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THE LAST WORD ON NETWORK OPERATOR STRATEGY FROM AROUND EUROPE

Telcos' content conundrum

Special report featuring:

- Proximus' TV chief on aggregation
- Survey reveals differentiation is key challenge
- The move towards big-bang productions

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Content production is for the few, not the many

The Q3 issue of European Communications magazine means two things: our annual OTT/digital content special report is here and the TV industry's IBC event is around the corner. In the former, our survey reveals that telcos continue to struggle to differentiate themselves when it comes to all things content. It is one of the reasons why several of Europe's largest operators have set a marker by investing in content production this year. We investigate the pros and cons of this in more detail in the report, which also features an in-depth interview with Proximus' Director of Content and Media. "The RoI of content production doesn't make sense. We're way better off investing in networks," Stephanie Rockmann says. I sense she speaks for the many, not the few.

This issue is being published in time for the IBC show in Amsterdam and I am keen to see what impact telcos make. 2016 was the first year I have seen network operators making keynote speeches but, as I wrote at the time, they really failed to shine. A look at the conference agenda suggests they haven't been invited back to showcase what they're doing when it comes to content production, so we'll be on the show floor to find out why.

Our c-suite section focuses on the UK and Ireland this issue. O2 UK Chief Executive Mark Evans shares his thoughts on his first year in charge, while eir Chief Marketing Officer Henry Dummer – just 10 months into the job after arriving from Tesco last November – explains how he plans to reposition the operator's brand. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

This issue also features a write-up of a digital transformation roundtable we hosted before the summer. Digital transformation has been one of the industry's biggest buzzwords over the past couple of years, so we invited execs from Manx Telecom, Orange, Telenor and Telia to discuss what it means to them and how their businesses are looking to change.

Enjoy the issue.

Marc Smith, Editor

Editor
Marc Smith
marc.smith@eurocomms.com
T: +44 (0) 207 933 8999
Twitter: @eurocomms

Publisher
Wayne Darroch
WayneD@sjpbusinessmedia.com
T: +44 (0) 207 933 8999

Staff Writer: Alex Sword
alexs@eurocomms.com
T: +44 (0) 207 933 8999

Design and Production: Alex Gold

Account Director: Fidi Neophytou
fidin@sjpbusinessmedia.com
Tel: +44 (0) 207 933 8997

Subscriptions/Circulation
SJP Business Media
PO Box 6009
Thatcham
Berkshire RG19 4TT
United Kingdom

T: +44 (0) 1635 879361
F: +44 (0) 1635 868594
E: europeancomms@circdata.com
W: eurocomms.com

SJP Business Media
(ISSN 1367 9996)

European Communications is published quarterly by:
SJP Business Media,
52-54 Gracechurch Street
London, EC3V 0EH


www.cytaglobal.com

German telecoms market

Germany is the focus of the second instalment of our feature that picks out key data points from the European telecoms market. The latest stats show that O2 is the leading mobile provider, incumbent Deutsche Telekom dominates broadband and Vodafone is hanging on as the destination of choice for TV customers

Mobile: **42.01 million** (+873,000)

Broadband: **13.04 million** (+265,000)

TV: **3.02 million** (+247,000)

Deutsche Telekom

Mobile: **4.57 million** (+710,000)

Broadband: **4.45 million** (+60,000)

united internet

Mobile: **45.19 million** (+2.05 million)

Broadband: **2.1 million** (-33,000)

O_2

unitymedia

Mobile: **340,000** (-18,300)
Broadband: **3.39 million** (+182,000)
TV: **6.39 million** (-55,900)

DRILLISCH

Mobile:
3.77 million (+768,000)

sky

TV: **5.12 million**
(+350,000)

*Sky figures are for Germany and Austria

vodafone

Mobile: **30.84 million** (+568,000)
Broadband: **6.36 million** (+425,000)
TV: **7.71 million** (-131,000)

Figures, which show customer numbers, are correct as of 30 June 2017. Year-on-year increase/decrease shown in brackets.

Customer engagement: Are we seeing more roses than thorns in the digital garden?

Over recent years, traditional telecommunication services have become increasingly commoditised and undifferentiated, leading to price competition that has driven considerable value out of the industry, writes Dr Janne Ohtonen, Director of Customer Experience Management at Openet.

Frustratingly, dropping prices, while undermining revenue, has not helped Communications Service Providers (CSPs) to hang on to their customers. Churn rates continue to be stubbornly high and CSPs continue to rely on contracts that lock customers in for 12-, 24- or even 36-month periods. While many customers see these as highly restrictive, CSPs feel they have little choice if they are to sustain a viable business. So, why do CSPs struggle to retain their customers and is there a more enlightened and rewarding approach than constantly ratcheting down prices?

In this challenging competitive landscape, customer experience has become a key battlefront - a way to retain customers that is less easily imitated by competitors than service or pricing innovation, and more likely to extend lifetime value. Delivering great customer experience isn't easy, however, and CSPs face many challenges in meeting customer expectations and improving the quality of their engagement. Success to date has been evident in the low Net Promoter Scores (NPS) that CSPs typically record – invariably well to the bottom of cross-industry comparisons – as well as customer attitudes that tend to be lukewarm at best in periodic surveys of customer satisfaction. Customer service is often poor enough that regulators have had to step in; in the UK, for example, Ofcom has imposed multimillion pound penalties on leading CSPs for failings in customer billing.

The need to maintain and work with older systems that weren't designed for agile service creation, real-time responsiveness or to enable speed to market has both slowed down service innovation and made it harder for long-established CSPs to offer consistent and coherent customer support. It also doesn't help that many are not even aware of customer issues until they receive complaints and/or see themselves being discussed in unflattering terms in the national press and on social media.

New operational solutions are needed quickly – solutions that will enable operators to deliver and, just as importantly, support services quickly and economically. Few CSPs can afford a nine-to-eighteen month deployment cycle at multimillion dollar cost when markets can shift radically in the space of just a few weeks. Customers are highly sensitive to market changes, particularly in these social media days, and will take any opportunity to switch to an attractive proposition from a competing CSP as soon as their contracts allow them to.

Undoubtedly, CSPs have much to gain and little to lose by taking digital customer engagement seriously and deploying solutions that will help them address their customers' needs in a more agile, responsive and engaging way – not least as customer experience improvements are clearly shown to have a direct positive impact on bottom-line results.

The challenges and opportunities of improved customer engagement

In mid-2017, Openet, with European Communications, surveyed the telecoms industry to establish the current state of customer engagement. The resulting report identified key issues and challenges, made industry-specific recommendations and drew some interesting conclusions.

For example, over 50 CSPs believed themselves to be performing well regarding market relevance and ease of use, but more poorly in driving the positive emotional responses that are vital for customer retention in all customer-facing industries today. This view conflicts somewhat with other research reports, such as the UK CSI, which reveal that end-customers are more inclined to see CSPs as problematic to deal with.

Regarding customer service channels, self-service websites, mobile apps and call centres are currently seen as performing relatively well and making the greatest contribution to a competitive customer experience – perhaps not surprising, as these channels are likely to have seen the highest investments by most CSPs in recent years.

Self-service websites and apps are typically rated highly for their ability to serve customers independent of time and location. Good as they are, however, these channels are rarely able to deliver consistent and comprehensive customer service. While an experienced agent can help the customer to resolve issues and meet their service needs, it's still rare for a mobile app or web service to provide the same breadth and depth of service.

This lack of consistency generates great and ongoing dissatisfaction amongst telecoms customers. One of the

biggest steps that European CSPs could take to improve customer satisfaction (CSAT) scores would be consistency of service, and more broadly functional self-service channels would certainly be a step in the right direction.

According to the Openet/European Communications report, the key challenges faced by CSPs in delivering competitive customer engagement today are:

• **Network coverage and performance issues.** According to Ofcom, almost nine in 10 broadband customers were satisfied with the reliability of their service, and 83 percent were satisfied with their online speeds. For mobile, 86 percent of customers were satisfied with their coverage. Though these numbers may look high as percentages, it leaves millions of customers unsatisfied across all operators and networks.

• **Poor product and service quality.** One investigation by Ofcom found that over 10,000 pay-as-you-go customers lost out when Vodafone failed to credit their accounts after they topped up their mobile phone credit. The affected customers collectively lost £150,000 over a 17-month period.

• **Inconsistent call centre experiences.** In the UK, on average, landline telephone and broadband customers had to wait over twice as long to speak to a customer services advisor (2 minutes, 51 seconds) than mobile customers (1 minute). Calls to technical support took two and a half minutes longer on average to answer than sales calls.

• **Meeting customer expectations of service quality.** As recent research quoted in this article has pointed out, there is a big variation between companies on how they meet customer expectations with their service quality.

• **Poorly contextualised customer communications.** Barely half of broadband and mobile customers who complained to their provider were satisfied overall with complaint handling (56 percent and 57 percent respectively) and much of their dissatisfaction derived from communication issues.

These challenges are not insurmountable, however. When we look outside telecoms, we see that many companies are believed to engage well with their customers. Our respondents cited, in particular, Amazon for its remarkable delivery logistics, Apple for product usability and Deutsche Telekom for innovative customer engagement approaches (such as Europe's biggest 360-degrees YouTuber meetup). These and other examples of innovative customer value and operational efficiency without compromising customer experience suggest that although things may not look so rosy today, there is great potential for improvement in the near future.

The financial benefits of better customer engagement have been well-established in various bodies of research. My book, The 5-Star Customer Experience, published in 2017, demonstrates that the higher the customer experience score, the greater the impact on annual revenue per customer. This is a view supported by Capgemini's research, showing that companies with a high NPS outperform their lower performing peers in revenue growth by 33 percent on average.

The Openet/European Communications research showed that 70 percent of CSPs are persuaded that customers are willing to pay more for a better experience. Unveiling TDC's Q2 2017 financials, the Chief Executive said that people are prepared to pay more to access the best mobile network experience. Since for many CSPs network experience is one of the highest drivers of overall customer experience satisfaction, it makes sense to work on the network to improve it.

Clearly, CSPs need to move away from price competition and locking customers into rigid contracts. They can certainly take steps to work on the key issues of network and customer experience quality in 2017, in particular through agile technology approaches such as micro-services and DevOps, which, backed with flexible back office and network infrastructure, enable companies to respond more quickly to the ever-changing demands of the market. By combining smart, real-time data processing capabilities with self-care user interfaces, the door is open for CSPs to create much greater customer satisfaction as well as significantly reduced customer and employee effort across all channels.

Improve digital engagement

Openet recently created a playbook of ideas to improve digital engagement in telecommunications. If you're looking for more help in achieving your customer engagement goals, download it from the Openet website: www.openet.com/learning-centre

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The C-Suite

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O2 UK Chief Exec: The future is mobile and we're in the best position to succeed

Mark Evans has just completed his first year in charge of the UK's second largest mobile operator. He tells Marc Smith why customer experience, not convergence, is the future

Mark Evans says quad-play will be viewed as a curious moment in telecoms history

"Busy" is the word Mark Evans chooses to describe his first 12 months at the helm of O2 UK. So busy in fact, that he is having to do this interview from his holiday sun lounger. Our original meeting got cancelled when Evans, who stepped up to replace Verizon-bound Ronan Dunne last August, was summoned to Madrid, home of O2's parent Telefónica. It is perhaps this that prompts him to say that what has most surprised him during his inaugural year is "the amount of engagement that the job requires with a variety of different stakeholders, including journalists!"

Less surprising is what O2's former CFO regards as the biggest disappointment of his first year in charge – issues around spectrum. As this interview takes place, the UK's mobile operator community is throwing around legal threats in relation to the terms of an upcoming spectrum auction – a mixture of bandwidth for 4G and 5G services.

Three has launched court action over a 37 percent cap to the total spectrum any operator can hold by 2020. It wants a lower cap but EE, which responded with its own threat to head to the courts, wants the cap to be scrapped entirely. O2 is sympathetic to Three's argument, but has no plans to get lawyers involved.

Evans dismisses both legal threats as "self-serving" and says he is more concerned with getting the part of the auction that relates to "immediately useable" spectrum underway as quickly as possible.

He says Ofcom "can and must act" to auction this 2.3GHz spectrum "either on a permanent or temporary basis". This would allow a legal process in relation to the 3.4GHz spectrum, earmarked for 5G-related services, to be contested separately, he argues.

"The UK mobile market remains imbalanced in terms of spectrum holdings," Evans says. "Spectrum asymmetry is and will continue to be one of the key areas that will determine whether the UK has a viable long-term, competitive mobile market. It is vital that Ofcom remains focused on ending the imbalanced allocation of spectrum and that the regulatory environment remains consistent and predictable. Failure to do so risks losing an opportunity to promote consumer choice, competition and investment in the sector."

No need for fixed

O2's position hinges on two key points. First, it holds just 14 percent of the UK's current useable mobile spectrum, which is less than Three (15 percent), Vodafone (29 percent) and BT/EE (42 percent). Second, having seen a previous attempt to sell the company to Three blocked by the European Commission, Telefónica is now looking at an IPO of its UK subsidiary in an effort to pay down its debt pile. However, O2 will not go public before its Spain-based parent knows what its future spectrum holding in the UK looks like. Evans says his relationship with Madrid is "very strong and supportive", and that Telefónica CEO José María Alvarez-Pallete and new COO Ángel Vilá both have "a huge passion and interest in the UK market".

He denies that the uncertainty about O2's future – let's not forget the deal with Three dates back to March 2015 – has affected its performance. "You only need to look at our first half financial results to see how we continue to deliver a winning proposition for our shareholder," he says. Indeed, like-for-like sales rose 2.3 percent year-on-year in the six months to June to €3.21 billion, while operating income increased 2.2 percent to €849 million. However, the operator's mobile customer base fell from 25.5 million to 25.1 million as growth in contract subscribers could not offset a decline in the prepay base. This more or less wiped out the 444,000 customers O2 gained during 2016, when its market share slipped slightly from 27.2 percent to 26.8 percent.

Evans says: "We've strengthened our focus on having the customer at the heart of our business, whether that be through the increased investment in our network and services (up 19 percent in 2016 versus 2015), reinforcing O2 Priority through our renewed deals for The O2, O2 Academies and England Rugby, increasing customer interactions with our Gurus (up 177 percent) or strengthening our position in both the public and private sectors."

O2 remains the second largest mobile player in terms of subscribers behind EE, but Evans claims he is not focused on catching its larger rival. "To us it's not about being big, it's about putting the customer first," he explains. "Other operators have been chasing us in terms of customer loyalty and satisfaction so we're comfortable with our position in the market. We respond first and foremost to what our customers need and invest heavily in the customer experience. That is, and always has been, our differentiator."

The CEO says the biggest success of his first 12 months in charge has been a restructure designed "to really embed our strategy of customer-led mobile first". Yet questions remain over whether O2 can prosper in the long term as a mobile-only player in a market that continues to move towards the provision of converged services.

Evans responds with a barrage of stats; he cites O2-commissioned research showing that mobile plays a far more important role in peoples' lives than fixed line – 48 percent versus 10 percent – and that 46 percent of people "cannot live without mobile", compared to just 15 percent who say the same for fixed line.

He adds: "To put it another way, our competitors need to be in mobile, but we don't need to be in fixed." Evans says BT buying EE and Sky launching a mobile service back up his argument.

"I believe in time that quad-play will be seen as a curious moment in telecoms history - especially with the introduction of 5G in 2020," he adds.

Simple business model

Given this, it would not be a surprise if O2 launched a fixed-wireless offering down the line. But Evans is coy when asked to speculate about what 5G services may be in the pipeline. "I'm excited about many things that 5G will bring," he says. "5G will build on the foundations already created of 2G, 3G and 4G as higher data speeds and increased capacity will herald more options for Internet of Things, whether for smart homes, smart cities or connected cars."

O2 has already dabbled in one of these when it became the first UK operator to launch a smart home service in September 2016. Details of how the offering, based on AT&T's Digital Life platform, has fared are scant. Evans describes the launch as "a commercial trial", given it was only on offer to select customers in London. He talks up unspecified "positive results" and gaining "the learnings we needed to refine our offer and sales model".

He adds: "The O2 Home commercial trial has helped us understand the importance of advice and assisted selling at this early stage of market evolution. While awareness of smart home is growing fast, engagement and consideration to purchase is lower in some segments."

Regardless of his caginess, the CEO says the service "absolutely" has a future. "Over the next decade connectivity and intelligence will become built into everything we use and interact with," he explains. "Within this context there's no doubt that the connected home will be one of the big consumer categories."

O2 Home is one of a number of so-called digital services that the company has launched, not all successfully. O2 Store & Share and O2 Guard closed down in May, but car insurance product O2 Drive continues to operate. But again precise details of how it is performing are hard to come by. Evans says: "I believe it's critical that we innovate our offers to play a broader role in helping our customers. This in turn will help increase differentiation and loyalty for our mobile business as well as drive new revenues. It's my ambition to take O2 into a new adjacent category at scale and I'm pleased with the initial progress we've made with innovative new services like O2 Home and O2 Drive."

Other strings to O2's bow include community-based MVNO giffgaff and Tesco Mobile, a joint venture with the supermarket chain. Evans oversees the former and is Chairman of the latter. He says both businesses demonstrate that O2 "is not an island". He adds: "We recognise that there are market segments that can be better reached through partnerships. Tesco has a very customer centric vision for shoppers, giffgaff presents a completely different model for mobile phone ownership. Both ventures have been successful as they complement our own O2 direct channels and attract customers we may not otherwise be able to reach."

All told, Evans is in an optimistic mood. "I believe O2 is the best-positioned operator in the UK market to capture the opportunities of a data-hungry economy, fuelled by the best interests of the customer," he says. "The future is mobile and our simple business model allows us to apply a relentless focus on the mobile needs of our customers."

Things could change very quickly of course, particularly if O2 doesn't get what it needs in the spectrum auction and uncertainty over its ownership structure continues. Such concerns, however, are clearly far from Evans' mind as he relaxes after what he regards as a job well done. ec

eir CMO: Marketing the art of the possible

Irish operator eir is reinventing itself again, this time by ditching its long-established Meteor brand and uniting its quad-play interests as a single "brand of possibility". The company's Group Marketing Director Henry Dummer tells all to James Blackman

Irish operator eir is on its third major rebranding project in a little over two years, having simplified the eircom brand in late 2015, and brought Setanta Sports under its own moniker last summer. This time it's different, reckons Henry Dummer, the company's new Group Marketing Director.

Its latest move to reposition the brand – which includes dropping the name of prepay provider Meteor altogether, and uniting its parallel interests around a more comprehensive and complementary quad-play proposition – has been in the works since the start of the year, and has delved deep into the company's character to define a new creative platform for its operations to rally around.

Its marketing spend, estimated at €3-€4 million for its Q1 through-the-line activity, is serious and mounting, as befits such an ambitious project. "We now have one big brand for our quad-play ambitions, with strong attributes in home broadband, content and mobile," says Dummer.

Dummer was recruited at the end of November 2016 to mastermind the project. His appointment, from Tesco Ireland, where he was Marketing Director for six years, was part of an organisational restructure that effectively foretold its external realignment: eir conflated its small business and consumer divisions as a single operational unit, and Dummer was handed charge of a new centralised marketing function, covering everything.

He arrived just as the Christmas rush was in full swing. "That was the first thing I encountered," he says. But the seasonal heat of Christmas trading was hardly new. "I was going from fire to fire," he says, suggesting there are "more parallels between the sectors than you think – even if one is about a Sunday joint [of meat], and the other's about a mobile phone".

His new remit, to fan the flames of brand loyalty whilst keeping sales red hot, was rather like his old one. He had plotted just such a brand narrative at Tesco Ireland. "It was the same challenge, to build a brand while maintaining sales – and to bring a business together around a new approach."

Nevertheless, the complexity of the task prompted him to seek familiar faces among the supporting cast. Long-standing strategic partner DDF-H&B was dropped in January for creative agency Rothco, which had supplied Dummer with the creative spark and strategic support on the Tesco account.

"It was reassuring to go from one challenge to the other and see I had the same job to do," he says. "At Tesco, it was a challenge to create that confidence. But we were very successful. When I left, the brand had great momentum in Ireland."

In search of a common truth

At the start of the year, the eir management team was already nurturing a long-held ambition to unite the group's various business units, and a vague inclination to ditch its Meteor brand. It just lacked a definitive position, and a carefully orchestrated game plan.

