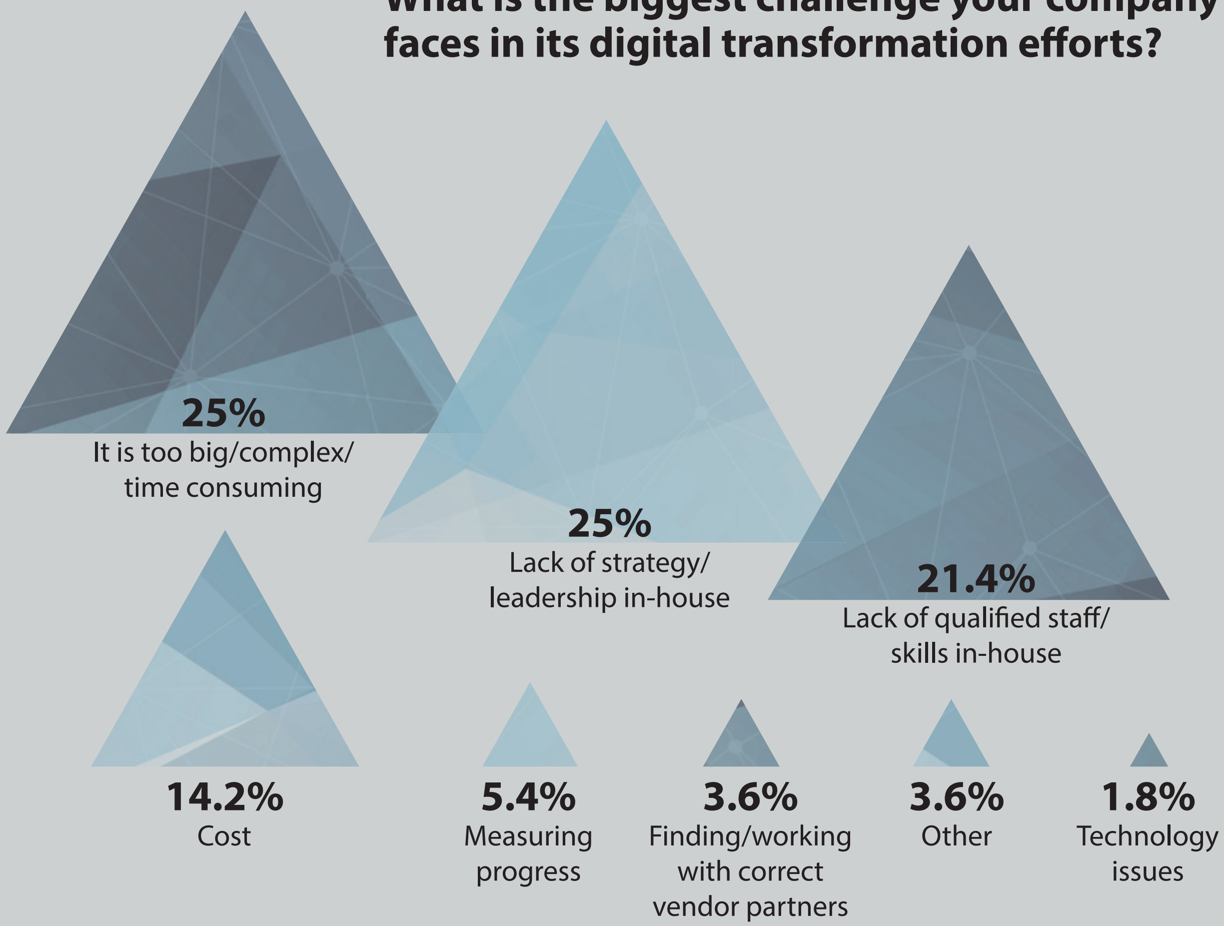
Which of these aims do you think will be THE HARDEST to achieve?



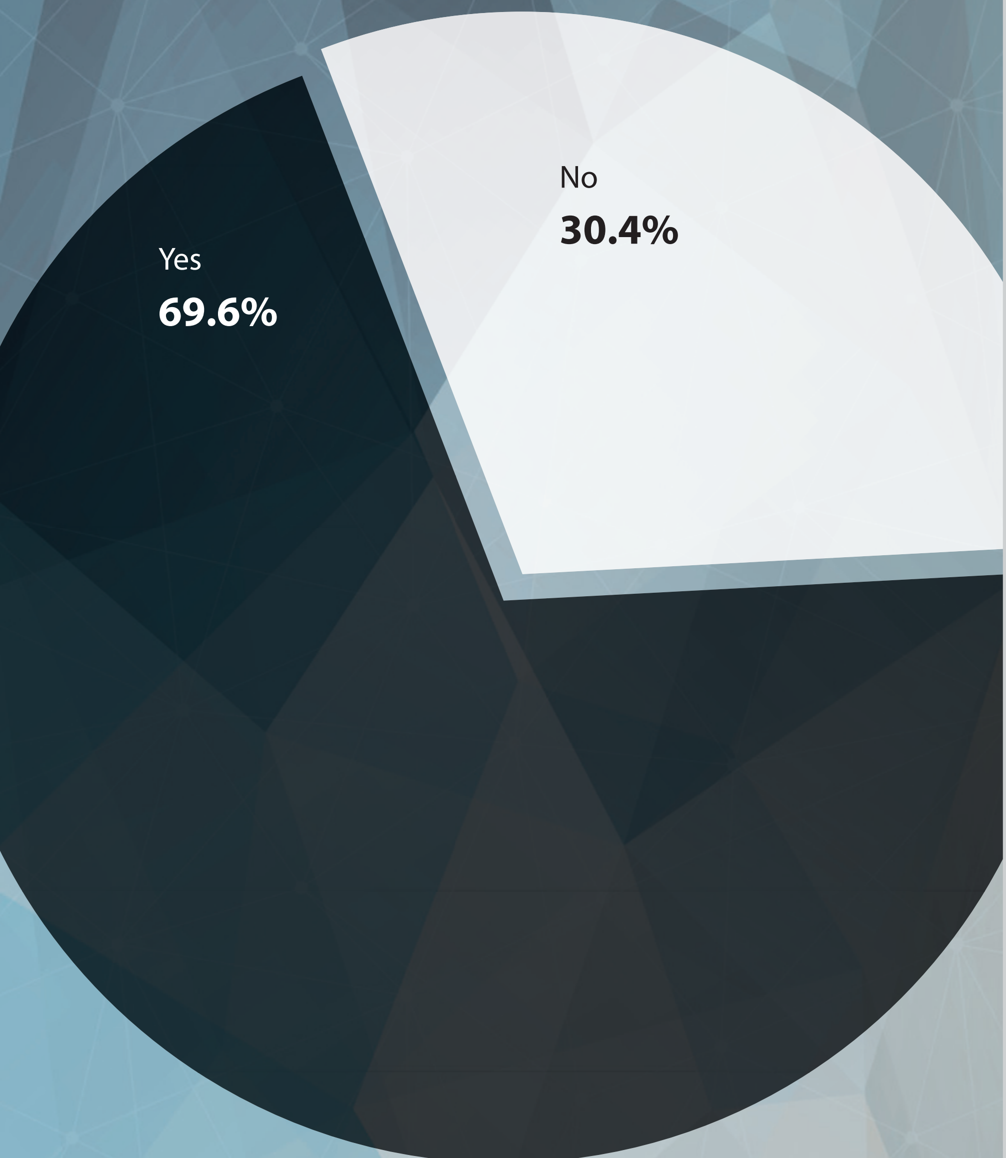
Who is in charge of digital transformation at your organisation?



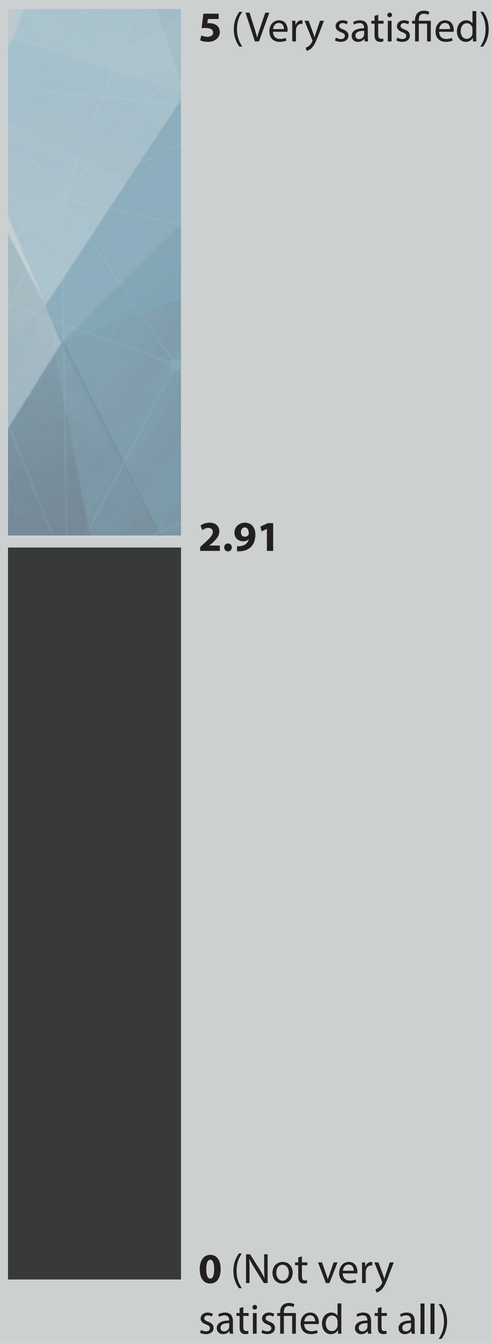
What is the biggest challenge your company faces in its digital transformation efforts?