"That was one of the reasons I joined – this great ambition and desire to build a well loved brand," explains Dummer. "The timing was less defined. They knew what they wanted, but they were less sure how to achieve it."

Dummer took the diversity of the business, and sought a "common truth" within its broad remit, leading he says to a "common glue" to bind it. With the agency, he set about interviewing every member of staff – from the shop floor to the boardroom – in an attempt to boil down the essence of their pride and passion in the business.

"That was the most powerful thing we did," he says. The key was to ask the right question – to allow staff to zoom out, and open up. "Ask about their passion for the brand, and they are more reflective. You get a different level of response," he says.

The result? "The common theme was this idea we are a brand of possibility – it is not about what this company makes happen, but what it makes possible; what people want to do with our products and services. That's where people found their common sense of pride," he explains.

The subsequent brand position, set out in the grammatically curious tagline Let's Make Possible, informs all of the company's future activity, and defines its advertising creative and marketing messages. "All of our game planning for the year ahead comes back to this question of what we're making possible – of getting everyone to explore this big idea," says Dummer.

The new tagline replaces the Live Life On Eir slogan, introduced with the company's rebranding from eircom in late 2015. "That was an invitation to join us; this is about making possibilities happen," he says.

Derived from 50 hours of staff interviews, it revealed the company's special character in the Irish market. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

Its affinity with its home market is total, he observes. "What we saw in the interviews was this deep desire to make a meaningful impact." He points to its

mission to bring fibre broadband to rural Ireland, including areas often made up of one-off housing and farms. The company is investing €30 million in County Kerry, in the country's far southwest, for example, also establishing an Innovation Hub in the county town of Dingle.

"Remote homes in deepest County Kerry will get download speeds equivalent to modern apartments in Tokyo. We are the only brand in Ireland doing that. It comes from this latent passion, which we've never articulated, to make a difference in our home market, our only market," he explains.

"One of the country's big social questions is this migration to big cities, and the challenge for rural communities. eir is breaking with the pack, and investing in fibre rollout in rural communities as well."

But "making possible" is not just about socially minded infrastructure projects; it is also about showing market leadership and expanding customer choice. eir is the first Irish mobile operator to launch Wi-Fi calling, points out Dummer, while eir Sports is the only TV provider showing Gaelic football.

Henry Drummer

Meteor downed

The removal, on 8 September, of Meteor as a mobile brand – from shops, phones, websites and bills – has been carefully plotted into the unfurling brand narrative. Meteor, around for 16 years, is third in the prepay market behind Vodafone and Three. By contrast, eir Mobile is a marginal post-pay player, which gets bundled with broadband.

"The smaller brand has swallowed the bigger one," observes Dummer, from the point of view of market watchers in the mobile space. Of course, mobile is only a single line of its business. In parallel, eir leads the market for broadband, from Virgin and Sky, and has taken a position as the country's top sports pay-TV brand following the acquisition of Setanta Sports in late 2015, and as a challenger brand for TV more broadly.

The withdrawal of the Meteor brand, on the cards anyway, is logical in the context of its parent's broader scope, and more premium offers in broadband, TV and content. "Meteor is a resilient brand, it is holding its own, and it has a very loyal fan base," says Dummer. "But when I looked at the bigger picture, to position the eir brand as a distinctive market leader for quad-play, it was clear it brought limitations."

The marketing narrative has been carefully organised over the past six months to raise the brand's profile in mobile, by making clear related benefits such as sports content and bundled connectivity, whilst also re-positioning the parent brand itself, climaxing with the multi-million euro advertising campaign that started back in July.

As a sub-plot, it has been required to make clear the lineage and perks for its large and loyal base of Meteor customers ahead of the changeover. "We have passed on the premium benefits of being part of the eir Group to the Meteor base. They have seen good news in the months to September."

But eir has already bombarded its home market with grand statements, including rebranding the business from eircom in late 2015, with a €16 million ad campaign and a chest-thumping Gaelic theme song, and the rebranding of Setanta Sports as eir Sport a year ago, attended by a promotional below-the-line campaign.

Will the latest campaign strike a deeper chord, so Irish customers perceive eir as the home team among multi-play telecoms providers, developing the country's digital infrastructure and services? "We have done a very good job in the past two years, but we haven't, perhaps, had a really crisp position, and all of these consumer impacts have lacked a common glue as a consequence," says Dummer.

"By having a common narrative, and a more consistent creative platform, we have an opportunity to communicate that. But we have to build that brand relationship, so consumers see the benefits of the brand making things possible for them – in a distinct way, in Ireland and for Ireland. That is our opportunity." EC

Amdocs: The intelligent approach to improved operations

In a rapidly transforming market, service providers need to continuously innovate, streamline new feature delivery and automate operations to drive step changes in the customer experience. Digital strategies including DevOps, cloud, artificial intelligence (AI) and IT modernisation help to reduce time to market and improve business agility, efficiency, service quality and customer and operational insight.

But that's a lot for an established operator to handle. Eric Updyke, Group President of Amdocs Services, gives the industry insider's view of where the majority of operators are today, the issues they continue to grapple with and shares Amdocs' approach to realising results quickly.

European Communications: Where are the majority of European operators today in their digital journey, their ability to harness the latest technologies available to them, and in being able to deliver the kind of customer proposition and experience they're aiming for?

Eric Updyke: It's still early days. If you look back 5-10 years, most service providers were operationally reactive, driven by operational KPIs, and supported by multiple manual processes. Most of their technology infrastructure was housed on premise, and was siloed in serving the different parts of the business. Now, we're starting to see a less reactive scenario, the start of self-healing networks, more automated or semi-automated processes, and more business-led KPIs. Meanwhile the IT and network worlds are converging and moving to the cloud. Most operators aren't even halfway there. There's still a long way to go.

What have been the main barriers to progress?

The new world is a complex one, and service providers can struggle to know where to start. Some of our customers look to what Netflix has achieved, and believe that should be their objective or aspiration. But even Netflix took 7-8 years to make a success of what it's doing, and that was without the legacy of a traditional telco. So it's not a realistic comparison. Operators don't need to be any less ambitious, but their opportunities are likely to differ. We remind them of the huge competitive advantage they have – the rich data they have accumulated. Their challenge is to harness this data.

You can't browse a publication or news feed at the moment without being bombarded with predictions about artificial intelligence and how it will change everything. How is AI relevant to service providers' digital transformation journey, and where should they be focusing their attention?

Although AI isn't a new concept, momentum is rapidly accelerating. It's something we are investing in heavily. AI was behind the launch of two key strategic initiatives for Amdocs – intelligent operations and aia. Launched in February at Mobile World Congress, aia is a digital intelligence platform that enables telcos to use real-time data to feed processes and business activity. In terms of intelligent operations, we use AI capabilities such as machine learning to drive efficiency as well as advanced analytics to provide new levels of insight, finding opportunities for continuous and rapid improvements.

Take predictive analytics for example. If a system is about to run out of memory, as a pre-emptive measure it can close apps or take other appropriate action to protect the customer experience. Predictive analytics can also help operators deliver the most appropriate products to the right people at the best time through the best channel. Our aia offering and intelligent operations bring all of this to life.

In terms of where operators are with all of this at the moment, many are anxious. There are technology suppliers selling them slick stories they want to believe, but the transition does take a bit of time so it's important to take this one step at a time.

Could it be that operators are preoccupied with automated assistants like Alexa, seeing this type of development as the key to exploiting AI?

Alexa, IBM Watson, Cortana and so on are something we can help leverage, but these are just the engines. Successfully exploiting AI needs domain expertise, i.e.

an understanding of what this means and how it will work in communications service provisioning. It's about using the right data in the right situation with the right business processes to deliver something meaningful and of value. That's where Amdocs' Services organisation comes in, and why we're winning ground from large, generic systems integrators who don't have the industry breadth and depth of experience in driving value from intelligence.

Can you give some examples of the kinds of projects you've been working on involving AI and intelligent operations?
In developing and emerging markets, Tier-1 operators have come to us because they've been disillusioned with their experiences with generic systems integrators. Although these technology companies are considered to be leaders in AI, when it came down to it they had the engines but not the relevant industry expertise. We talk about 'economies of focus' rather than 'economies of scale', for instance – starting with small projects and doing something well, rather than trying to ramp up everything at once.

And we get results. Within just a couple of months, we've been able to help operators automate key processes to accelerate billing processing and improve accuracy – with better results than their previous suppliers could have achieved over a period of years. In the case of a large service provider, with over 100 million subscribers and more than 90 bill cycles, we were able to run these with 100 percent accuracy in under 48 hours, something that was inconceivable previously. This has given them a faster path to revenue, improved cash flow, reduced customer care burden (due to more accurate billing), and lowered churn.

In more developed markets, we've helped service providers see beyond the Netflix ideal and exploit the huge advantage they have in their existing data, using a bimodal approach to IT in which legacy systems run alongside innovative digital projects.

Our experience shows that one of the things that customers value most is execution – delivering on the promise.

In the case of a Tier-0 North American operator, we provided an infrastructure-as-a-service solution delivered using DevOps methodology. They needed to move very fast, so we recommended a cloud-enabled, virtualised approach which meant they could launch within 90 days, and with a 70 percent reduction in hardware and software costs compared to traditional systems provisioning. They used our next-generation suite of products to launch solutions for each different aspect of their business, starting with enterprise and more recently consumer and SMEs.

Where an operator's priority is to enable autonomous operations, what is their best approach?
There are three key elements: real-time data visibility; accurate predictions via analytics to enable pre-emptive alerts; and then pre-emptive automation based on these predictions. This requires that the system is able to continuously learn so that it increasingly gets better over time.

What's the key to delivering results within an acceptable timeframe?
We advocate a bimodal approach, in which we find a way to harness the rich data and insight from an operator's legacy systems and expose it so they can achieve the business agility they need at the front end of the business. It isn't a case of abandoning legacy investments, but being able to draw from them in a more efficient and profitable way. Key enablers for this would be microservices and DevOps methodologies.

When we talk about microservices, we refer to modularising key aspects of software and exposing APIs and some of the critical business processes, to meet the needs of fast-moving front-end systems – without having to rewrite or adapt back-office systems. By investing in microservices, operators can start to expose the benefits of the rich information they are sitting on, and achieve the business agility they want (the ability to react much more quickly to opportunities).

In terms of DevOps, we mean a mapped-out journey to greater business agility which starts with quick wins, but works towards greater transformation, acknowledging that systems from multiple vendors will be involved but that someone needs to take the lead.

What does that mean in practice?
It means seeing through the journey, end-to-end. We've always taken accountability for the impact of the solutions and services we provide. We take a holistic view and harness automation to take everything up a gear.

The benefits of automation in network self-healing, pre-emptive intervention and the ability to operate with zero-touch efficiency are becoming increasingly clear. What other benefits can service providers expect from intelligent operations?
Removing the scope for human error results in a higher-quality customer service experience. Then there is the increased speed which operators crave. Aided by DevOps-driven release automation and agile deployment via the cloud, service providers can expect to launch new products and services in days rather than months. They can also bring partners onboard much more swiftly. And legacy systems become an asset, rather than a disadvantage.

What final advice do you have for operators who now need to turn their vision into something more tangible?
Service providers need to consider carefully with whom to partner. As with anything else, success doesn't rely solely on the technology. It's what you do with it, how you do it and in what context. That means working with someone who not only has the technical prowess, but who can draw on a broad range of industry experience and best practices to ensure timely and sustainable results.
www.amdocs.com

IBC hails golden age of broadcasting on gold anniversary

IBC, the world's leading media, entertainment and technology show, celebrates its 50th anniversary this year, writes Michael Crimp, CEO of IBC. While the broadcast landscape has been transformed in that time, the show still seeks to be the leading global forum where the real issues of the industry are discussed and new strategies developed. Back in 1967 the founders of IBC knew that to be a success the event had to have three strands: a comprehensive exhibition, a visionary conference, and the networking opportunities to share ideas. Fifty years on we have a huge amount to talk about: from Ultra HD to 5G connectivity; from IP to cyber security. And IBC is still the best place to do that.

This year's conference is subtitled Truth, Trust and Transformation, and has five tracks running over five days. Session topics range from the deeply technical, like new codec design, to the topical and strategic, like "fake news". Broadcasters have traditionally been the trusted brand for news: is the era of social media and universal internet access changing that?

Our conference theme has resonances in other ways than the obvious, too. One of the challenges of the transition to IP connectivity is the risk that the media industry will become a major target for malware and hackers. As the transport platform becomes more open, the more we need to focus on cyber security and the intrinsic design of safe, secure systems.

Platforms for debate

Issues around OTT and social media delivery run right through the conference. Sometimes seen as "disruptive", though probably "transformative" is the better word, it brings new challenges for creativity and business. The keynote session from Brian Sullivan, President of the digital consumer group at Fox, looks at these challenges, or as he says: "In a digital world the consumer has the power. Deal with it."

The Technology Forward Keynote, 'What's Happening in VR, AR and Mixed Reality', is delivered by Rikard Steiber, President, Viveport and SVP Virtual Reality, HTC, who will look at the emerging swathe of consumer devices and services, as well as showcasing successful VR experiences across platforms.

New this year is the C-Tech Summit: two days of specialist presentations and debates, presented on the same behind-closed-doors basis as the Leaders' Summit. The event will provide technological debate at a strategic level, aiming to help C-level executives understand the implications for business transformation. Friday's session will discuss the critical issue of cyber security, while on Saturday it will be the possibilities of 5G and persistent, universal high speed connectivity.

We have also added the biggest temporary structure we have ever built for an IBC to house Hall 14, dedicated to Content Everywhere. This area combines a curated exhibition with a Hub Theatre and other features specifically designed to help visitors expand their knowledge and understanding of the latest trends, strategies and developments in online TV and video.

In addition we will present the IP Showcase. IP is no longer the future – real-time IP for production, playout and contribution is a practical, flexible, efficient reality that is rapidly taking hold in mainstream broadcast operations. The IP Showcase will offer demonstrations, real-world scenarios and education sessions, showing the full potential of IP workflows.

There will be many opportunities around the show for visitors to immerse themselves in cutting edge technologies and learn about the accelerating trends that are enhancing, customising or otherwise transforming the user experience (UX). The Business Transformation conference session entitled 'Broadcast is about to be Transformed' sees speakers from Google, Freeview Australia, DMC and DTG discussing the myriad disruptions currently facing broadcast on all fronts, from IP-only delivery to personalised user experiences, while the series of Tech Talks on Sunday 17 September also features several must-see sessions that step further into the future.

We've come a long way since 1967; maybe this year's IBC will give us a glimpse of what the next 50 years will bring.
show.ibc.org


Michael Crimp, CEO, IBC

Special report
DIGITAL CONTENT

Contents

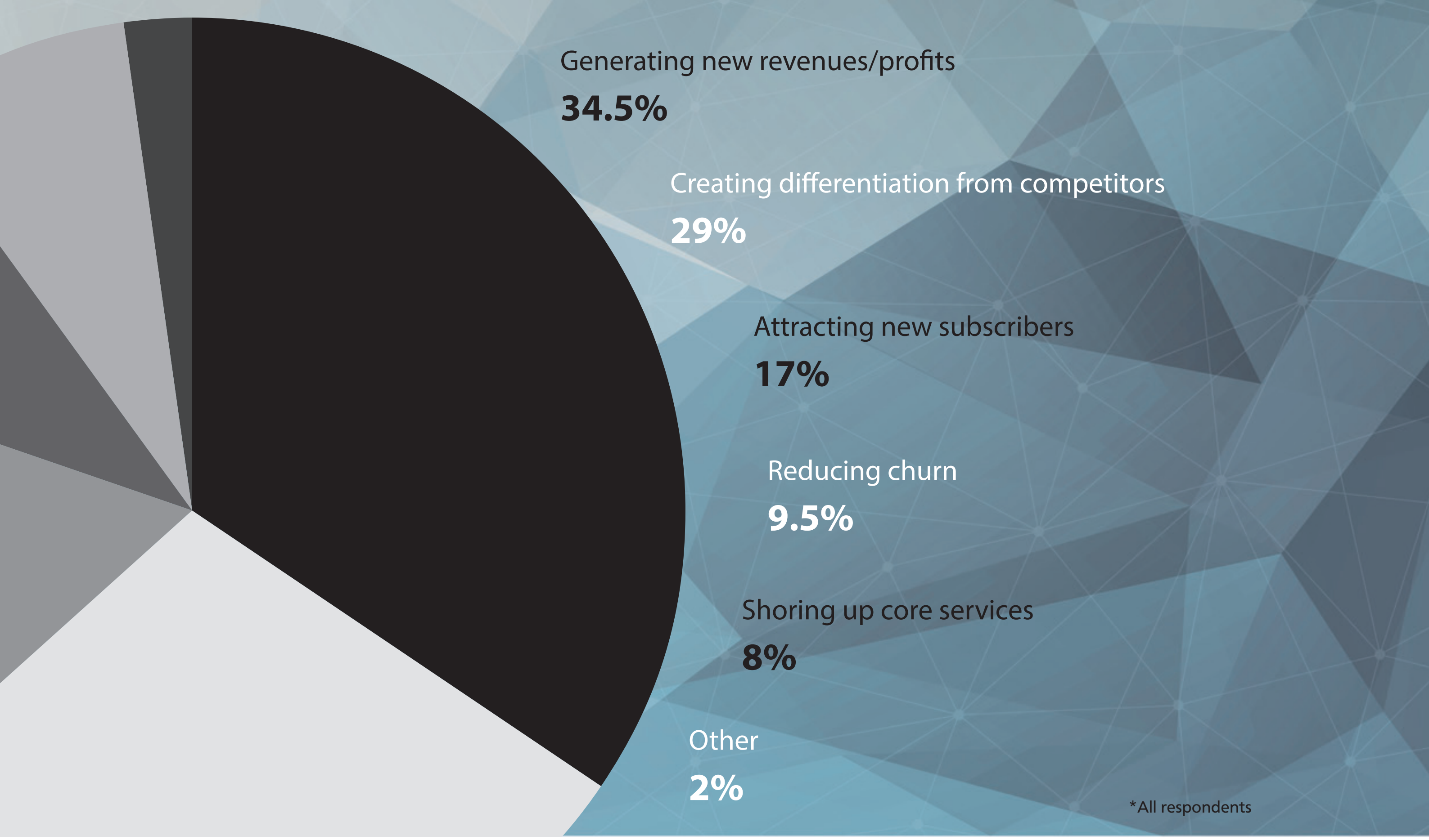
Q3 survey: Struggle for financial gain, differentiation to be continued…

The telecoms industry thinks drama, film and sport can deliver revenues and profits, regards Netflix as operators' biggest competitor and says differentiation is the biggest challenge to successful content strategies. These are the headline findings from European Communications' latest annual OTT/digital content survey, which polled 152 people in June and July 2017.

Generating new revenues and profits overtook creating differentiation as the main driver for operators providing content this year. The latter dropped 12 percentage points versus last year's survey, but was top when it came to the biggest challenge respondents think the industry faces. Operators seem to agree with the wider industry, given just eight percent describe their offering as "very differentiated" from competitors.

Operators also seem to be in sync with the rest of the industry in terms of what type of content is the most important. The industry at large thinks drama and film is the most valuable,

What do you regard as the main driver for operators providing content?



while over 71 percent of operators say they offer this type of content. This is interesting, given how the industry views Netflix – a company telcos continue to get into bed with – as operators' biggest competitor in the field.

However, one respondent said: "There is no single 'most valuable' content to offer, just as there is no single one target group for digital content as such. In order for a telco brand to lock customers' attention and own a lasting client relationship, telcos ideally need to offer the complete portfolio of digital entertainment content."

There appears more work still to be done by operators' content teams to persuade the wider business that their efforts are bearing fruit. A significant number of operator respondents indicated they were ambivalent as to whether progress had been made in terms of strategy during the past 12 months and as to whether they are impressed with what's on offer to subscribers. Further, more operators said the content they provide is not providing any return on investment than those who said it is generating a significant RoI.