Have you personally been enrolled in a digital transformation programme at your organisation?



How satisfied are you with what you have learned/been taught thus far?



TCTS: Building the future telco through simplification, automation and innovation

Traditionally in a telco world, a new service means the installation, commission, billing, configuration, etc. of a new box over days or weeks, writes Vaibhav Dongre, GM and Global Head of Marketing at Tata Communications Transformation Services (TCTS). In contrast, today's web-scale companies activate new services thousands of times a day.

Though rising demand for on-demand services has pushed telcos to automate their operational and business support services (OSS/BSS), they still cannot on-board new services in minutes. Typically, if you ask telco customers what they are least satisfied about regarding the services they receive from their operator, consistently, two things come up: price and coverage.

While a few operators have already realised their consumers' need and are working towards delivery service excellence, others should work on increasing the density of their infrastructure in order to increase coverage. Firstly, because their customers want it; secondly, because new applications are going to demand it; and thirdly, as the new spectrum bands go up through the frequency range, they are going to also require a more dense network of cell sites.

The transformation of telcos/communication service providers (CSPs) into digital service providers (DSPs) seems like a tall order with all the changes required for next gen BSS/OSS, the need for platforms, more automation and the multi-touch customer relationships.

Over the years, digital transformation has become an overwhelming concern for CSPs. With disruptive digital and online players eating away at their core markets, CSPs have no choice but to fundamentally change their operating and business models. They have to adopt digital transformation strategies that can streamline their operations, improve customer experience and create new revenues.

Vaibhav Dongre, GM and Global Head of Marketing at Tata Communications Transformation Services

To achieve this, they have to deliver a number of parallel transformations. They have to make their businesses customer-adaptive; able to support fast service development and delivery; and supportive of continuous innovation and collaborative relationships. They also have to implement radical infrastructure and platform changes supported by analytics, artificial intelligence, lean, and agile operations.

To do all of this is clearly a big ask. Given the complexity of such a transformation, there is a huge role for CSPs' professional service partners to play not just in implementing specific platform, process, organisational and cultural changes, but in also providing guidance on the overall journey.

While CSPs' transformation journeys are unique, they should be aimed at regaining their competitiveness and securing better operational and commercial position. The size of tasks varies depending on the maturity of the CSP, and is a complex and iterative process that requires careful consideration and cooperation with customers, partners, and employees.

The result should be to ensure that the business can move to a simpler structure and embrace agile ways of working, embed intelligence, implement extreme automation in systems and processes, and around its analytics and data-mining. There are common considerations and using a framework can help de-risk CSPs' transformation journeys. Amid all these, the questions that need answers are: how can telcos transform operations, drive efficiencies, accelerate revenues and enhance customer experience?

TRANSFORM OPERATIONS with a goal to SIMPLIFY business. Telcos need to transform their operations by simplifying business processes to improve network performance and omni-channel service management to ensure faster service delivery, desired QoS, and enhance end customer experience.

DRIVE EFFICIENCIES through automation and the adoption of new tools – AUTOMATE. Transformation of CSP's business processes (service assurance and service delivery), adoption of next gen tools and rapid automation have become critical for CSPs to gain competitiveness and to secure a better operational and commercial position.