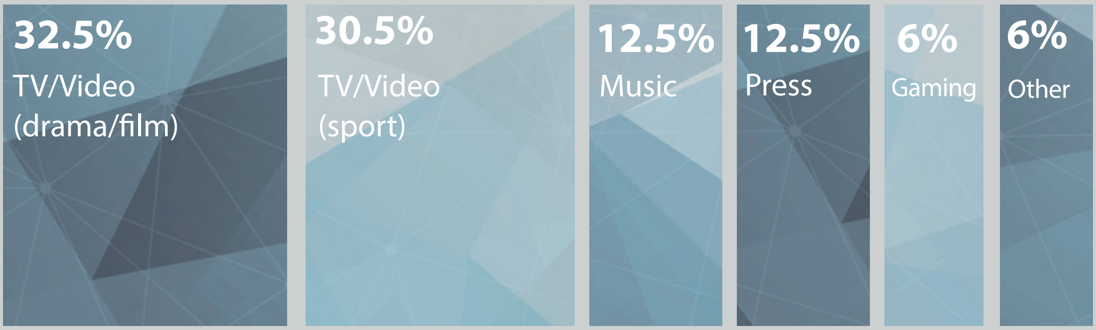
We also asked two new questions this year: the majority of operators think offering zero-rated content on mobile is important to their overall strategies, while catch-up and VoD offerings are expected to be the most popular methods of consumption by 2020.

You can read the full results of the survey over the next few pages. Of the 152 respondents to our online survey, 39 percent were operators and 30 percent were vendors. The remaining 31 percent of respondents work for other interested third parties, including analysts, consultants and regulators. Sixty nine percent of respondents were based in Europe, 15 percent in Asia-Pacific and nine percent in North America. The remainder were split evenly between the Middle East and Africa, and South America.

What do you regard as the biggest challenge to the success of operators' digital content strategies?

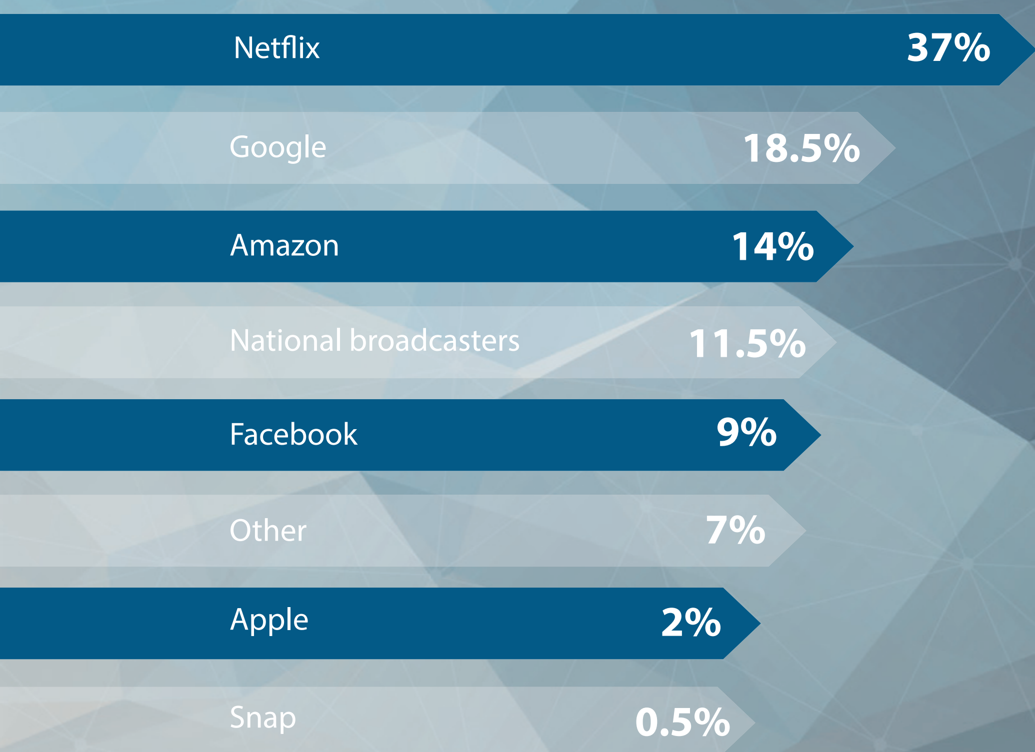
*All respondents

Which type of content do you regard as the most valuable to offer subscribers?



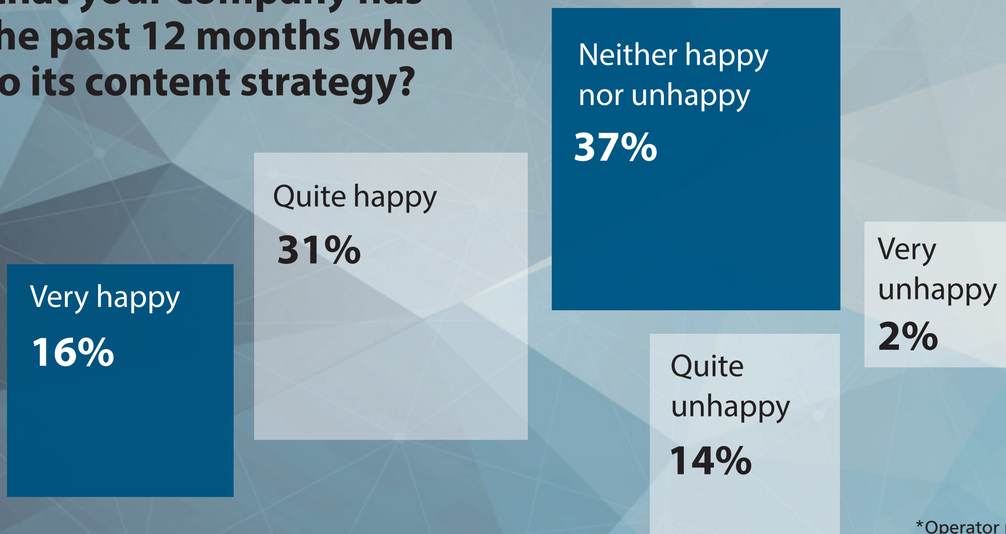
*All respondents

Which of the following do you consider to be the biggest competitor to operators in the content space?



*All respondents

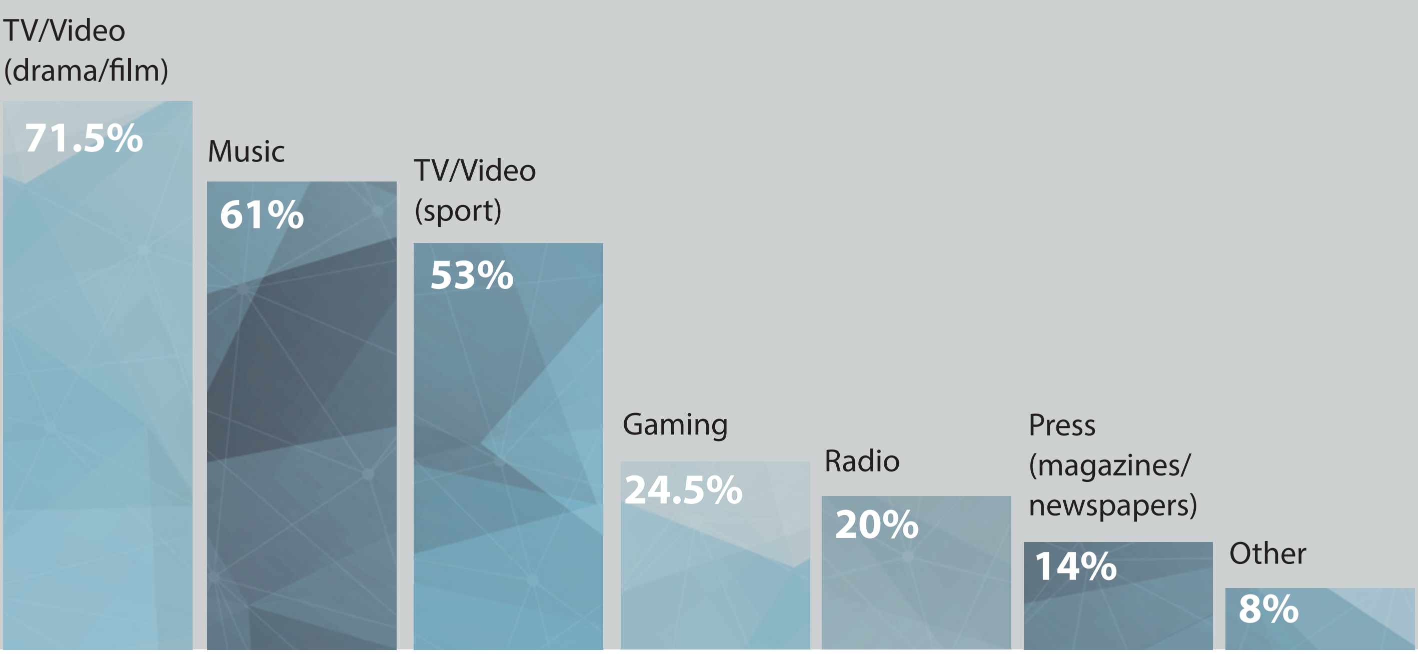
How happy are you with the progress that your company has made in the past 12 months when it comes to its content strategy?



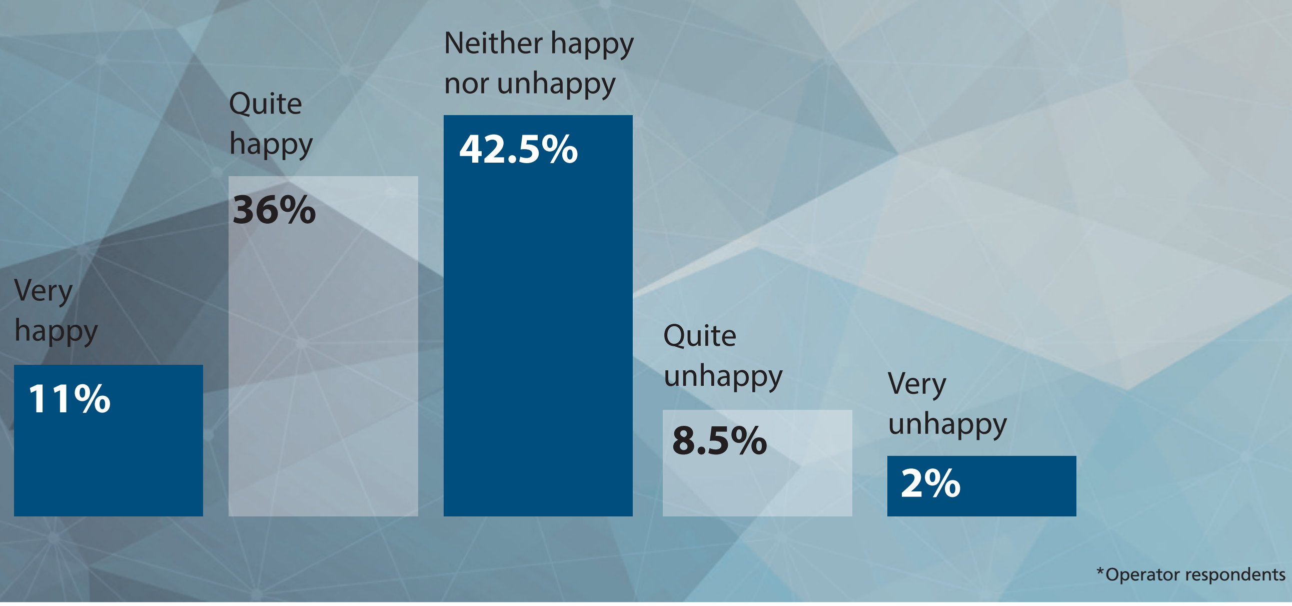
*Operator respondents

Which of they following types of content do you offer subscribers currently?

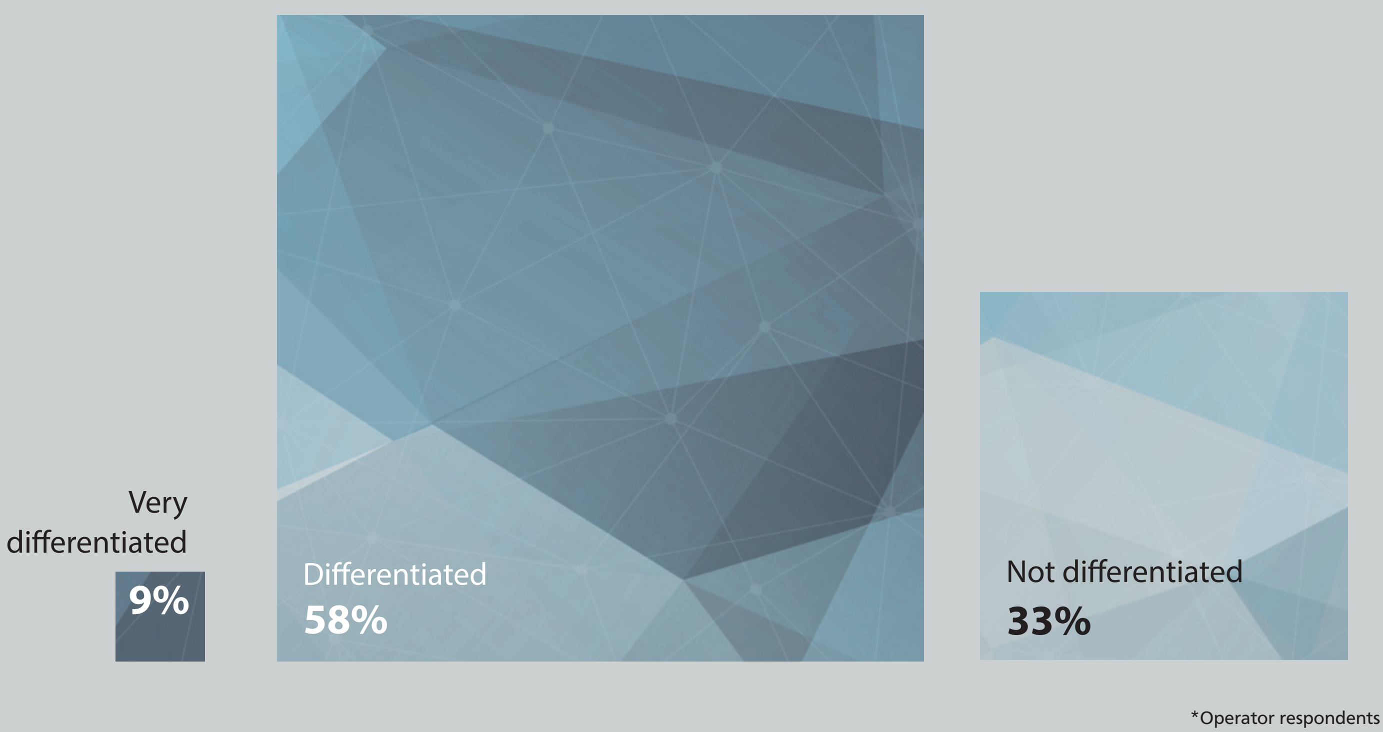
*Operator respondents



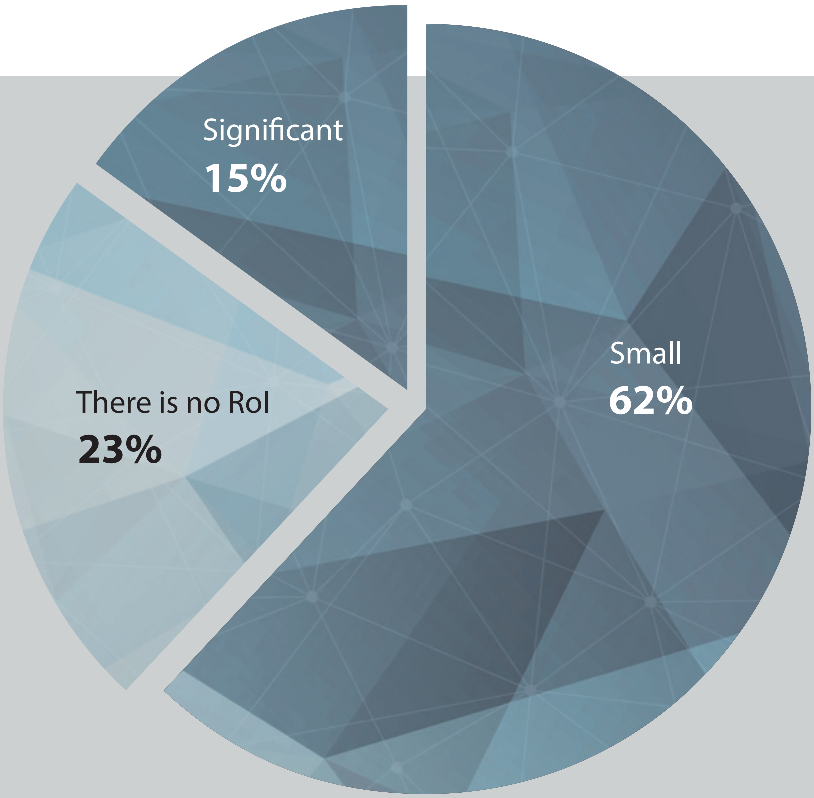
How happy are you with the choice of content that you offer your subscribers currently?



How differentiated do you think your content offering is currently compared to your competitors?

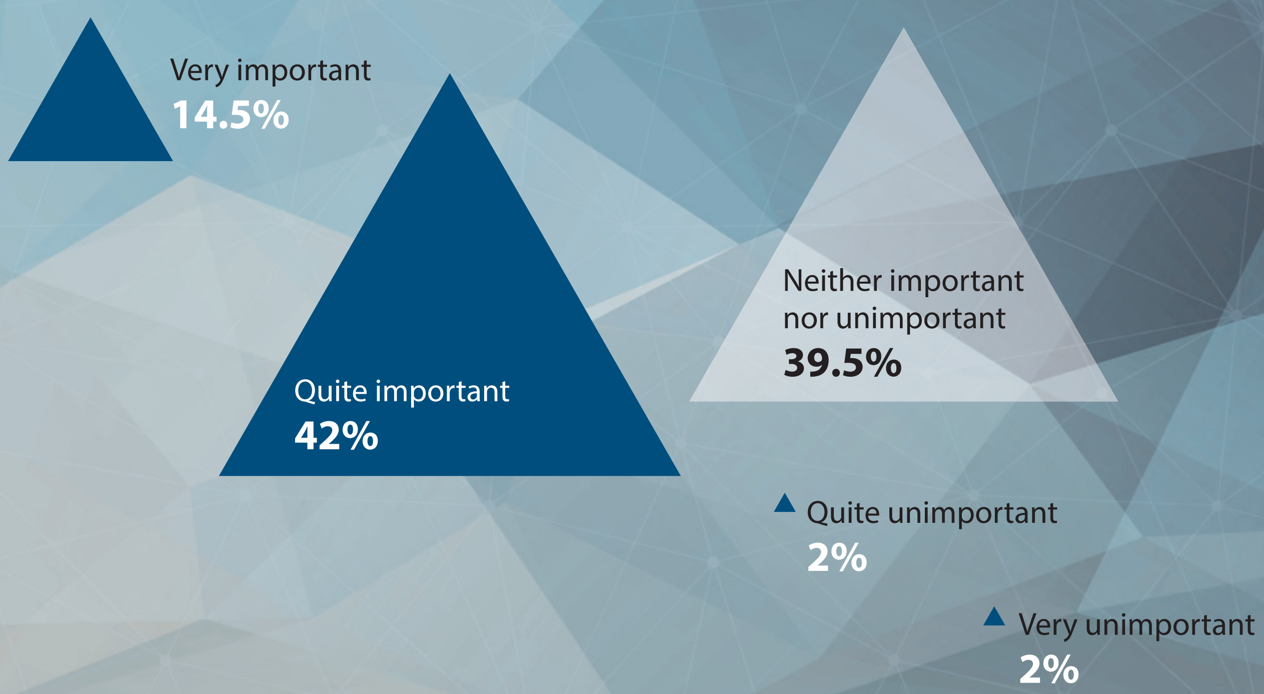


What is your assessment of the RoI you are getting from the content you provide currently?



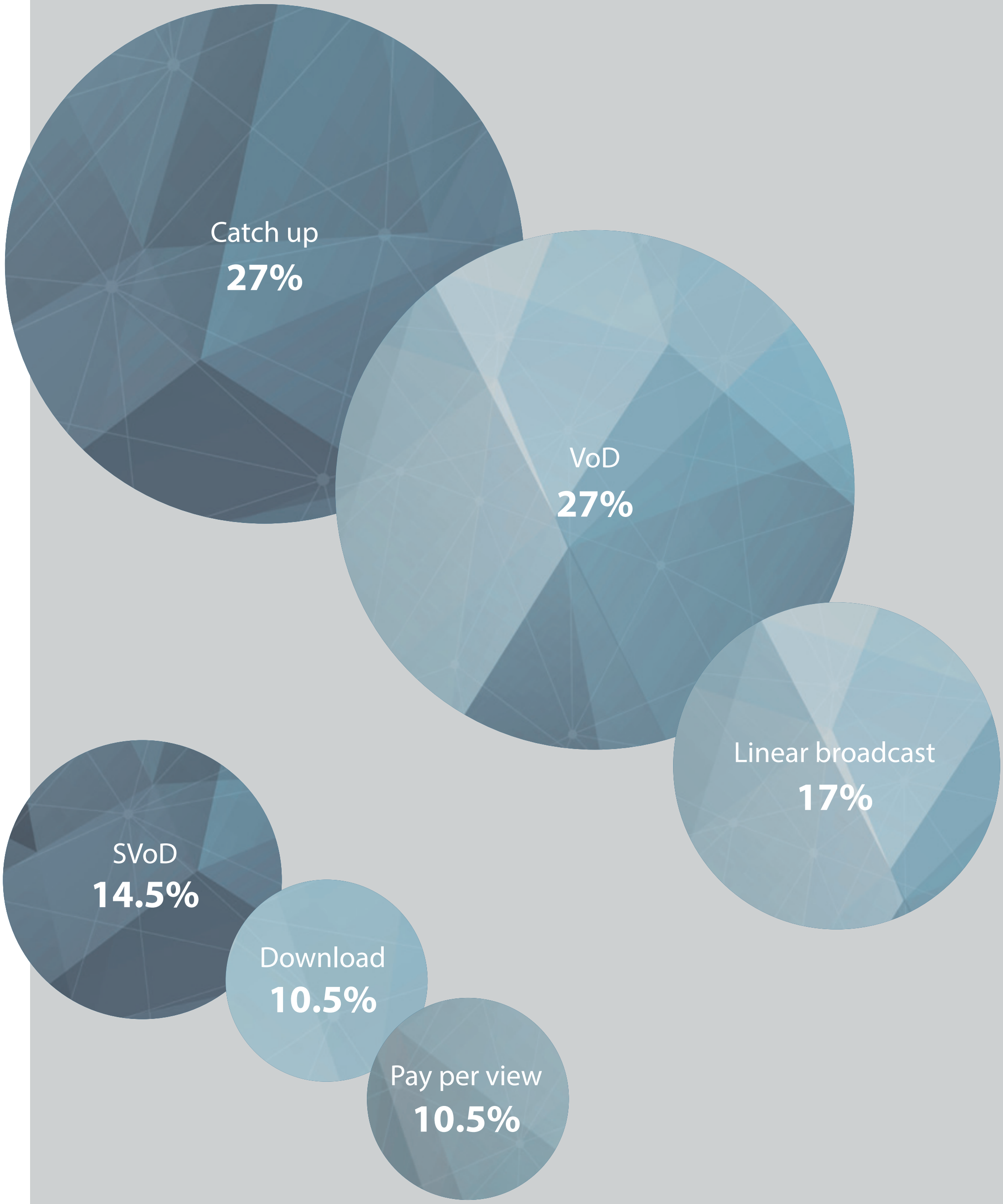
*Operator respondents

How important is offering zero-rated content on mobile to your overall strategy?

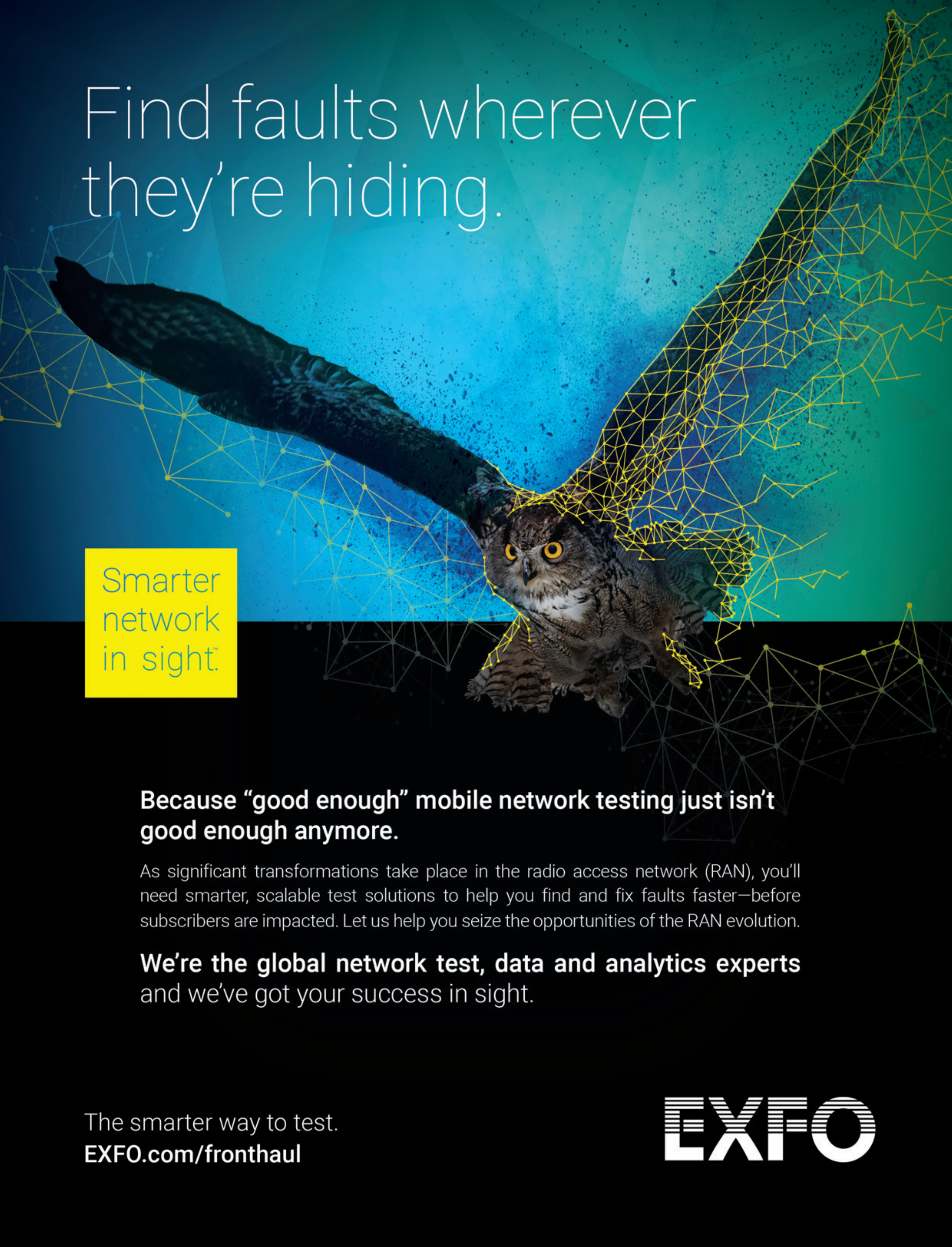


*Operator respondents

Which type of TV/video service do you think will be the most popular among your subscribers in 2020?



*Operator respondents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Proximus TV chief talks porn, VICE and niche audiences

Stephanie Rockmann, Director of Content and Media at Proximus, tells Marc Smith why the Belgium-based operator is happy to be an aggregator of content

It's not often that you get to discuss pornography with a telecoms exec, either on or off the record, but Stephanie Rockmann doesn't blink when this rather unusual topic is raised. Indeed, Proximus' Director of Content and Media goes so far as to educate me about a "new trend" in the Netherlands – adult content made for couples. "We offer that too," Rockmann says.

The discussion comes up after a look at the Belgian operator's website reveals one of four TV "offers" available to subscribers is adult content (the others are entertainment, kids and sports). Click on the "Learn more and order" button and you are faced with promises of "erotic clips and exciting videos", news that "it's getting hot on Proximus TV" and the reassurance that it is "discreet, secure and regularly updated". It is accompanied by an illustration of two scoops of ice cream shaped into women's breasts.

The surprise here is not that this sort of content is offered – most telcos do in some capacity – but that it can be accessed in just two clicks of a mouse at a company whose CEO and TV chief are both women. "I don't find it that prominent," Rockmann responds. "At the end of the day this is content that people want access to. We're responding to a very clearly expressed demand from parts of our customer base." She adds: "We're definitely not ashamed of it."

Rockmann goes on to assure me that Proximus has "very strict rules" about what it broadcasts and that there is an "equality chart" providers have to comply with.

"People say 'Why have this when everything is for free on the internet?'

Well, [what we have] is totally different, it's much higher quality," she says.

Stephanie Rockmann says tech enables telcos to hyper-serve niche audiences

Citing the novel Fifty Shades of Grey and its subsequent movie adaptation, Rockmann adds: "[This type of] content has become a lot more acceptable in society."

It is arguably a cultural thing. A look at the Orange TV website shows similar adult offers – the Bouquets Adulte et Charme – whereas there is no sign of any equivalent content bundles on BT TV, for example. Before I'm forever cast as the quintessential English prude, I move the discussion on. Rockmann, in her post since March 2014, heads up a team of 60 within Proximus's consumer business unit. While some operators – notably Orange, Altice and Telefónica – are pushing on into production, Proximus is very much in the camp that says it knows its own limits.

"We're not a media company, we're a telco," says Rockmann. "We consider content to be one of our pillars – it is what binds us to our customers. As such, our mission is to give access to content in the easiest, smoothest way. We're a content aggregator, not a content creator."

She adds a caveat: "There are a few exceptions – we produce our own sports channels – but there is clear differentiation from competitors who call themselves media companies."

Does she think those who are going down the production route are making a terrible mistake? "Every company is different but we just don't consider this to be our core business. It's not what we're

good at," Rockmann responds. "We're good at putting fibre in the ground, at maintaining a mobile network. The RoI of content production doesn't make sense. We're way better off investing in networks. You can have the best content but if it's delivered over a shitty network it's not going to work."

Keeping up with demand

Proximus offers 205 channels via linear TV, VoD and SVoD. Champions League football and some kids channels have been bought as exclusives, but most of the rest can found elsewhere.

Rockmann says she works with around 85 partners to provide the content that her customers want. The most recent is millennial favourite VICE MEDIA, whose TV arm produces programmes with titles such as Gaycation and Bong Appetit. Rockmann says the US-based company is a good example of the type of content partner she wants to work with. "They've very savvy about their own users," she explains. Allied to Proximus' distribution capabilities, this leads to "some very interesting discussions" that can benefit both parties, she says without expanding further.

However, given the number of times Rockmann namechecks Netflix during this interview it is clear which partner may be the most important out of the 85. "We've definitely decided to view them as a partner," she says when it is put to her that the majority of European Communications readers voted The House of Cards producer as the biggest competitor to operators in the content space.

"They're a phenomenally data driven company. What they've managed to do over the past few years is astounding, it's fundamentally changed media consumption."

Rockmann notes feedback from customers has confirmed that the addition of Netflix is "exactly what they want". But keeping on top of customer demands is key. "We're continuously busy with optimising our line up, [deciding] what channels should we keep," she says.

Proximus does "a lot" of market research to help it meet the evolving needs of its subscribers. Linear television "still rules" Rockmann says, with Belgians watching five hours a day on average. However, she notes audiences are on the decline: "The trick is to have a good mix."

Pulling off such a trick is complicated by the fact that Belgium is "basically two countries". "The north and the south have completely different line ups to some extent," Rockmann says, adding that the large expat community in Brussels adds another layer of complexity. The result is that a one-size-fits-all approach just won't wash.

Yet this can be a challenge if you're an aggregator. How do you differentiate your offering? "We're lucky, we're in an era where technology allows us to hyper-serve niche audiences," Rockmann responds. She splits the content market into three distinct parts to illustrate what she means. First, there is exclusive content that "will continue to be expensive". Second, there is the "fat belly" in the middle that represents content people regard as being "important but not that important". Third, is a long tail of niche content that is for "a few people but for whom it is extremely important".

While Proximus offers a very limited selection of exclusive content – "it's not the keystone," Rockmann says – and rather more fat belly, the exec sees a big opportunity in the third area. "Traditionally, we haven't been able to serve the long tail due to limitations in technology and finance. Now we can, it's going to make a big difference," Rockmann says.

The partnership with VICE is one example of this long tail; mobile-only content could be another. "Its definitely something we're looking at," Rockmann says. "How do you monetise/valorise this is still the biggest question. The user group's willingness to pay is limited."

Dreaming of hulu

As of September, Rockmann will be reporting to a new line manager. Guillaume Boutin was hired from French pay TV channel Canal+, where he served as Chief Marketing Officer, in June. Boutin also spent 14 years at French operator SFR, so should we be well placed to work with Rockmann on pushing Proximus' content strategy forward.

"I'm very excited to have him join us. [His arrival] is testament to how important content is," Rockmann says. The pair had already met, with Rockmann tapping him for information in 2016 on how SFR was bundling content amid "the hurricane arrival of Free Mobile" on the French market. "He's an absolutely charming person, super bright," Rockmann says.

The pair will work together to keep Proximus TV on an upward curve. The operator added 75,000 TV customers in 2016 and a further 44,000 in the first half of 2017, taking its total TV subscriber base to 1.53 million.

Looking forward, Rockmann says her biggest challenge is finding the best content possible to offer subscribers: "The media industry is one of the most disrupted industries out there right now. Being a telco you're part of the ecosystem and the fact that people are fundamentally changing the way they consume media is deeply affecting our business." She adds: "If you don't listen, don't meet their demands and don't satisfy their needs they will go somewhere else."

Rockmann hints that she is working on a new content offering, but won't reveal any details. She is happier to talk about what she would offer her customers, if money and a host of other potential barriers were no object. "I'd love to be able to offer hulu. They don't seem to have international expansion plans but they might one day. They've done a great job in keeping interest in linear content in a non-linear way and in keep creating value around content – that is going to be the biggest nut for everyone to crack."

Whether Rockmann gets to add hulu as a partner in the future remains to be seen, it is clear she will leave no stone unturned to get what her customers want. ec

Telcos look to make local drama out of studio giants' global crisis

Telecoms providers are getting into content production in a big way. But how can they possibly compete with Netflix and Amazon when even old kings of content like Time Warner are seeking help? James Blackman reports

Florence Le Borgne, a lead analyst at European think-tank IDATE, reflects on a conversation she had with a Time Warner executive earlier this summer. "He said to me, 'AT&T will probably buy Time Warner just because, you know, both of them need to be bigger'." She pauses, momentarily. "I mean, Time Warner," she resumes. "It says something about the state of the market when one of the most powerful media companies in the world says it needs to be bigger."

The $85 billion deal between these two companies, currently under review by the US Justice Department, will see the world's third largest telecoms provider with the world's third largest entertainment company. It is the most significant deal so far between the two sectors, putting the $48.5 billion AT&T paid for DirecTV in 2015 in the shade, and dwarfing the €706.8 million Telefónica spent on the Spanish arm of Canal+ the same year.

Moves by Altice, Orange, Telefónica and Liberty Global in Europe in recent months confirm what the AT&T deal signposted: that these parallel markets are on converging paths. More significantly, the Time Warner aside tells of a media market that has been reimagined and re-ordered by OTTs going straight to consumers with content of their own.

Netflix, 10 years old as a streaming service and five years old as a production house, said in July it has surpassed 100 million paid subscribers globally, with the majority now residing outside of the US. If the old movie studios are feeling bullied, and telecoms providers are struggling to make their infrastructure pay, it is only because the rules have changed. "The numbers don't lie," says Paolo Pescatore, Vice President of Multiplay and Media at analyst house CCS Insight. "Netflix has paved the way. It has shown the appetite among consumers to pay for video."

In search of distinctiveness

Operators in Europe agree with the logic. 2017 began with Telefónica backing itself to become the leading provider of Spanish content, by committing €70 million to four productions this year, with another 10 scheduled for 2018 with new investment. The Spain-based operator 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. "Our strategy has worked so far; customer loyalty has increased. But we need our own content as well, so we aren't just relying on foreign content and sports," says Domingo Corral, Director of Original Content at Movistar+. The early response to its new titles has been positive, with international distribution rights agreed for three already, even as they are in pre-production.

> "We need our own content as well, so we aren't just relying on foreign content and sports"

Altice launched a cooking channel featuring British chef Jamie Oliver in April as part of a wider MY Cuisine brand that incorporates a print magazine and a mobile app. It is the latest in a long line of moves the Portugal Telecom and SFR owner has made over the past 18 months as it looks to turn itself into "a transatlantic converged communications player".

In July, Orange committed €100 million over five years to produce a number of original dramas, including with HBO, and launched a new division, Orange Content, to combine content production and distribution. The same month, Liberty Global teamed up with investment firm TPG Growth to launch a global TV production and distribution studio called Platform One Media that is tasked with curating, developing, producing and distributing new content. This follows a deal Liberty signed with UK-based All3Media, in which it owns a 50 percent stake, to produce exclusive content for its operating companies – including Virgin Media in the UK, Unitymedia in Germany and Ziggo in the Netherlands – in a deal stretching to four original drama series over two years.

David Bouchier, Chief Digital Entertainment Officer at Virgin Media, echoes Corral on foreign imports. "What production and co-production give you is distinctiveness. That is very important, especially in mature markets like the UK. You can't just recycle everyone else's programming," he says.

Sky is at it too, with plans to co-produce two drama series per year with HBO as part of a $250 million agreement. It has also collaborated with Amazon on upcoming series Britannia and with Altice on 10-part drama series, Riviera, the premiere of which on Sky Atlantic was the channel's biggest launch this year.

"There's definitely been an increase in

the volume of original content being produced by companies across the industry," says Gary Davey, Managing Director of Content at Sky. "For us, this is the year when we are really seeing the results of our strategy to develop more high-end scripted drama – 2017 is already one of our biggest years on screen for Sky."

Bouchier acknowledges that Netflix's strategy has set the tone, and prompted the response from the telecoms and TV industries. "That [investment in original content] has always been a critical component of the pay TV offer. What has changed is Netflix has fragmented that offer and taken it into a sort of skinny bundle," he explains.

Netflix has made a virtue of its user interface, he suggests, presenting a simplified library of high-quality content on-demand. "There is lots of content on Netflix that you don't watch. The difference is customers perceive it as choice, whereas lots of channels are considered a cost. It's about perception. As a new entrant, you get to knock the skittles away. The challenge for us is to re-set the narrative," he says.

It requires the industry to move from "multi-channel television to multi-service television", with more flexible access and clearer promotion of content, whether it is bought-in or homemade. "It's difficult for an industry to pivot like that, to meet the challenge of subscription video services that are easy to obtain and to churn from," he says. "We have to move with the times in the offers we make to customers."

Its content production falls into this broader review. New shows will be available on-demand from Virgin Media, and online in 12 international markets. Linear channels are good for marketing, but require "constant feeding", says Bouchier. "With all the other great channels we have, we only need to drop in a few [programmes] of our own to sprinkle a little difference," he says.

Leveraging local expertise

Ultimately, telecoms providers' investment in the content market is rooted in their existential struggle for differentiation. "They're great at laying cable in the ground, but it's a cutthroat business that comes down to price and service," says Pescatore. "The only way to drive traffic and subscriptions is to offer content."

On set at La Peste, Telefónica's new drama production

He points to BT's eye-watering investments in live sports, including £1.2 billion for the latest Champions League rights, up 32 percent on its previous investment. "If you look at its subscriber uptake, its strategy has been a great success," he says.

But for pure drama, what hope do telecoms providers, historically bounded by licensing deals, have against Netflix and Amazon, investing up to $6 billion a year? Le Borgne says the telecoms sector's major protagonists have the only hopes. "They are the only ones more powerful than the media companies," she says. Their tactical approach should be to leverage local expertise and undercut the "global, American-style content" from online players. "People want local content as well. There is still room for that," she says.