ACCELERATE REVENUES through rapid launch of new digital services – INNOVATE. Telcos need to enter new business models offering network infrastructure to business enablement to consumer centric digital services to improve their margins and expect growth in the next decade. CSPs must take advantage of new emerging technologies such as NFV and SDN. Virtualisation of physical network elements are giving organisations, advantage of cost, scalability, innovation and quick deployment. But these promising virtualisation technologies brings with them challenges, specifically when organisations have a partial network on virtualised platforms, and the rest on legacy networks with physical elements. Such hybrid networks require specific attention and skills to manage network operations. As a trusted transformation partner of choice we are helping telcos to accelerate revenues and improve profit margins by helping them build the array of digital services portfolio such as cloud, SD-WAN, unified communications and managed security for the next gen enterprise.

The main drivers for digital transformation are relatively universal: they include the need to automate, create more agile operating models, improve operational efficiency and improve customer engagement. The key triggers that initiate rapid transformation tend to be the launch of new digital services, IoT and 5G initiatives by competitors and the disruption to business and pricing models generated by internet content providers. 5G, automation and virtualisation are all essential elements of telco transformation and are closely interlinked because they feed each other's needs. As NFV and SDN become expensive, the need for an automated approach become acute. The more mature 5G deployment becomes, the more important it becomes to deploy network slices to support new types of customers and new types of applications. They become very closely associated because of the way that the industry is developing and because of the needs that they fulfill.

NEW TECHNOLOGY ADOPTION: 5G presents a generational shift in network technology that can drive transformational benefits of revenue acceleration by powering IoT/M2M devices. Telcos operating their current 4G/LTE networks have already started to load-test their readiness by active investments and initiatives to quickly remove bottlenecks from existing legacy and transition to an all IP network.

DIGITAL SERVICES: Everything around us is exponentially becoming smarter, connected and intelligent, including those that were once isolated. This proliferation of connected machines intelligently talking to each other presents an economic value that is expected to create a real business opportunity for the CSP to secure its share of the pie in the upcoming digital economy. Tata Communications Transformation Services (TCTS) is enabling the world's largest IoT network based on LoRA technology in India. The complexity in deploying IoT, which involves identifying the right components from different suppliers, having experience in managing hybrid network environments (Sigfox, NB-IoT, Cellular networks, and Wi-Fi, etc.) and the requirement of robust, proven integration capabilities makes it important for telcos to engage a partner that can orchestrate end-to-end IoT deployment, management and integration.

VIRTUALISATION (SDN/NFV): In the telco transformation journey, virtualisation is key to driving operational efficiency, agility and service innovation. The need to overcome saturation in telco legacy systems is often backed by investments in agile, cloud-centric, software-based digital architectures – SDN and NFV. TCTS is enabling the world's first next generation enterprise network alliance leverage cutting edge cloud and virtualisation technology. This means understanding a highly complex system architecture, deployment scenarios, technology and operations. TCTS has designed an agile continuous integration/delivery DevOps model and automation platform to validate business processes – OSS/BSS solution and SDN/NFV stack for a successful launch.

www.tatacommunications-ts.com

Telco Transformation Framework

TCTS has partnered with Ovum to evaluate the transformation priorities of over 60 CSPs globally, across six different market segments to build a Telco Transformation Framework that enables CSPs to de-risk and accelerate their transformation journey.

The fundamental goal of the framework is to MAKE BUSINESSES SIMPLER, FASTER AND MORE EFFICIENT TO DELIVER SUPERIOR CUSTOMER EXPERIENCE across all digital channels and services.

People power: Preparing your workforce for digital transformation

Telcos have two choices when it comes to improving the skillsets of their workforce - hire new talent or retrain existing employees. Michelle Donegan reports on how operators are meeting this challenge head on

Telcos are experiencing unprecedented changes in nearly all aspects of their businesses. Network virtualisation, software defined networking, 5G, the Internet of Things, automation, edge computing, just to name a few, are fundamentally changing how networks are designed. The lines between network and IT systems are blurring and artificial intelligence is creeping into telco operations.

Meanwhile, customers are becoming more tech savvy and demanding. They increasingly use voice and messaging services from over-the-top competitors and expect to interact from any social media platform, which puts new pressures on operators' service development and customer services.

These changes require new skillsets. To fill the skills gap, telcos are offering retraining programs, hiring new employees and breaking down internal cultural barriers to change. There is a general sense that everyone – from the network architect to the customer service specialist – needs to get up to speed with digital transformation, and very quickly.

A recent report by Accenture on behalf of the European Telecommunication Network Operators (ETNO) group estimates that more than half of current jobs in Europe (not just in telecoms) will be affected by digitalisation by 2030. Technologies including robotics and AI will cause jobs to be redesigned or eliminated.