HBO, working with Sky and Orange, agrees that home-grown content does best, and local telecoms providers have the inside track. "As proud as we are of our original US productions, we know indigenous programming has proven to be more popular among local audiences," says Casey Bloys, the company's President of Programming. "Quality programming is emerging around the globe. Orange and Sky bring a local expertise that is vital for such productions. These are countries where we don't have HBO services and these are proven producers of high quality content. Shared resources and skill sets will result in some very dynamic projects."

Unsurprisingly, Netflix says it is making "big investments" in local content as well. Telefónica's Corral is not unduly worried: "Yes, Netflix is making local content, and Amazon will make steps as well, but our approach is unique," he says. "The shows we have in production feature Spanish writers, directors and stars. No one else is serving our market in the same way."

Customers perceive Netflix and Amazon as "additions, not alternatives," reckons Sky's Davey. He says his company's local knowledge goes deeper: "We have a very close connection to our customers. We are at our best when we serve our local markets with world-class content." ec

Kerlink: M2M stalwart claims IoT leadership with biggest-ever LoRa network

As the Internet of Things gathers pace, and opens up new roads, French technology provider Kerlink wants to show the way. "We are well positioned, with the right solutions, and the right vision," says the company's Chairman and Chief Executive William Gouesbet. "We are well positioned not just to anticipate and innovate in the market, but also to lead it."

It is a grand vision, especially for an engineering firm that is unaccustomed to the spotlight, operating in a market that is bustling with bright young things. But Kerlink is not just another start-up, making hay in the modish Internet of Things (IoT) space. Indeed, it has form and history with connected machines, it led the way with smart metering at home in France, and has played a central role in the rise of LoRa® technology across the world.

The business was founded in 2004 by Gouesbet and Yannick Delibie, its CTIO and deputy CEO; the pair worked together at French M2M module maker Wavecom, eventually acquired by Sierra Wireless, and quickly perceived the expansive role of wireless technologies in sectors such as fleet management, asset tracking and telemetry.

But Kerlink has pushed the envelope as well, launching a range of products for transportation applications in addition to the familiar discipline of fleet management, such as passenger information, onboard infotainment, fuel-efficiency monitoring and car sharing. It has also championed new RF technologies to connect machines, quickly innovating around emerging low-power wide-area (LPWA) solutions.

"When we started 13 years ago, M2M solutions held sway, and required GSM SIM cards. Operating costs were higher, and devices not only cost more, they used a lot more energy than now. Plus, the business model was less flexible," explains Gouesbet. "It would have been impossible to address the IoT market, as it is today, with usual M2M technology. SIM-based cellular solutions are just too expensive for an increasing number of IoT use cases."

Kerlink also helped to develop and implement the Wireless M-Bus, or Meter-Bus, standard for gas, water, electric and heat metering, promoting its usage in Europe. Importantly, its work with French gas company GrDF saw it engage with LPWA solutions provider Cycleo, snapped up by US semiconductor outfit Semtech in 2012, just as Cycleo was developing its own proprietary RF modulation technology, called LoRa®.

Indeed, Kerlink was there from the start of the new LPWA revolution. "We are a unique early adopter of LoRa® technology because of our close partnership with Semtech, and Cycleo before it. We were the first solution provider to support LoRa® technology; we built the world's first commercially available LoRaWAN™ gateway, the Wirnet station, in 2014," says Gouesbet.

"That's why we are a leading player in the field now. Our pioneering spirit informed our heritage with smart metering, which ensured we were one of the first in this space."

Two pillars

LoRa®, making use of ISM license-free sub-1GHz spectrum bands, brings unprecedented capabilities for IoT applications, in terms of extensive coverage, low energy consumption, deep penetration, and cost-efficiency, reckons Gouesbet. "The reduced capex and opex offer more flexibility for players to make the decision to invest in such an IoT dedicated network, and offer faster returns," he says.

"There are no licensing fees, because it is running in unlicensed spectrum, and it is fast to deploy, and quick to bring to market, so the return on investment is rapid. LoRa® is the right technology at the right time to unlock many segments and offer innovative business models. It also perfectly fits in the strategy of public operators, like telcos or cable operators, and private companies or cities, that want to deploy their own networks."

By 2014, through its first engagement with Semtech and its founding role in the open, non-profit LoRa Alliance™, Kerlink had developed a range of outdoor carrier-grade LoRaWAN™ base stations – the first of their kind – recently augmented by indoor solutions. It soon padded out its LoRa® proposition with network planning services, covering network design and deployment, as well as core-network, radio-network and gateway-management services. These services are included in the Wanesy™ RAN Management Center suite.

"Our value proposition relies on two pillars: connectivity and services for applications, offered through a mix of hardware products, software solutions and professional services," explains Gouesbet. His company provides the full-service wrap, he says, from hardware and operations, through to a reference design so third-party developers can rapidly integrate their own LoRa®-based IoT solutions. The company also focuses on value-added services like network-based geolocation, and recently announced device-management capabilities to remotely monitor and manage connected devices.

Kerlink's progress over the past five years has been like a rolling scrum, on a field of play completely transformed by wide-area networking and smart applications. The company has installed over 70,000 gateways and base stations for M2M and IoT networks for more than 260 clients in Europe and Asia, including telecom providers such as Tata Communications, and utilities such as GrDF and Suez. It recently announced a deal with a South American partner to deploy a network across Argentina.

Since 2013, its compound annual growth rate (CAGR) has exceeded 50 percent. Just as the remit of machine communications has gone beyond the old boundaries of fleet management and utility metering, into disciplines like agriculture, smart cities and asset tracking, so Kerlink has retained its pioneering spirit.

"Innovation is in our DNA," says Gouesbet. The company dedicates 25 percent of its revenue to research and development. It added a network-based geolocation service, leveraging radio and core-network components, to its LoRa® gateways last year. The service replaces GPS and enables network LPWA operators to add native location services to end nodes without increasing the bill of material or draining batteries.

Last year also saw Kerlink's debut on the Euronext Growth exchange in Paris, following an initial public stock offering of €13.2 million. Revenue jumped 90 percent in the year. It raised a further €20.7 million via a capital increase with preferential shareholder subscription rights in the second quarter of 2017.

Biggest deal

Its current status is assured, reckons Gouesbet. "We are the leading service provider for LPWA IoT network equipment and software solutions, serving broadband and telecom operators, smart cities and private companies alike, across the world." As if to confirm it, Tata Communications has just confirmed Kerlink's role in the deployment of the largest LoRa® network in the world.

The pair ran a trial behind the scenes during the second half of 2016, in Mumbai, Delhi, and Bangalore, featuring "several hundred" Kerlink network gateways. "The goal was to cover four million people in three major cities in India," says Gouesbet. "It confirmed the design, performance and reliability of our equipment."

They signed a contract in February, announced it in June, and are presently engaged in the "initial phase of the deployment", working towards a nationwide rollout of a LoRa® network covering 27 cities, 2,000 communities and 400 million people.

Alongside its requisite LoRa® features, Kerlink's LoRaWAN™ Wirnet iBTS Compact gateway offers a 3G / 4G dual-SIM modem to ensure backhaul continuity of service, plus a geolocation-ready design for new types of services. For this first step, Tata Communications will deploy more than 10,000 of the gateways in India, creating the largest network of LoRa® stations anywhere on the planet.

Such scale has presented certain technical and logistics challenges, acknowledges Gouesbet. "The challenge was to keep pace and maintain quality. We had to evolve our product and add new features very quickly, we had to adapt our processes in France and India, to orchestrate the perfect execution of the plan, and we had to increase our overall production capacity," he says.

To that end, it partnered with "Sketch-to-Scale™" solutions provider Flex to increase its production capacity by leveraging Flex's reach and know-how in wireless networks and RF-based fronthaul and backhaul connectivity solutions like small cells and radio access base stations.

"We had to show our major customers that we could deliver large-scale projects, with a large volume of base stations, while maintaining quality and reactivity. That's why we partnered with Flex, which can meet demand for equipment manufacturing, delivery and support anywhere in the world," says Gouesbet.

Indeed, the arrangement with Flex buoys Kerlink's global expansion plans into booming IoT regions like Asia Pacific and North America, where it established subsidiaries in earlier 2016 and 2017, respectively.

Future paths

Gouesbet declines to speculate on the likely applications that will be developed for the Tata Communications network in India, but says Kerlink currently sees three primary markets for its LoRaWAN™ based solutions: smart cities, covering sub-verticals such as lighting, parking, buildings, metering and transportation; smart industry, with particular focus on asset tracking and management; and smart agriculture for monitoring crops and livestock, and such aspects as air quality and temperature.

The company is on the right track, clearly. Its customers are enthusiastic, even if it does say so itself. "We have had very strong feedback from customers, because we were so early to market, and have such long experience, which is reflected in our ability to integrate technology solutions into our network," says Gouesbet.

Interoperability and integration are essential for the burgeoning IoT sector, and its founding technologies, he observes. "Kerlink wants to promote an open ecosystem with third parties playing a key roles," he says, pointing to its vigorous, continuing membership of the LoRa Alliance™, which now has 500+ members pushing the network, and Kerlink's key role on its technical, certification and marketing committees.

"It is the largest and fastest-growing alliance in the technology sector. Its growth makes clear the interest in the technology. We are one of the co-founders, and remain an active member, working every day to further develop the technology."

Gouesbet also makes reference to the importance of security and privacy in network building, especially when unlicensed spectrum is being used to carry public and private data. "Customers also appreciate the security of our network design, and the management of our gateway and platform," he says.

The order of the day is more of the same, it seems. "We want to confirm our leadership in delivering leading IoT equipment and solutions. We also want to leverage the distinctive character of our value proposition, covering our deployment expertise, network management and operator support."

www.kerlink.com, email us at contact@kerlink.com or follow us on Twitter @kerlink_news.

Optimising IoT-connected devices in LPWA networks over their lifetime with remote device management

Low-Power wide-area (LPWA) Internet of Things technologies allow service providers and enterprises to offer long-range Internet of Things (IoT) connectivity for battery-powered objects that consume little energy. The most popular use cases for LPWA devices involve temperature and environmental sensors, smart meters for gas, electricity and water, asset and inventory tracking, as well as industrial monitoring. One of the common attributes of almost all LPWA devices is the longevity of the device: generally a sensor or a meter is expected to operate for more than 10 years.

Device management, a critical asset to deploy and manage IoT end devices

But low-power and longevity requirements of IoT-connected endpoints make device management (DM) an essential and challenging function of IoT networks. It is vitally important for companies deploying IoT solutions to streamline their operations, adapt to changing expectations and generate new revenue streams. With billions of sensors, meters, actuators and other devices expected to be connected to the IoT, remotely managing them allows service providers and enterprises to:

- Directly manage network provisioning, including device subscription
- Launch and support new functionalities and applications
- Ensure compliance with changing telecommunication standards
- Ensure compliance with changing regional radio regulations
- Provide security management including, for example, keys management for authentication
- Manage radio performance, with dynamic LPWA network behaviour monitoring
- Optimise radio footprint to manage device power consumption.

Kerlink's Wanesy™ Device Management Centre offers mobile network operators, smart cities and enterprise customers a complete, secure and standard solution to manage and optimise all connected devices over their entire lifetime.

Device management for LPWA networks using ISM bands

LPWA networks are based on the same star network topology as 3GPP networks, including the presence of a core network and base stations, and management of radio communications, sensors/devices and their commissioning. This enables network operators to focus on high-quality security, the use of rating, billing and other operations systems, and the use of various application-server interfaces.

But there are some key differences between LPWA and other 3GPP technologies. On the radio side, LPWA networks often use unlicensed and free spectrum for transmission and reception (industrial, scientific and medical, aka ISM bands) as defined for geographical regions:

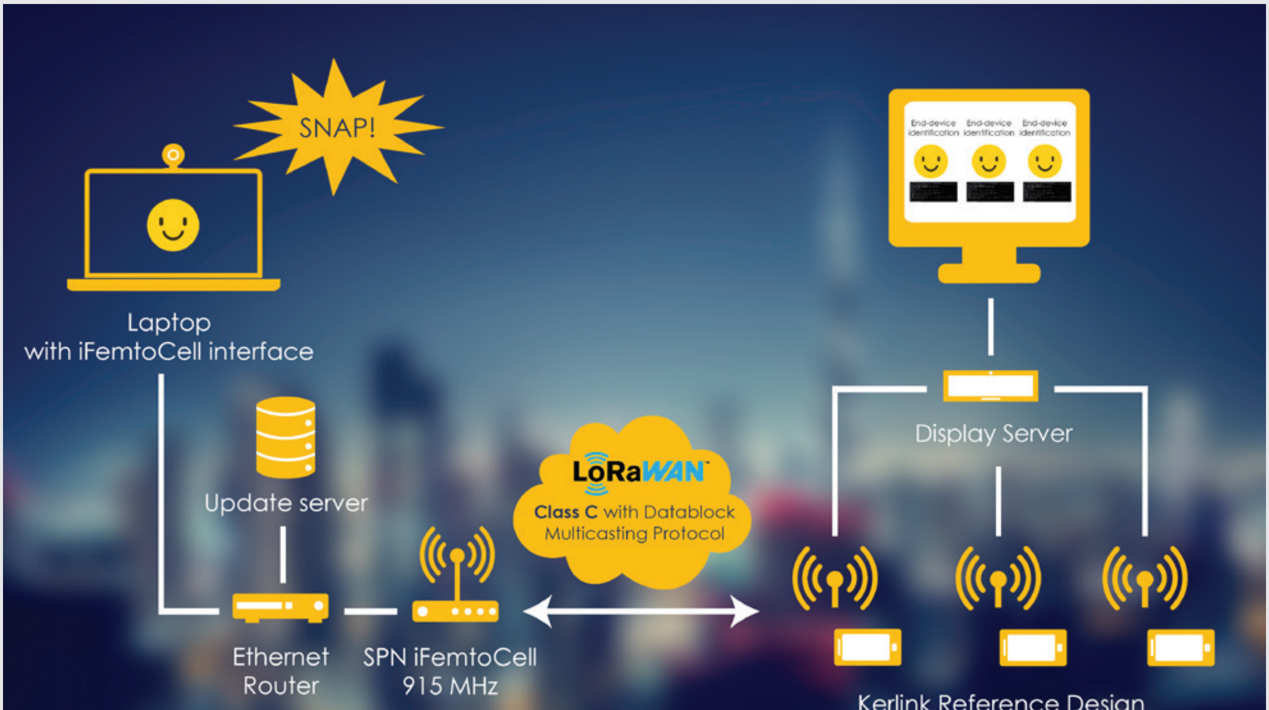
- Europe: 863-873Mhz
- North and South America: 902-928Mhz
- Asia: 915-928Mhz.

These unlicensed bands must meet certain parameters that increase LPWA quality, but they also impose some constraints on the network, especially duty-cycle limitations of typically one percent on-air and transmission power of less than 14dBm-25mW to share radio resources. In addition, to maximise sensitivity up to -141dBm to facilitate long-range communications, the radio modulation (Ultra Narrow Band or LoRa®) uses low data rates, typically below 1kbit/s.

For Kerlink customers, **IoT device management** is powered by a set of technological tools and features for managing the lifecycle of IoT-connected equipment, including LPWA end devices. These tools allow DM users to:

- Configure applicative parameters, including logical name, application destination and wake-up behaviour
- Configure protocol parameters, such as net address or radio parameters (channel, modulation)
- Ensure device security, key management and network subscription (commissioning)
- Monitor device behaviour, including power consumption and radio footprint
- Manage network performance with over-the-air adaptive channel configuration, while managing radio footprint and cell scalability related to regional radio constraints, and
- Conduct complete or partial over-the-air firmware updates (batches or campaigns).

IoT DM is commonly used in mobile communications based on a



Kerlink's LoRaWAN Firmware Update Over-The-Air demonstrator, showcased during LoRa Alliance All Members Meeting in Philadelphia, last June.

standardised solution from the Open Mobile Alliance called OMA-DM. This standard implements the protocol for LightweightM2M (LwM2M) over CoAP (Constraint Application Protocol), which is generally well adapted to 3GPP topology networks. The Internet Engineering Task Force (IETF) is also defining a suite of protocol for LPWAN, through the CoMI package (CoAP Management Interface).

Interestingly, the very high-quality parameters of LPWA networks using ISM bands impact some features of LPWA device management. By adapting their solutions for the unique requirements of LPWA, vendors like Kerlink that offer LPWA device management can provide important LPWA-specific features. These include off-line and maintenance status without updating, multi-cast capabilities with large volumes of data (firmware binary) sent once for all targeted devices, and low-latency protocol adaptation, such as LwM2M that is supported by a large number of telecommunications service providers.

A key component in LPWA IoT network management suites

IoT remote device management is a critically important component of any IoT solution. The ability to cost-efficiently and securely manage IoT devices is relevant to all IoT deployments. Kerlink's broad experience with customers around the world over the past 12 years has identified three reasons why device management is essential in LPWA installations, and has helped guide the company's R&D for this critical feature.

1. Executing cost-efficient and scalable operations requires well-adapted tools as part of a global solution

- **Communicating with extremely high numbers of IoT LPWA devices requires automated, bulk-device lifecycle management (provision, update, deprovision).** LPWA devices are generally part of large-scale deployments and benefit from bulk provisioning processes. In addition, a quality LPWA device-management platform vendor supporting large-scale deployments should, (1) provide continuous quality assurance and patches to the platform as needed, (2) adapt the platform to the customer's evolving operational environment with firmware, hardware and software updates, and (3) offer value-rich new features to increase the functionality of the platform.
- **Bandwidth constraints require smarter, automated deployment of software and firmware to LPWA devices.** Due to bandwidth constraints, operations departments must take into account usage patterns to prevent interference with usual operational or commercial communications.
- **Revenue per device may be low,** which requires automation to keep operational costs down and ensure operations scalability in the long run.
- **Third-party systems and platforms often interact with device installations and end-devices API** for efficient bulk

operations and batch processes: interoperability and open solutions remain key for efficient deployment.

2. Longevity of LPWA devices requires unique features to support long-term operation and security of end devices

- **Connected devices have an expected lifetime of 10 years or more without physical access to the devices, in many cases.** This requires that they be monitored and updated by configuration or firmware switching to prevent overconsumption of power and bandwidth on the radio network.
- **Intelligent device management** maximises the efficiency of power used for transmission, so that a device's battery life is not unnecessarily diminished.
- **Device management must allow the rollout of security updates** that will be inevitable due to LPWA devices' longevity.
- **Devices require end-device radio configuration and firmware updates** to stay up to date with the latest developments and changes in regulations.
- **Devices must be monitored** to identify faults and prevent major problems upstream, before they occur.

3. Lack of LPWA IoT device accessibility requires zero-touch, remote device management

- **Devices must be easy to install, manage and diagnose remotely.** Installation and maintenance crews will frequently lack deep technical knowledge or adequate tools to triage the connectivity elements of these LPWA devices on the spot.
- **Many IoT devices are deployed in areas that are difficult or costly to access physically.** Device management must provide capabilities to configure and maintain a device remotely once installed to allow easy troubleshooting and operation.
- **Fast, simple provisioning** allows solutions to be deployed quickly to ensure the solution is replicable in a cost-effective way.

Operator and enterprise benefits of LPWA device management

LPWA device management has several financial and operating benefits for a service provider or enterprise. These include:

- **Optimising the total cost of ownership (TCO) and return on investment (ROI) of LPWA network deployment.** By using remote, automated device lifecycle management, a service provider or enterprise can minimise manual device management procedures and lower ongoing operations costs, while guaranteeing a constant high level of quality.
- **Adapting the embedded application during the lifetime of the device.** Using over-the-air updates, a service provider or enterprise can update embedded applications to keep up with market or connected services evolution to meet evolving end-customer expectations.
- **Increasing the ability to leverage predictive and preventative maintenance** to orchestrate multicast update or configuration campaigns.
- **Addressing maintenance operations and trouble resolution with high efficiency**. Using the real-time monitoring and alerting features of an IoT DM platform, a service provider or enterprise can provide enhanced maintenance to quickly find and repair troubles with devices or the underlying LPWA network.
- **Managing the device fleet in a consistent way.** LPWA device management allows a service provider or enterprise to manage its IoT devices with the same tools as it would manage a fleet of mobile phones. And some of these tools might be based on OMA-DM standards for LwM2M to provide a standards-based solution.
- **Reconfiguring devices to optimise network use.** IoT device management allows a service provider or vendor to reconfigure devices on an LPWA network to maximize network efficiencies and ensure global quality of service (QoS) across the network.

Kerlink's device management solution

By providing its Wanesy™ Device Management Platform on top of its existing core network Wanesy™ RAN Management Center, Kerlink now offers a full suite for public or private service providers or enterprises to remotely and securely operate their connected devices. Combining state-of-the-art LPWA network stations, core network management solutions and end-device remote monitoring and configuration tools, Kerlink enables existing players and new entrants to quickly roll out and operate a highly reliable connectivity network to streamline their operations and generate new revenue streams. Focused on leveraging industry-proven open solutions and promoting interoperability, Kerlink is dedicated to building a vibrant ecosystem around its solutions to boost the IoT growth in verticals where use cases can be efficiently supported by LPWA connectivity. These include smart-city, industry, agriculture, transport and asset-management applications.

The company is a founder and board member of the LoRa Alliance™ and a world leading LoRaWAN™ IoT equipment and solutions provider. It has installed more than 70,000 Kerlink stations and other equipment in Europe, South Asia and South America for more than 260 clients. For more information, visit us at **www.kerlink.com**, email us at contact@kerlink.com or follow us on Twitter @kerlink_news.

Digital transformation roundtable: Cutting through the complexity

European Communications brought together telecoms executives from across Europe to discuss the thorny topic of digital transformation. Strategy, staffing, technology and challenges were some of the areas hotly debated by participants. Alex Sword reports.

What does digital transformation mean to you? It's a good place to start this roundtable as it can mean many things to many people. For Telia it is about "renewing, reinventing the business", says Sari Leppanen, Head of Business and Technology Transformation at Telia Finland. She describes digital transformation as a "long journey" that Telia started in 2014 and is "heavily customer experience and customer behaviour driven". Pointing out that digital transformation is not simply replacing IT architecture, Leppanen adds: "What we have is really business transformation supported by technology." At Orange, Christian Luginbuhl wears two hats: he is in charge of technology for the operator's European subsidiaries outside of France and part of the innovation, marketing and technology team at group level. On the one hand, says Luginbuhl, digital transformation is "very much driven by the requests from [enterprise] customers". The France-based operator then uses that knowledge to help transform internally, Luginbuhl says. On the other hand, he says digital transformation is driven by "the requests of our [retail] customers to have digital interfaces to our company". Orange has a target at group level to have half of all interactions with customers made digitally.

Like Luginbuhl, Aurelia Aubugeau is French but works in London for Norway-based Telenor's Wholesale division as Director of Digital Innovation. Like Orange, one of Telenor's digital transformation goals is to increase the number of digital interactions it has with customers. But it's also about moving towards virtualised networks

Participants

Kevin Paige,
CITO, Manx Telecom

Erick Cuvelier,
CIO, Orange Belgium

Vinod Kumar,
COO, Subex

Ashwin Chalapathy,
CTO, Subex

Richard Swinford,
Partner, Arthur D Little

Christian Luginbuhl,
SVP Technology Europe & Global Performance Innovation, Marketing & Technologies, Orange

Aurélia Aubugeau,
Director, Digital Innovation, Wholesale and International, Telenor

Marc Smith,
Editor, European Communications

Sari Leppanen,
Head of Business and Technology Transformation, Telia Finland

and operations, as well as creating a "digital culture", Aubugeau adds. Zooming out, she says: "It is about survival and making sure we're not missing the train."

For Kevin Paige, CITO at Manx Telecom, digital transformation "gives us an opportunity to really make a big difference to the way our company operates, both from a customer-facing perspective as well as our processes and the way our business culture works". Although a smaller operator, he thinks it is "absolutely essential" to digitalise and says Manx has had a transformation programme up and running for a few years. The main goal is improving customer experience, partly through automating the core business "as efficiently as possible", but also to grow the company outside of traditional telecoms services.

Erick Cuvelier, CIO of Orange Belgium, also thinks digital transformation provides "a unique opportunity" to enter new areas. "The Orange Bank launch in France is a perfect example of what it means to use digital opportunities to add new businesses," he says.

Richard Swinford, Partner at management consultants Arthur D Little, agrees that new business areas are one goal of digital transformation efforts at many operators, but warns that there are several barriers. "One of those barriers is regulation," he says. "There is not a level playing field between a telco and an OTT [player], or a bank, who is offering a similar set of digital services, but often under a different set of regulations."

Vinod Kumar, COO at Subex, brings to the table findings from a recent McKinsey report. Three-quarters of companies that embarked on digital transformation in the last five years have started to see their growth coming down, according to the report, which also noted that first mover advantage is significant and strategy is more important than the execution. Reflecting on the discussion thus far, Kumar says getting the strategy right is absolutely key. He quotes one executive from the McKinsey report to illustrate the point: "It's good to keep running but in the case of digital it's better to be stationary than running in the wrong direction."

Telia's Leppanen picks up on this, saying it is important to be "very precise" about what you are looking to achieve. Telia "crystallised" its thinking in 2016, two years after its digital transformation initiative began, moving away from a technology-focused approach to business-focused goals. As part of this, the CEO and his team were fully engaged in the process to ensure the process was company-wide. Leppanen warns that having "a separate ivory tower programme" with a brief to create "a new digital machine" that will be handed over when it's ready simply doesn't work. "Everyone in the company needs to be involved," she says. "The people who will be running this new digital machinery so to speak must build it themselves from day one." Ultimately, digital transformation is "only a vehicle" to get to a pre-determined goal, according to Leppanen.

Flat organisations

Once goals have been decided upon, you then need to create a structure staffed by the right people to deliver them. Orange Belgium's Cuvelier, who says that he was given permission as CIO to "clarify more or less what digital transformation could mean", did so partly through his choice of staff. For example, he recruited IT directors with a combination of business and technology experience in an effort to break down existing siloes. This meant finding people who are "close to complex processes in the back end" but who also look at operations in terms of customer rather than technical results. In addition, Cuvelier says he "flattened the organisation" in an attempt to bring ownership of delivering different solutions to the highest point possible in the company.

At Telenor, Aubugeau explains, there is a group level Chief Transformation Officer who is served by different programme directors responsible for various aspects

of digital transformation. These include connectivity, customer interactions and culture. The programme directors work with local business units, so “each programme is actually handled by group and by the [local] operation together”. Telenor has also taken a “cluster” approach, where similar market areas are grouped together. “Some of our markets are very similar and some are completely different, so you cannot run [the same] transformation programme [for] everyone,” Aubugeau says. It is important to build a cross-functional team and use resources from the individual business units, she adds.

Orange’s Luginbuhl also highlights the importance of group leadership. Rather than naming a Chief Digital Officer, he says Group CEO Stéphane Richard took responsibility for providing the “impulsion” for digital transformation across the company. Orange Bank is emblematic of this, explains Luginbuhl – it was driven and pushed by Richard and when it goes live will become the company’s first 100 percent digital product and business line.

At Manx Telecom, the CEO and the board led digital transformation discussions, Paige says. The process began when the company found that making incremental changes to the business did not lead to any substantial changes in revenues or profits. The programme covers a number of workstreams, including customer experience and sales enablement.

“It’s a whole stack with business leaders looking after each one of those elements,” Paige says. The company is now in the process of maturing those activities, according to the CITO, but has not fully reached the digital state it is trying to get to. “We’ve laid people off and refreshed the organisation to try and attempt to change culture, because you can’t just change culture with the people that you have there today,” he says.

European Communications Editor Marc Smith highlights a story about Deutsche Telekom sending its executives back to business school in the US to teach them digital skills. Can digital transformation be taught, he asks. Aubugeau of Telenor thinks it can be taught but adds: “It’s also about using the existing resources… I think the big groups are in general very bad at talent management.” There is a tendency to treat an employee as a “one-trick pony”, Aubugeau says, who will do the same thing for their entire career. In fact, people can be trained, Aubugeau says. “Some people are looking forward to that change,” she adds. “Some people are a bit more resistant. So that’s where you have to identify and have a proper talent management programme.”

Leppanen agrees that telcos are “not very good” at talent management. As part of its digital transformation efforts, Telia identifies the competencies – both new and old – that are required, which are then used to create a structured plan for the human resources team. The company can then identify the best way to get the competencies, whether through new hires or retraining, Leppanen says.

Paige says Manx Telecom is trying to endorse “process owners”, whereby even if a process extends over the entire business one person is in charge of it. This is an effort to bring accountability back into the organisation, he says, as there are disputes between product teams and sales teams over who is responsible for certain functions. Leppanen adds that a strategy is needed to define what is going to be kept within the organisation and what will be run by partners. “When you outsource the IT operations you actually move the focus within the staff onto [new areas such as] innovation,” she says.

Luginbuhl reveals that Orange looks to market itself as a “digital and caring employer” in an effort to get employees to transform without putting too much pressure on them. He doesn’t believe in big programmes such as sending execs to business school; rather, Orange believes in triggering employees to want to transform themselves. Cuvelier thinks that it is often the middle management that can be difficult. Smith backs up this thought with comments from research house IDC, who said in a recent report that middle management often put the brakes on digital transformation processes, despite enthusiasm and commitment from the

leadership and rank and file. "This is why you need to flatten your organisation," Cuveiler responds. You need to "squeeze" the middle management, he adds, but also show them by example that things can be done better. "Suddenly they just say, it can be done, I want that for my project too," Cuveiler says. Telia works towards three-month sprints, Leppanen says, and this has won many converts in the company. This solves the problem of middle management reluctance, she claims, as these teams want to be "part of the news story". Like Cuvelier, Leppanen also talk about the need for a "really flat" organisational structure.

Virtualised platforms

Strategy and structure will only get digital transformation efforts so far, of course. Technology plays a key role too. Luginbuhl outlines Orange's three priorities in this area, beginning with connectivity. He says the IP network is key as without it an operator is unable to deliver digital transformation. Luginbuhl also highlights the importance of virtualised platforms in making digitalisation "accessible to many different partners or clients and involving them much more in the process than before". The first step in this is providing APIs for these partners to connect, he says. But this open approach is not necessarily a natural one for telcos, given their desire "to control things". The third key area is deciding to what extent the company plans to use the public cloud.

Paige says the majority of Manx's core fixed infrastructure has now been migrated to a virtualised platform. The operator views the new platform as the main vehicle from which to launch new services. There is a broader philosophy at work here – moving away from vertical stacks supplied by a single vendor to its own horizontal cloud stack, according to the CITO. Citing the billing and customer relationship management stack it took from one vendor, Paige says "some parts were good, some parts were behind the curve". He therefore split the stack between two vendors. Cuvelier also highlights the importance of working out where to innovate in terms of technology and where to accept that "good is good enough". It may not be necessary to reinvent everything, the CIO says, sometimes a bit of simplification is all that is required. By way of example, he says that the four vendors Orange Belgium uses for its enterprise resource planning (ERP) technology will be scaled down to just one. Leppanen offers the example of Telia revising its own transformation approach, away from using "one gigantic BSS solution and then some channels on top of that" towards a more layered approach that takes into account how different parts of the stack can be upgraded at different speeds and combined through well-defined APIs.

Paige moves the conversation on to end customers. "[They] want more information about what they're consuming, how they're consuming it, what other products and services are, which you can draw from the API infrastructure quite easily, and you can continually evolve that," he says. The keys are proposition change and intelligence around how customers use your services, Paige notes. "If you get those two elements right, you make a big uplift in the customer experience." He then brings in some of the more future-gazing technologies: AI and virtual agents. AI is already being looked at "seriously" in the back-end of Manx's network management, while virtual assistants will be trialled in the next few months, he says. Leppanen is also interested in AI for the back-end, saying it could replace the "huge amount of manual transactions that take time".

Kumar asks how important analytics are. Leppanen highlights how sales and marketing can be brought together, using data not only to provide recommendations but also to "surprise" the customer with products and services they don't expect. However, she says it is important to define what data is being used for and design the analytics accordingly. Further, she says that you will not have big data before you have a unique identifier for the customer. In her own experience, achieving a single sign-on for customers

was the "battle [she] jumped into first". Cuvelier chimes in with a sentiment many may agree with on big data: "The worst thing for IT is buzzwords. It's probably the worst one." He says creating a framework of the why before the how is key as people ask for things without knowing what they want it for.

For Aubugeau, who is less involved on the technology side, the platform model is the key part. Operators need to open up their communication APIs so that developers can embed voice and SMS within their own applications, she says. But with their use of data, operators need to understand customers better, she adds. "We need to touch the right customer at the right time at the right place with the right product," she explains.

Cuvelier also looks to link technology back to customer experience. He says the best customer experience is very often the simplest one. His go-to example is Amazon, which he calls by far "one of the less sexy websites in the world". But the fact is it is consistent with Amazon's promise, he explains. "You order, it's easy, you click, you pay, it deliver." From there, Leppanen chimes in, it is about differentiating on top of this basic experience by "enhancing, enriching the offering that the customer can choose with", rather than with the "basic plumbing".

No discussion of technology can be complete without touching on the companies who provide it. What, Kumar wants to know, can vendors do to help deliver the things that operators need in their digital transformation journeys? "The problem with vendors is they are as un-agile as we are," says Luginbuhl. "What we would expect is that they would help us to become more agile." Paige says vendors are "creating more complexity than what's actually needed." For Leppanen, they have not bought enough into the pay-per-use cloud mentality and want customers to sign up to long licence commitments. Meanwhile, Aubugeau wants to see more co-creation. Vendors usually come with a set, off-the-shelf, portfolio that a company can take or leave, she says, but this leaves no space for customisation.

Key challenges

Citing research European Communications undertook earlier this year, Smith notes that the biggest digital transformation challenge cited by respondents was that projects were too big, complex and time-consuming. Leppanen says it is about categorisation. In theory, she says, an operator builds a new BSS to sit alongside a legacy system, and is supposed to move "overnight" from one to the other. In practice, it doesn't work like that: the legacy system is never in a "stable situation" and the new BSS ends up sitting around for years waiting to be used. She says this is why it is important to split digital transformation into parts and have a clear roadmap on what to do deliver first.

With the cost of digital transformation projects being another key challenge, Swinford notes it is important to demonstrate the revenue benefits, not just the savings. Leppanen says telcos are currently in an "invest to grow" phase, while Cuvelier thinks digital transformation creates efficiencies to enable companies to invest. "Changing an ERP system is not about changing the customer journey, it's just to save €15 million in three to four years that we can use to do something else," he says. As the discussion draws to a close, the last word goes to Leppanen. "The most difficult thing for all companies, not just telcos, [is deciding] what the new business model should be, what the revenue share is, what the shared delivery chain is and how we make that seamless," she concludes. ec

Supporting the telco revolution

Consulting firm everis, part of NTT DATA, has a mission to improve operator efficiency, increase revenue, shorten development cycles and help telcos to connect better with customers. Its Head of Telecommunications in Europe, Eva Labarta, tells European Communications how the company plans to do it.

European Communications: What is your view of the European telecommunications industry currently?

Eva Labarta: If I have to choose three dynamics to describe the current market, undoubtedly they would be: content, collaboration with third parties and customer relations. All these are causing what I like to call "the telco revolution".

There is a tough fight among telcos for retail customers who are shifting fast from the traditional business to content based services. In the retail market, content is key to differentiation and a perfect bridge to other digital services.

But this is hard for telcos since they need either to produce their own content or get it from third parties. The former is very complex, though some telcos are being successful at it, while the latter means losing some control of their business.

Strategies may vary depending on the size and positioning of a telco. Larger telcos usually benefit from investing in premium, expensive content that helps them to improve acquisition, ARPU and AMPU, while reducing churn. On the other hand, smaller telcos usually avoid the large investments that premium content requires, through partnerships.

Collaboration with third parties can help telcos to create new, disruptive revenue streams beyond content, such as by collaborating with other OTTs. Again, there are different strategies to follow: incumbent telcos tend to be more protectionist, while challengers tend to be more open, and benefit from this openness.

This is already leading telcos to weave a network of alliances. The better a telco is in building these alliances and profiting from them, the more successful it is going to be. Not to forget other potential partnering initiatives, such as by the increasingly popular strategy of network sharing that can help telcos to be more efficient.

There is the additional challenge to understand the customers in a changing, fast-spinning, digital world. In the end, a telco will need to transform itself, improve the way it relates with its customers, and become a conglomerate of different digital businesses, in order to be differential and successful. This opens up incredible opportunities for telcos.

How can everis support this telco revolution?

Telcos are struggling to create tight bonds with their customer base, and are in need of better insights. We

have recently delivered our "Telco Connected Index" survey across several geographies; it shows that there is still room for improvement in some areas, particularly those related to how customers perceive their relationship with the telcos.

At the same time B2B2C models are becoming more common, so telcos also need to understand how to play a leading role in the value chain and enable other businesses to be successful. They still strive to understand the complexities of the large businesses that they target. At everis, we understand large companies in different sectors of activity very well thanks to our different market vertical practices. This can be of great help to telcos.

Regarding collaboration with third parties, collaborating with startups is becoming more usual. But doing it with the right startups at the right time, before your competitor does it so you can really win the differentiation you are looking for, will become a matter of survival. We can also help in this matter. We have built "everis Next", the world's largest B2B startup repository according to the renowned Singularity University, which is a window to accelerate disruptive innovation for large corporations. We are wrapping "everis Next" with consulting services to make the most of the new disruptive business models approaching any industry, including telecoms.

I believe that our vision is disruptive on the one hand and realistic on the other since our core business is solution implementation. We are following this approach with a number of relevant telcos, helping them become Open Telcos, through the definition of their digital strategy, the implementation of digital enablers at all levels – digital channels, digital enabling systems, virtualisation of the core network following an SDN/NFV adoption strategy, etc – or even the set-up of new cross-industry businesses, such as banking, and media.

How does everis keep up-to-date to all these changes?

Our vision is not just to be up-to-date with the market, but to be two steps ahead. The challenges that come from digital apply to telcos, but also to banks, insurance companies, utilities and consulting firms. We have faced these challenges ourselves and invested in building a digital mindset, which is now embedded within our core and our teams. We use the digital paradigms like cloud, social, AI and mobility within our services and our service management methods, so even the more traditional services are delivered innovatively and efficiently. We apply lean start-up and design thinking practices to build, test and deliver our value proposition. We learn from other industries and build new businesses together with some of our long-standing clients. We collaborate with third parties, not just the large vendors but also smaller niche players and disruptive start-ups. We have gone through a similar transformation, essentially, and the lessons learnt from it are very useful to our clients.

One thing that we plan to do in the near future is to increase sharing our thought leadership with the market. We have built open microsites for our "Telco Connected Index" and "everis Next" initiatives, as well as for "everis Cloud" or "everis Moriarty" – our amazing Cognitive Application Development Platform. We intend to work more closely with market associations such as TM Forum, and we are building closer relationship with relevant market research firms and media partners.

During this quarter, we will be delivering a European OTT market report, through European Communications. I think it will be a great demonstration of what I have just described.

What has becoming part of the NTT DATA Group meant for everis?

NTT DATA is a truly global innovator and one of the top 10 systems' companies in the world, and part of the NTT Group. It is a privilege being part of NTT DATA and the NTT family, while still having a great amount of autonomy to drive our business. We have now access to an impressive amount of assets and R&D initiatives that we are leveraging at our customers. This year, NTT DATA will invest more than €50 million on R&D and the NTT Group will invest more than €1.5 billion.

We also have an extended geographical reach that is very useful when working with multinationals. We have a great insight of what is happening in the telco market in Japan, where many trends originate. And it is an ever more exciting privilege to start providing consulting services to other group's companies, something we are already doing, leveraging all the everis world-class consulting expertise.

When everis joined NTT DATA in 2014 we were a €591 million revenue company; three years later we have almost doubled our business, recording €1.03 billion sales in our last financial year. We now have 19,000 employees working across a wide range of industries in 14 countries.

www.everis.com

About Eva Labarta

Eva Labarta was appointed Head of Telecoms Europe at everis last year. Her areas of specialisation include business management, new business development, consulting and IT services. Eva has a degree in Economics and Business from the University of Barcelona and a Master in Business Administration from ESADE.