"The point is, how do you accompany the shift from old jobs to new jobs in a way that people are not left behind?" says ETNO spokesperson Alessandro Gropelli. "For telcos, it's not just a matter for our own workforce, but also a matter of making sure that investment and rollout of networks is useful to society."

Mind the skills gap

A lack of skills is considered a major hurdle for digital transformation. It is common to hear big technology shifts like network functions virtualisation referred to as more of a people challenge than a technology challenge, for example.

According to a survey of 400 CEOs in 13 countries across five continents, conducted by the Economist Intelligence Unit on behalf of BT, 40 percent said that the biggest obstacle to building better digital infrastructure was lack of technology skills. The other main obstacles identified were inflexible technology (43 percent) and security (39 percent).

So what are the skills that telcos need most? For Telia, the new generation of future telco critical competencies include big data and advanced analytics, automation and robotics, user experience (UX) and user interface (UI) design, and customer insight management, according to Cecilia Lundin, Head of People and Brand.

"We clearly see a technology shift where we rapidly implement new generation technologies and thereby increase the demand of new tech competencies throughout our business," she says.

Telenor has identified five areas that it wants to strengthen within its workforce: digital marketing, digital channels, applied analytics, design and product development.

Proximus is currently recruiting 250 new technical employees, most of whom will work on the rollout of fibre in the country. In addition to these splicers, call-out and ICT technicians, the Belgian operator is also hiring 50 "digital specialists" in the areas of data science, digital marketing and IT security.

"There is a deep need for future-oriented skills, particularly in the areas of data, security and digital marketing," says Jan Van Acoleyen, Chief Human Resources Officer.

For Orange, the skills that are most in demand and most difficult to find are mathematics and statistics, which are the basic competencies for data analytics and complex IT projects, according to Stefan Busch, Senior Vice President of Human Resources for Europe.

In a recent interview with sister publication Mobile Europe, Telecom Italia's Head of Technology, Giovanni Ferigo, pointed to the need for data analytics skills, and within virtualisation, there is demand for experience with storage and capacity engineering, orchestration and hypervisors.

Change from within

To find the digital skills it needs, Proximus uses a combination of retraining existing employees and recruiting new staff. Proximus currently employs 13,600 people and is one of the biggest software employers in Belgium. In 2017, roughly 1,000 employees moved to new jobs within the company while there were more than 400 new hires. Van Acoleyen says he expects a similar ratio of retraining to hiring in 2018.

Internally, Proximus encourages knowledge sharing, job mobility, temporary assignments, projects, learning days and longer-term retraining programs to allow employees to learn new skills.

"We're getting everyone up to a level

of digital literacy," says Van Acoleyen, adding that the underlying element of the company's internal transition is to foster a spirit of continuous learning.

"We try to help people understand as a premise that learning is a continuous and rewarding process," he explains. If employees have this kind of mindset, they can more easily adapt to new technology and "not get too stressed with all these changes".

Orange has also prioritised internal transformation. In 2013, the company launched a training program called Digital Leadership Inside to introduce employees to new digital tools. The operator then started an internal Digital Academy, where employees can work at their own pace to learn about new technologies. Around 100,000 employees have earned "digital passports" after completing training courses through the Academy. A new company-wide platform called Orange Learning is now available.

Worldwide, Orange employs 155,000 people. Busch is responsible for HR in the group's Europe unit, which excludes France, and employees 29,800 people across seven countries from Spain to Poland and Romania. Skills and employment challenges vary widely across Orange's markets. In some countries, the average employee age is 30, while in others it is closer to 50, which has implications for upskilling the workforce. Some people have grown up in a digital environment and others have not.

"It's very human that people do not say, 'I'm scared about the future, I'm afraid to approach new technology.' People find other ways to express their concerns," Busch says. "So we said let's have a practical approach to help them step by step to grow into new habits like using digital tools, social media and digital workflow apps. It sounds very simple, but it helped a lot."

Busch claims Orange has been upfront with employees about the effect new technology will have on their jobs. The company estimates that of its total workforce, up to 25,000 will be directly impacted and fundamentally transformed over the next five to 10 years.

"We were very open in communicating how many jobs and functions could change given the digital evolution," he says. "We don't hide that fact. At the same time, we started deploying a lot of training and development measures to help people start that journey."