People will pay more for the best mobile network

TDC Chief Executive Pernille Erenbjerg said people are prepared to pay slightly more to access the best mobile network. The CEO made the comment as mobility service revenues ticked up 3.6 percent to DKK698 million in Q2 thanks to higher mobile voice ARPU and data growth.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COMMUNICATIONS

Content production is for the few, not the many

The Q3 issue of European Communications magazine means two things: our annual OTT/digital content special report is here and the TV industry's IBC event is around the corner. In the former, our survey reveals that telcos continue to struggle to differentiate themselves when it comes to all things content. It is one of the reasons why several of Europe's largest operators have set a marker by investing in content production this year. We investigate the pros and cons of this in more detail in the report, which also features an in-depth interview with Proximus' Director of Content and Media. "The RoI of content production doesn't make sense. We're way better off investing in networks," Stephanie Rockmann says. I sense she speaks for the many, not the few.

This issue is being published in time for the IBC show in Amsterdam and I am keen to see what impact telcos make. 2016 was the first year I have seen network operators making keynote speeches but, as I wrote at the time, they really failed to shine. A look at the conference agenda suggests they haven't been invited back to showcase what they're doing when it comes to content production, so we'll be on the show floor to find out why.

Our c-suite section focuses on the UK and Ireland this issue. O2 UK Chief Executive Mark Evans shares his thoughts on his first year in charge, while eir Chief Marketing Officer Henry Dummer – just 10 months into the job after arriving from Tesco last November – explains how he plans to reposition the operator's brand. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

This issue also features a write-up of a digital transformation roundtable we hosted before the summer. Digital transformation has been one of the industry's biggest buzzwords over the past couple of years, so we invited execs from Manx Telecom, Orange, Telenor and Telia to discuss what it means to them and how their businesses are looking to change.

Enjoy the issue.

Marc Smith, Editor

Editor
Marc Smith
marc.smith@eurocomms.com
T: +44 (0) 207 933 8999
Twitter: @eurocomms

Publisher
Wayne Darroch
WayneD@sjpbusinessmedia.com
T: +44 (0) 207 933 8999

Staff Writer: Alex Sword
alexs@eurocomms.com
T: +44 (0) 207 933 8999

Design and Production: Alex Gold

Account Director: Fidi Neophytou
fidin@sjpbusinessmedia.com
Tel: +44 (0) 207 933 8997

Subscriptions/Circulation
SJP Business Media
PO Box 6009
Thatcham
Berkshire RG19 4TT
United Kingdom

T: +44 (0) 1635 879361
F: +44 (0) 1635 868594
E: europeancomms@circdata.com
W: eurocomms.com

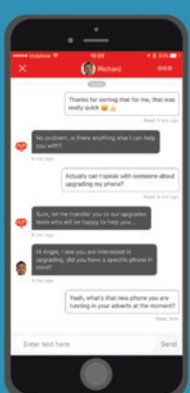
European Communications is published quarterly by:
SJP Business Media,
52-54 Gracechurch Street
London, EC3V 0EH

Opinion

Use zero-rating to turn revenue protection into revenue generation
By Mark Collins, Senior Product Manager, Openet

Q&A

Graham Sutherland has led BT's expanded Business and Public Sector division since it formed last year. He discusses progress to date, Brexit and future opportunities.



Analysis

Vodafone UK reboots in bid to become a forward-thinking customer service brand
Vodafone UK is moving out of recovery mode and going on the offensive, its Director of Customer Services and Operations has claimed.

German telecoms market

Germany is the focus of the second instalment of our feature that picks out key data points from the European telecoms market. The latest stats show that O2 is the leading mobile provider, incumbent Deutsche Telekom dominates broadband and Vodafone is hanging on as the destination of choice for TV customers

Mobile: **42.01 million** (+873,000)

Broadband: **13.04 million** (+265,000)

TV: **3.02 million** (+247,000)

Deutsche Telekom

Mobile: **4.57 million** (+710,000)

Broadband: **4.45 million** (+60,000)

united internet

Mobile: **45.19 million** (+2.05 million)

Broadband: **2.1 million** (-33,000)

O_2

unitymedia

Mobile: **340,000** (-18,300)

Broadband: **3.39 million** (+182,000)

TV: **6.39 million** (-55,900)

DRILLISCH

Mobile:

3.77 million (+768,000)

sky

TV: **5.12 million**

(+350,000)

*Sky figures are for Germany and Austria

vodafone

Mobile: **30.84 million** (+568,000)

Broadband: **6.36 million** (+425,000)

TV: **7.71 million** (-131,000)

Figures, which show customer numbers, are correct as of 30 June 2017. Year-on-year increase/decrease shown in brackets.

Customer engagement: Are we seeing more roses than thorns in the digital garden?

Over recent years, traditional telecommunication services have become increasingly commoditised and undifferentiated, leading to price competition that has driven considerable value out of the industry, writes Dr Janne Ohtonen, Director of Customer Experience Management at Openet.

Frustratingly, dropping prices, while undermining revenue, has not helped Communications Service Providers (CSPs) to hang on to their customers. Churn rates continue to be stubbornly high and CSPs continue to rely on contracts that lock customers in for 12-, 24- or even 36-month periods. While many customers see these as highly restrictive, CSPs feel they have little choice if they are to sustain a viable business. So, why do CSPs struggle to retain their customers and is there a more enlightened and rewarding approach than constantly ratcheting down prices?

In this challenging competitive landscape, customer experience has become a key battlefront - a way to retain customers that is less easily imitated by competitors than service or pricing innovation, and more likely to extend lifetime value. Delivering great customer experience isn't easy, however, and CSPs face many challenges in meeting customer expectations and improving the quality of their engagement. Success to date has been evident in the low Net Promoter Scores (NPS) that CSPs typically record – invariably well to the bottom of cross-industry comparisons – as well as customer attitudes that tend to be lukewarm at best in periodic surveys of customer satisfaction. Customer service is often poor enough that regulators have had to step in; in the UK, for example, Ofcom has imposed multimillion pound penalties on leading CSPs for failings in customer billing.

The need to maintain and work with older systems that weren't designed for agile service creation, real-time responsiveness or to enable speed to market has both slowed down service innovation and made it harder for long-established CSPs to offer consistent and coherent customer support. It also doesn't help that many are not even aware of customer issues until they receive complaints and/or see themselves being discussed in unflattering terms in the national press and on social media.

New operational solutions are needed quickly – solutions that will enable operators to deliver and, just as importantly, support services quickly and economically. Few CSPs can afford a nine-to-eighteen month deployment cycle at multimillion dollar cost when markets can shift radically in the space of just a few weeks. Customers are highly sensitive to market changes, particularly in these social media days, and will take any opportunity to switch to an attractive proposition from a competing CSP as soon as their contracts allow them to.

Undoubtedly, CSPs have much to gain and little to lose by taking digital customer engagement seriously and deploying solutions that will help them address their customers' needs in a more agile, responsive and engaging way – not least as customer experience improvements are clearly shown to have a direct positive impact on bottom-line results.

The challenges and opportunities of improved customer engagement

In mid-2017, Openet, with European Communications, surveyed the telecoms industry to establish the current state of customer engagement. The resulting report identified key issues and challenges, made industry-specific recommendations and drew some interesting conclusions.

For example, over 50 CSPs believed themselves to be performing well regarding market relevance and ease of use, but more poorly in driving the positive emotional responses that are vital for customer retention in all customer-facing industries today. This view conflicts somewhat with other research reports, such as the UK CSI, which reveal that end-customers are more inclined to see CSPs as problematic to deal with.

Regarding customer service channels, self-service websites, mobile apps and call centres are currently seen as performing relatively well and making the greatest contribution to a competitive customer experience – perhaps not surprising, as these channels are likely to have seen the highest investments by most CSPs in recent years.

Self-service websites and apps are typically rated highly for their ability to serve customers independent of time and location. Good as they are, however, these channels are rarely able to deliver consistent and comprehensive customer service. While an experienced agent can help the customer to resolve issues and meet their service needs, it's still rare for a mobile app or web service to provide the same breadth and depth of service.

This lack of consistency generates great and ongoing dissatisfaction amongst telecoms customers. One of the

biggest steps that European CSPs could take to improve customer satisfaction (CSAT) scores would be consistency of service, and more broadly functional self-service channels would certainly be a step in the right direction.

According to the Openet/European Communications report, the key challenges faced by CSPs in delivering competitive customer engagement today are:

• **Network coverage and performance issues.** According to Ofcom, almost nine in 10 broadband customers were satisfied with the reliability of their service, and 83 percent were satisfied with their online speeds. For mobile, 86 percent of customers were satisfied with their coverage. Though these numbers may look high as percentages, it leaves millions of customers unsatisfied across all operators and networks.

• **Poor product and service quality.** One investigation by Ofcom found that over 10,000 pay-as-you-go customers lost out when Vodafone failed to credit their accounts after they topped up their mobile phone credit. The affected customers collectively lost £150,000 over a 17-month period.

• **Inconsistent call centre experiences.** In the UK, on average, landline telephone and broadband customers had to wait over twice as long to speak to a customer services advisor (2 minutes, 51 seconds) than mobile customers (1 minute). Calls to technical support took two and a half minutes longer on average to answer than sales calls.

• **Meeting customer expectations of service quality.** As recent research quoted in this article has pointed out, there is a big variation between companies on how they meet customer expectations with their service quality.

• **Poorly contextualised customer communications.** Barely half of broadband and mobile customers who complained to their provider were satisfied overall with complaint handling (56 percent and 57 percent respectively) and much of their dissatisfaction derived from communication issues.

These challenges are not insurmountable, however. When we look outside telecoms, we see that many companies are believed to engage well with their customers. Our respondents cited, in particular, Amazon for its remarkable delivery logistics, Apple for product usability and Deutsche Telekom for innovative customer engagement approaches (such as Europe's biggest 360-degrees YouTuber meetup). These and other examples of innovative customer value and operational efficiency without compromising customer experience suggest that although things may not look so rosy today, there is great potential for improvement in the near future.

The financial benefits of better customer engagement have been well-established in various bodies of research. My book, The 5-Star Customer Experience, published in 2017, demonstrates that the higher the customer experience score, the greater the impact on annual revenue per customer. This is a view supported by Capgemini's research, showing that companies with a high NPS outperform their lower performing peers in revenue growth by 33 percent on average.

The Openet/European Communications research showed that 70 percent of CSPs are persuaded that customers are willing to pay more for a better experience. Unveiling TDC's Q2 2017 financials, the Chief Executive said that people are prepared to pay more to access the best mobile network experience. Since for many CSPs network experience is one of the highest drivers of overall customer experience satisfaction, it makes sense to work on the network to improve it.

Clearly, CSPs need to move away from price competition and locking customers into rigid contracts. They can certainly take steps to work on the key issues of network and customer experience quality in 2017, in particular through agile technology approaches such as micro-services and DevOps, which, backed with flexible back office and network infrastructure, enable companies to respond more quickly to the ever-changing demands of the market. By combining smart, real-time data processing capabilities with self-care user interfaces, the door is open for CSPs to create much greater customer satisfaction as well as significantly reduced customer and employee effort across all channels.

Improve digital engagement

Openet recently created a playbook of ideas to improve digital engagement in telecommunications. If you're looking for more help in achieving your customer engagement goals, download it from the Openet website: www.openet.com/learning-centre

THE 5-STAR CUSTOMER EXPERIENCE

Three Secrets to Providing Phenomenal Customer Service

DR. JANNE OHTONEN

The C-Suite

Interviews with senior execs from Europe's top operators

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O2 UK Chief Exec: The future is mobile and we're in the best position to succeed

Mark Evans has just completed his first year in charge of the UK's second largest mobile operator. He tells Marc Smith why customer experience, not convergence, is the future

Mark Evans says quad-play will be viewed as a curious moment in telecoms history

"Busy" is the word Mark Evans chooses to describe his first 12 months at the helm of O2 UK. So busy in fact, that he is having to do this interview from his holiday sun lounger. Our original meeting got cancelled when Evans, who stepped up to replace Verizon-bound Ronan Dunne last August, was summoned to Madrid, home of O2's parent Telefónica. It is perhaps this that prompts him to say that what has most surprised him during his inaugural year is "the amount of engagement that the job requires with a variety of different stakeholders, including journalists!"

Less surprising is what O2's former CFO regards as the biggest disappointment of his first year in charge – issues around spectrum. As this interview takes place, the UK's mobile operator community is throwing around legal threats in relation to the terms of an upcoming spectrum auction – a mixture of bandwidth for 4G and 5G services.

Three has launched court action over a 37 percent cap to the total spectrum any operator can hold by 2020. It wants a lower cap but EE, which responded with its own threat to head to the courts, wants the cap to be scrapped entirely. O2 is sympathetic to Three's argument, but has no plans to get lawyers involved.

Evans dismisses both legal threats as "self-serving" and says he is more concerned with getting the part of the auction that relates to "immediately useable" spectrum underway as quickly as possible.

He says Ofcom "can and must act" to auction this 2.3GHz spectrum "either on a permanent or temporary basis". This would allow a legal process in relation to the 3.4GHz spectrum, earmarked for 5G-related services, to be contested separately, he argues.

"The UK mobile market remains imbalanced in terms of spectrum holdings," Evans says. "Spectrum asymmetry is and will continue to be one of the key areas that will determine whether the UK has a viable long-term, competitive mobile market. It is vital that Ofcom remains focused on ending the imbalanced allocation of spectrum and that the regulatory environment remains consistent and predictable. Failure to do so risks losing an opportunity to promote consumer choice, competition and investment in the sector."

No need for fixed

O2's position hinges on two key points. First, it holds just 14 percent of the UK's current useable mobile spectrum, which is less than Three (15 percent), Vodafone (29 percent) and BT/EE (42 percent). Second, having seen a previous attempt to sell the company to Three blocked by the European Commission, Telefónica is now looking at an IPO of its UK subsidiary in an effort to pay down its debt pile. However, O2 will not go public before its Spain-based parent knows what its future spectrum holding in the UK looks like. Evans says his relationship with Madrid is "very strong and supportive", and that Telefónica CEO José María Alvarez-Pallete and new COO Ángel Vilá both have "a huge passion and interest in the UK market".

He denies that the uncertainty about O2's future – let's not forget the deal with Three dates back to March 2015 – has affected its performance. "You only need to look at our first half financial results to see how we continue to deliver a winning proposition for our shareholder," he says. Indeed, like-for-like sales rose 2.3 percent year-on-year in the six months to June to €3.21 billion, while operating income increased 2.2 percent to €849 million. However, the operator's mobile customer base fell from 25.5 million to 25.1 million as growth in contract subscribers could not offset a decline in the prepay base. This more or less wiped out the 444,000 customers O2 gained during 2016, when its market share slipped slightly from 27.2 percent to 26.8 percent.

Evans says: "We've strengthened our focus on having the customer at the heart of our business, whether that be through the increased investment in our network and services (up 19 percent in 2016 versus 2015), reinforcing O2 Priority through our renewed deals for The O2, O2 Academies and England Rugby, increasing customer interactions with our Gurus (up 177 percent) or strengthening our position in both the public and private sectors."

O2 remains the second largest mobile player in terms of subscribers behind EE, but Evans claims he is not focused on catching its larger rival. "To us it's not about being big, it's about putting the customer first," he explains. "Other operators have been chasing us in terms of customer loyalty and satisfaction so we're comfortable with our position in the market. We respond first and foremost to what our customers need and invest heavily in the customer experience. That is, and always has been, our differentiator."

The CEO says the biggest success of his first 12 months in charge has been a restructure designed "to really embed our strategy of customer-led mobile first". Yet questions remain over whether O2 can prosper in the long term as a mobile-only player in a market that continues to move towards the provision of converged services.

Evans responds with a barrage of stats; he cites O2-commissioned research showing that mobile plays a far more important role in peoples' lives than fixed line – 48 percent versus 10 percent – and that 46 percent of people "cannot live without mobile", compared to just 15 percent who say the same for fixed line.

He adds: "To put it another way, our competitors need to be in mobile, but we don't need to be in fixed." Evans says BT buying EE and Sky launching a mobile service back up his argument.

"I believe in time that quad-play will be seen as a curious moment in telecoms history - especially with the introduction of 5G in 2020," he adds.

Simple business model

Given this, it would not be a surprise if O2 launched a fixed-wireless offering down the line. But Evans is coy when asked to speculate about what 5G services may be in the pipeline. "I'm excited about many things that 5G will bring," he says. "5G will build on the foundations already created of 2G, 3G and 4G as higher data speeds and increased capacity will herald more options for Internet of Things, whether for smart homes, smart cities or connected cars."

O2 has already dabbled in one of these when it became the first UK operator to launch a smart home service in September 2016. Details of how the offering, based on AT&T's Digital Life platform, has fared are scant. Evans describes the launch as "a commercial trial", given it was only on offer to select customers in London. He talks up unspecified "positive results" and gaining "the learnings we needed to refine our offer and sales model".

He adds: "The O2 Home commercial trial has helped us understand the importance of advice and assisted selling at this early stage of market evolution. While awareness of smart home is growing fast, engagement and consideration to purchase is lower in some segments."

Regardless of his caginess, the CEO says the service "absolutely" has a future. "Over the next decade connectivity and intelligence will become built into everything we use and interact with," he explains. "Within this context there's no doubt that the connected home will be one of the big consumer categories."

O2 Home is one of a number of so-called digital services that the company has launched, not all successfully. O2 Store & Share and O2 Guard closed down in May, but car insurance product O2 Drive continues to operate. But again precise details of how it is performing are hard to come by. Evans says: "I believe it's critical that we innovate our offers to play a broader role in helping our customers. This in turn will help increase differentiation and loyalty for our mobile business as well as drive new revenues. It's my ambition to take O2 into a new adjacent category at scale and I'm pleased with the initial progress we've made with innovative new services like O2 Home and O2 Drive."

Other strings to O2's bow include community-based MVNO giffgaff and Tesco Mobile, a joint venture with the supermarket chain. Evans oversees the former and is Chairman of the latter. He says both businesses demonstrate that O2 "is not an island". He adds: "We recognise that there are market segments that can be better reached through partnerships. Tesco has a very customer centric vision for shoppers, giffgaff presents a completely different model for mobile phone ownership. Both ventures have been successful as they complement our own O2 direct channels and attract customers we may not otherwise be able to reach."

All told, Evans is in an optimistic mood. "I believe O2 is the best-positioned operator in the UK market to capture the opportunities of a data-hungry economy, fuelled by the best interests of the customer," he says. "The future is mobile and our simple business model allows us to apply a relentless focus on the mobile needs of our customers."

Things could change very quickly of course, particularly if O2 doesn't get what it needs in the spectrum auction and uncertainty over its ownership structure continues. Such concerns, however, are clearly far from Evans' mind as he relaxes after what he regards as a job well done.

eir CMO: Marketing the art of the possible

Irish operator eir is reinventing itself again, this time by ditching its long-established Meteor brand and uniting its quad-play interests as a single "brand of possibility". The company's Group Marketing Director Henry Dummer tells all to James Blackman

Irish operator eir is on its third major rebranding project in a little over two years, having simplified the eircom brand in late 2015, and brought Setanta Sports under its own moniker last summer. This time it's different, reckons Henry Dummer, the company's new Group Marketing Director.

Its latest move to reposition the brand – which includes dropping the name of prepay provider Meteor altogether, and uniting its parallel interests around a more comprehensive and complementary quad-play proposition – has been in the works since the start of the year, and has delved deep into the company's character to define a new creative platform for its operations to rally around.

Its marketing spend, estimated at €3-€4 million for its Q1 through-the-line activity, is serious and mounting, as befits such an ambitious project. "We now have one big brand for our quad-play ambitions, with strong attributes in home broadband, content and mobile," says Dummer.

Dummer was recruited at the end of November 2016 to mastermind the project. His appointment, from Tesco Ireland, where he was Marketing Director for six years, was part of an organisational restructure that effectively foretold its external realignment: eir conflated its small business and consumer divisions as a single operational unit, and Dummer was handed charge of a new centralised marketing function, covering everything.

He arrived just as the Christmas rush was in full swing. "That was the first thing I encountered," he says. But the seasonal heat of Christmas trading was hardly new. "I was going from fire to fire," he says, suggesting there are "more parallels between the sectors than you think – even if one is about a Sunday joint [of meat], and the other's about a mobile phone".