Hearing that their jobs won't disappear but will change completely can be painful for employees, Busch admits. Learning new skills to take on different job functions can be unsettling. Embracing change isn't easy for most people.

"We have seen that treating adults like adults and not trying to sugar coat anything really paid off," he says. "We said yes, things will change, and here and there we will have to transform jobs. But we put you first."

Getting employees on board with big internal changes is imperative for transformations to succeed, but not always easy. One of the first things that Telecom Italia's new CEO, Amos Genish, did was to meet with trade union representatives and appeal to them for cooperation with the company's digital transformation strategy, which will involve investment in innovation and workforce training to create a "digital culture".

Genish's message to the unions was: "We have the same goal: motivating the workforce in TIM by making the most of the existing resources while also giving opportunities to young people."

At Colt Technology Services, Executive VP of Human Resources Mary Alexander believes companies become stronger when employees are encouraged to transfer internally to take on new challenges. For example, a technology specialist could join the sales team, bringing technical knowledge to the sales process or an employee could take on an international assignment. Colt employs 4,700 people across 22 countries and is opening a new office in Dalian, China.

"I think [internal transfer of skills] breaks down barriers, helps overall team outputs to be stronger, and it gives interesting opportunities to people," she says.

Tough competition for tech talent

When certain roles cannot be filled through retraining programs and job transfers, the alternative is the hire new employees. One of the challenges that telcos have when it comes to recruiting specialised tech skills is that they are competing with the likes of Amazon, Google and Facebook, among other big international tech firms, which can look like cooler places to work for bright, young graduates.

"Orange is not top of the list for young engineers in Europe as the place to be," says Busch. "We are in general a very attractive employer though. But are we really able to hire the best all the time? No, we struggle."

As Telia's Lundin explains: "Digitalisation and automation is part of ours and many other companies' agendas, meaning that we are competing for the same talents and competencies. And, yes, telcos and tech companies in general have some difficulties attracting talents. This is a fast-moving market and it is obvious that there are more jobs than people."

> "You have to capitalise on talent, empower people and give them confidence and trust"

The telecoms industry is clearly not the only sector facing skills shortages.

"There is a growing shortage of talent because the labour market is going well," says Proximus's Van Acoleyen. "But some skills – in the software field as a whole – are in limited supply. Those challenges are not different from other companies."

In Orange's search for skills, Busch notes that the company's footprint across multiple different markets has helped provide access to much-needed skills. For example, he says that Romanian academies have a high output of graduates with maths and statistics skills, and Orange can recruit people there for projects in other countries. The operator is building big data and cybersecurity teams in Spain, and Busch said that about half of the people were recruited in Romania.

It's a cultural thing

Network and digital transformations are leading to cultural reviews and changes at some telcos. Of course, network operators are no strangers to technological change. They have been dealing with new technologies and their impact on the workforce for decades.

But the pace of change has accelerated markedly in the last five or so years. For many, the key to keeping up and attracting the most talented people is to create a diverse culture that is flexible, eager to innovate and open to change.

"To increase your attractiveness on the market not only as a serious employer but also as a place to be for innovative spirit and for tech people is to first and foremost work on your own internal reputation," Busch says. "Delivering on the promise to our people will result in people projecting that this is a good company."

Colt's Alexander has seen this effect in action. The company was recently ranked in the top 50 of Glassdoor's best UK places to work, as rated by employees. "The essence of what we're trying to do is have an appeal to the skills we need and the way people want to work," she says.

But corporate cultures don't change as fast as technology. For telcos, technological changes today are faster and potentially "more disruptive," while the internal cultural and skills transformations are always too slow, says Van Acoleyen.

He advises that if you want to succeed in the rapidly changing technology sector, "you have to capitalise on talent, empower people and give them confidence and trust. There is no magic trick or solution. We're working hard in multiple domains."

For Orange, the key is to prioritise the human element in digital transformation. As Busch explains, there is "no economical performance without social performance. If we say customers first, then we also need to put employees first. If we want to bring our customers closer to more digital, straightforward and simple experiences, we start with our employees".

Facing disruptive change on multiple fronts, some telcos are finding that their human resources strategies will be just as important as their technology choices for a successful digital transformation. ec

Iliad appoints 29 year-old to run new opco in Italy

Iliad sprung a surprise in January by appointing a telecoms novice to run its soon-to-be launched mobile subsidiary in Italy. Benedetto Levi, 29, had been Country Manager for online rail ticketing service Trainline in Italy until France-based Iliad came calling.