His new remit, to fan the flames of brand loyalty whilst keeping sales red hot, was rather like his old one. He had plotted just such a brand narrative at Tesco Ireland. "It was the same challenge, to build a brand while maintaining sales – and to bring a business together around a new approach."

Nevertheless, the complexity of the task prompted him to seek familiar faces among the supporting cast. Long-standing strategic partner DDF-H&B was dropped in January for creative agency Rothco, which had supplied Dummer with the creative spark and strategic support on the Tesco account.

"It was reassuring to go from one challenge to the other and see I had the same job to do," he says. "At Tesco, it was a challenge to create that confidence. But we were very successful. When I left, the brand had great momentum in Ireland."

In search of a common truth

At the start of the year, the eir management team was already nurturing a long-held ambition to unite the group's various business units, and a vague inclination to ditch its Meteor brand. It just lacked a definitive position, and a carefully orchestrated game plan.

"That was one of the reasons I joined – this great ambition and desire to build a well loved brand," explains Dummer. "The timing was less defined. They knew what they wanted, but they were less sure how to achieve it."

Dummer took the diversity of the business, and sought a "common truth" within its broad remit, leading he says to a "common glue" to bind it. With the agency, he set about interviewing every member of staff – from the shop floor to the boardroom – in an attempt to boil down the essence of their pride and passion in the business.

"That was the most powerful thing we did," he says. The key was to ask the right question – to allow staff to zoom out, and open up. "Ask about their passion for the brand, and they are more reflective. You get a different level of response," he says.

The result? "The common theme was this idea we are a brand of possibility – it is not about what this company makes happen, but what it makes possible; what people want to do with our products and services. That's where people found their common sense of pride," he explains.

The subsequent brand position, set out in the grammatically curious tagline Let's Make Possible, informs all of the company's future activity, and defines its advertising creative and marketing messages. "All of our game planning for the year ahead comes back to this question of what we're making possible – of getting everyone to explore this big idea," says Dummer.

The new tagline replaces the Live Life On Eir slogan, introduced with the company's rebranding from eircom in late 2015. "That was an invitation to join us; this is about making possibilities happen," he says.

Derived from 50 hours of staff interviews, it revealed the company's special character in the Irish market. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

Its affinity with its home market is total, he observes. "What we saw in the interviews was this deep desire to make a meaningful impact." He points to its

Henry Drummer

mission to bring fibre broadband to rural Ireland, including areas often made up of one-off housing and farms. The company is investing €30 million in County Kerry, in the country's far southwest, for example, also establishing an Innovation Hub in the county town of Dingle.

"Remote homes in deepest County Kerry will get download speeds equivalent to modern apartments in Tokyo. We are the only brand in Ireland doing that. It comes from this latent passion, which we've never articulated, to make a difference in our home market, our only market," he explains.

"One of the country's big social questions is this migration to big cities, and the challenge for rural communities. eir is breaking with the pack, and investing in fibre rollout in rural communities as well."

But "making possible" is not just about socially minded infrastructure projects; it is also about showing market leadership and expanding customer choice. eir is the first Irish mobile operator to launch Wi-Fi calling, points out Dummer, while eir Sports is the only TV provider showing Gaelic football.

Meteor downed

The removal, on 8 September, of Meteor as a mobile brand – from shops, phones, websites and bills – has been carefully plotted into the unfurling brand narrative. Meteor, around for 16 years, is third in the prepay market behind Vodafone and Three. By contrast, eir Mobile is a marginal post-pay player, which gets bundled with broadband.

"The smaller brand has swallowed the bigger one," observes Dummer, from the point of view of market watchers in the mobile space. Of course, mobile is only a single line of its business. In parallel, eir leads the market for broadband, from Virgin and Sky, and has taken a position as the country's top sports pay-TV brand following the acquisition of Setanta Sports in late 2015, and as a challenger brand for TV more broadly.

The withdrawal of the Meteor brand, on the cards anyway, is logical in the context of its parent's broader scope, and more premium offers in broadband, TV and content. "Meteor is a resilient brand, it is holding its own, and it has a very loyal fan base," says Dummer. "But when I looked at the bigger picture, to position the eir brand as a distinctive market leader for quad-play, it was clear it brought limitations."

The marketing narrative has been carefully organised over the past six months to raise the brand's profile in mobile, by making clear related benefits such as sports content and bundled connectivity, whilst also re-positioning the parent brand itself, climaxing with the multi-million euro advertising campaign that started back in July.

As a sub-plot, it has been required to make clear the lineage and perks for its large and loyal base of Meteor customers ahead of the changeover. "We have passed on the premium benefits of being part of the eir Group to the Meteor base. They have seen good news in the months to September."

But eir has already bombarded its home market with grand statements, including rebranding the business from eircom in late 2015, with a €16 million ad campaign and a chest-thumping Gaelic theme song, and the rebranding of Setanta Sports as eir Sport a year ago, attended by a promotional below-the-line campaign.

Will the latest campaign strike a deeper chord, so Irish customers perceive eir as the home team among multi-play telecoms providers, developing the country's digital infrastructure and services? "We have done a very good job in the past two years, but we haven't, perhaps, had a really crisp position, and all of these consumer impacts have lacked a common glue as a consequence," says Dummer.

"By having a common narrative, and a more consistent creative platform, we have an opportunity to communicate that. But we have to build that brand relationship, so consumers see the benefits of the brand making things possible for them – in a distinct way, in Ireland and for Ireland. That is our opportunity." EC

Amdocs: The intelligent approach to improved operations

In a rapidly transforming market, service providers need to continuously innovate, streamline new feature delivery and automate operations to drive step changes in the customer experience. Digital strategies including DevOps, cloud, artificial intelligence (AI) and IT modernisation help to reduce time to market and improve business agility, efficiency, service quality and customer and operational insight.

But that's a lot for an established operator to handle. Eric Updyke, Group President of Amdocs Services, gives the industry insider's view of where the majority of operators are today, the issues they continue to grapple with and shares Amdocs' approach to realising results quickly.

European Communications: Where are the majority of European operators today in their digital journey, their ability to harness the latest technologies available to them, and in being able to deliver the kind of customer proposition and experience they're aiming for?

Eric Updyke: It's still early days. If you look back 5-10 years, most service providers were operationally reactive, driven by operational KPIs, and supported by multiple manual processes. Most of their technology infrastructure was housed on premise, and was siloed in serving the different parts of the business. Now, we're starting to see a less reactive scenario, the start of self-healing networks, more automated or semi-automated processes, and more business-led KPIs. Meanwhile the IT and network worlds are converging and moving to the cloud. Most operators aren't even halfway there. There's still a long way to go.

What have been the main barriers to progress?

The new world is a complex one, and service providers can struggle to know where to start. Some of our customers look to what Netflix has achieved, and believe that should be their objective or aspiration. But even Netflix took 7-8 years to make a success of what it's doing, and that was without the legacy of a traditional telco. So it's not a realistic comparison. Operators don't need to be any less ambitious, but their opportunities are likely to differ. We remind them of the huge competitive advantage they have – the rich data they have accumulated. Their challenge is to harness this data.

You can't browse a publication or news feed at the moment without being bombarded with predictions about artificial intelligence and how it will change everything. How is AI relevant to service providers' digital transformation journey, and where should they be focusing their attention?

Although AI isn't a new concept, momentum is rapidly accelerating. It's something we are investing in heavily. AI was behind the launch of two key strategic initiatives for Amdocs – intelligent operations and aia. Launched in February at Mobile World Congress, aia is a digital intelligence platform that enables telcos to use real-time data to feed processes and business activity. In terms of intelligent operations, we use AI capabilities such as machine learning to drive efficiency as well as advanced analytics to provide new levels of insight, finding opportunities for continuous and rapid improvements.

Take predictive analytics for example. If a system is about to run out of memory, as a pre-emptive measure it can close apps or take other appropriate action to protect the customer experience. Predictive analytics can also help operators deliver the most appropriate products to the right people at the best time through the best channel. Our aia offering and intelligent operations bring all of this to life.

In terms of where operators are with all of this at the moment, many are anxious. There are technology suppliers selling them slick stories they want to believe, but the transition does take a bit of time so it's important to take this one step at a time.

Could it be that operators are preoccupied with automated assistants like Alexa, seeing this type of development as the key to exploiting AI?

Alexa, IBM Watson, Cortana and so on are something we can help leverage, but these are just the engines. Successfully exploiting AI needs domain expertise, i.e.

an understanding of what this means and how it will work in communications service provisioning. It's about using the right data in the right situation with the right business processes to deliver something meaningful and of value. That's where Amdocs' Services organisation comes in, and why we're winning ground from large, generic systems integrators who don't have the industry breadth and depth of experience in driving value from intelligence.

Can you give some examples of the kinds of projects you've been working on involving AI and intelligent operations?
In developing and emerging markets, Tier-1 operators have come to us because they've been disillusioned with their experiences with generic systems integrators. Although these technology companies are considered to be leaders in AI, when it came down to it they had the engines but not the relevant industry expertise. We talk about 'economies of focus' rather than 'economies of scale', for instance – starting with small projects and doing something well, rather than trying to ramp up everything at once.

And we get results. Within just a couple of months, we've been able to help operators automate key processes to accelerate billing processing and improve accuracy – with better results than their previous suppliers could have achieved over a period of years. In the case of a large service provider, with over 100 million subscribers and more than 90 bill cycles, we were able to run these with 100 percent accuracy in under 48 hours, something that was inconceivable previously. This has given them a faster path to revenue, improved cash flow, reduced customer care burden (due to more accurate billing), and lowered churn.

In more developed markets, we've helped service providers see beyond the Netflix ideal and exploit the huge advantage they have in their existing data, using a bimodal approach to IT in which legacy systems run alongside innovative digital projects.

Our experience shows that one of the things that customers value most is execution – delivering on the promise.

In the case of a Tier-0 North American operator, we provided an infrastructure-as-a-service solution delivered using DevOps methodology. They needed to move very fast, so we recommended a cloud-enabled, virtualised approach which meant they could launch within 90 days, and with a 70 percent reduction in hardware and software costs compared to traditional systems provisioning. They used our next-generation suite of products to launch solutions for each different aspect of their business, starting with enterprise and more recently consumer and SMEs.

Where an operator's priority is to enable autonomous operations, what is their best approach?
There are three key elements: real-time data visibility; accurate predictions via analytics to enable pre-emptive alerts; and then pre-emptive automation based on these predictions. This requires that the system is able to continuously learn so that it increasingly gets better over time.

What's the key to delivering results within an acceptable timeframe?
We advocate a bimodal approach, in which we find a way to harness the rich data and insight from an operator's legacy systems and expose it so they can achieve the business agility they need at the front end of the business. It isn't a case of abandoning legacy investments, but being able to draw from them in a more efficient and profitable way. Key enablers for this would be microservices and DevOps methodologies.

When we talk about microservices, we refer to modularising key aspects of software and exposing APIs and some of the critical business processes, to meet the needs of fast-moving front-end systems – without having to rewrite or adapt back-office systems. By investing in microservices, operators can start to expose the benefits of the rich information they are sitting on, and achieve the business agility they want (the ability to react much more quickly to opportunities).

In terms of DevOps, we mean a mapped-out journey to greater business agility which starts with quick wins, but works towards greater transformation, acknowledging that systems from multiple vendors will be involved but that someone needs to take the lead.

What does that mean in practice?
It means seeing through the journey, end-to-end. We've always taken accountability for the impact of the solutions and services we provide. We take a holistic view and harness automation to take everything up a gear.

The benefits of automation in network self-healing, pre-emptive intervention and the ability to operate with zero-touch efficiency are becoming increasingly clear. What other benefits can service providers expect from intelligent operations?
Removing the scope for human error results in a higher-quality customer service experience. Then there is the increased speed which operators crave. Aided by DevOps-driven release automation and agile deployment via the cloud, service providers can expect to launch new products and services in days rather than months. They can also bring partners onboard much more swiftly. And legacy systems become an asset, rather than a disadvantage.

What final advice do you have for operators who now need to turn their vision into something more tangible?
Service providers need to consider carefully with whom to partner. As with anything else, success doesn't rely solely on the technology. It's what you do with it, how you do it and in what context. That means working with someone who not only has the technical prowess, but who can draw on a broad range of industry experience and best practices to ensure timely and sustainable results.
www.amdocs.com

IBC hails golden age of broadcasting on gold anniversary

IBC, the world's leading media, entertainment and technology show, celebrates its 50th anniversary this year, writes Michael Crimp, CEO of IBC. While the broadcast landscape has been transformed in that time, the show still seeks to be the leading global forum where the real issues of the industry are discussed and new strategies developed. Back in 1967 the founders of IBC knew that to be a success the event had to have three strands: a comprehensive exhibition, a visionary conference, and the networking opportunities to share ideas. Fifty years on we have a huge amount to talk about: from Ultra HD to 5G connectivity; from IP to cyber security. And IBC is still the best place to do that.

This year's conference is subtitled Truth, Trust and Transformation, and has five tracks running over five days. Session topics range from the deeply technical, like new codec design, to the topical and strategic, like "fake news". Broadcasters have traditionally been the trusted brand for news: is the era of social media and universal internet access changing that?

Our conference theme has resonances in other ways than the obvious, too. One of the challenges of the transition to IP connectivity is the risk that the media industry will become a major target for malware and hackers. As the transport platform becomes more open, the more we need to focus on cyber security and the intrinsic design of safe, secure systems.

Platforms for debate

Issues around OTT and social media delivery run right through the conference. Sometimes seen as "disruptive", though probably "transformative" is the better word, it brings new challenges for creativity and business. The keynote session from Brian Sullivan, President of the digital consumer group at Fox, looks at these challenges, or as he says: "In a digital world the consumer has the power. Deal with it."

The Technology Forward Keynote, 'What's Happening in VR, AR and Mixed Reality', is delivered by Rikard Steiber, President, Viveport and SVP Virtual Reality, HTC, who will look at the emerging swathe of consumer devices and services, as well as showcasing successful VR experiences across platforms.

New this year is the C-Tech Summit: two days of specialist presentations and debates, presented on the same behind-closed-doors basis as the Leaders' Summit. The event will provide technological debate at a strategic level, aiming to help C-level executives understand the implications for business transformation. Friday's session will discuss the critical issue of cyber security, while on Saturday it will be the possibilities of 5G and persistent, universal high speed connectivity.

We have also added the biggest temporary structure we have ever built for an IBC to house Hall 14, dedicated to Content Everywhere. This area combines a curated exhibition with a Hub Theatre and other features specifically designed to help visitors expand their knowledge and understanding of the latest trends, strategies and developments in online TV and video.

In addition we will present the IP Showcase. IP is no longer the future – real-time IP for production, playout and contribution is a practical, flexible, efficient reality that is rapidly taking hold in mainstream broadcast operations. The IP Showcase will offer demonstrations, real-world scenarios and education sessions, showing the full potential of IP workflows.

There will be many opportunities around the show for visitors to immerse themselves in cutting edge technologies and learn about the accelerating trends that are enhancing, customising or otherwise transforming the user experience (UX). The Business Transformation conference session entitled 'Broadcast is about to be Transformed' sees speakers from Google, Freeview Australia, DMC and DTG discussing the myriad disruptions currently facing broadcast on all fronts, from IP-only delivery to personalised user experiences, while the series of Tech Talks on Sunday 17 September also features several must-see sessions that step further into the future.

We've come a long way since 1967; maybe this year's IBC will give us a glimpse of what the next 50 years will bring.

show.ibc.org

Michael Crimp, CEO, IBC

Special report
DIGITAL CONTENT


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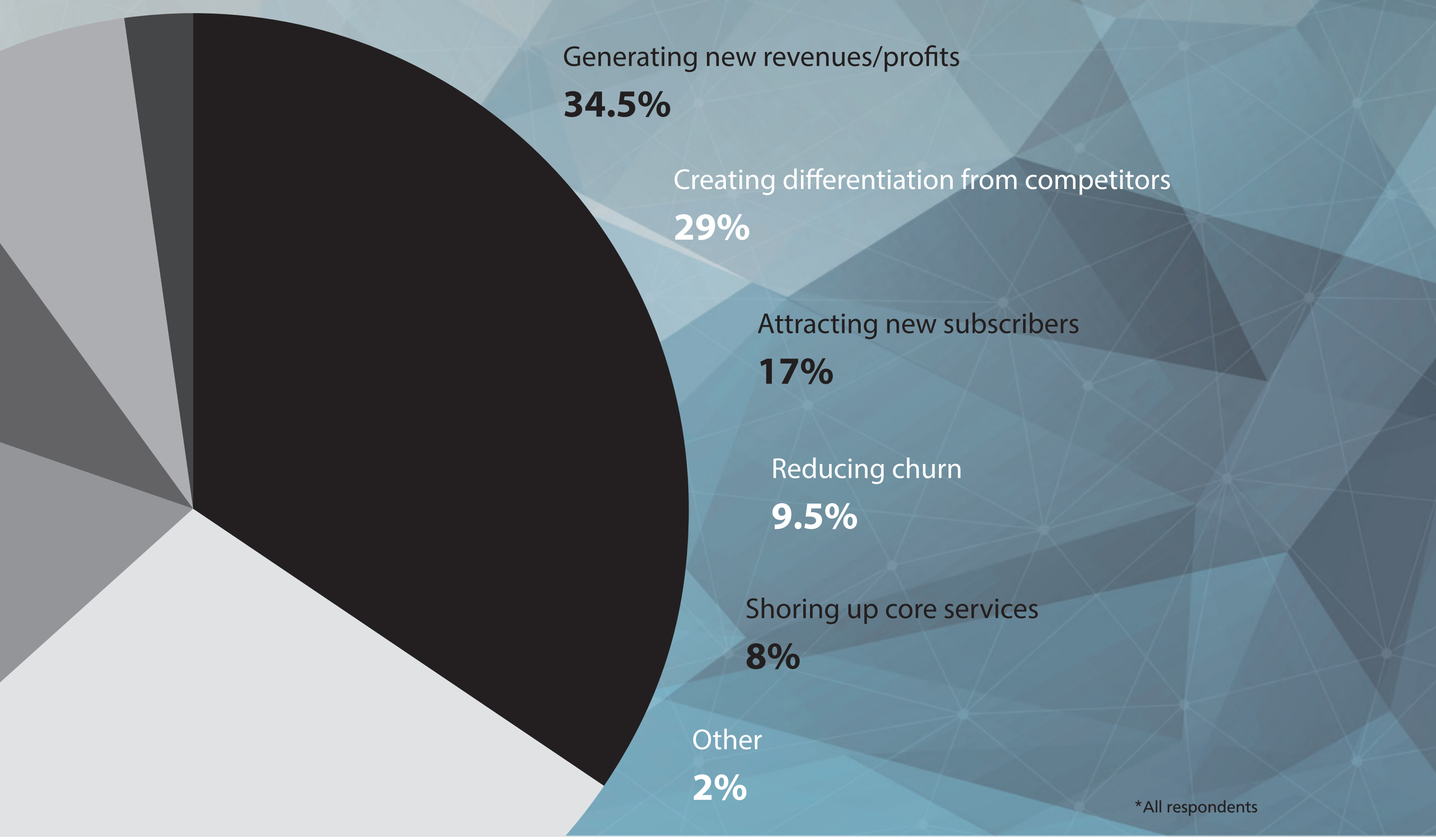
Q3 survey: Struggle for financial gain, differentiation to be continued…

The telecoms industry thinks drama, film and sport can deliver revenues and profits, regards Netflix as operators' biggest competitor and says differentiation is the biggest challenge to successful content strategies. These are the headline findings from European Communications' latest annual OTT/digital content survey, which polled 152 people in June and July 2017.

Generating new revenues and profits overtook creating differentiation as the main driver for operators providing content this year. The latter dropped 12 percentage points versus last year's survey, but was top when it came to the biggest challenge respondents think the industry faces. Operators seem to agree with the wider industry, given just eight percent describe their offering as "very differentiated" from competitors.

Operators also seem to be in sync with the rest of the industry in terms of what type of content is the most important. The industry at large thinks drama and film is the most valuable,

What do you regard as the main driver for operators providing content?



while over 71 percent of operators say they offer this type of content. This is interesting, given how the industry views Netflix – a company telcos continue to get into bed with – as operators' biggest competitor in the field.

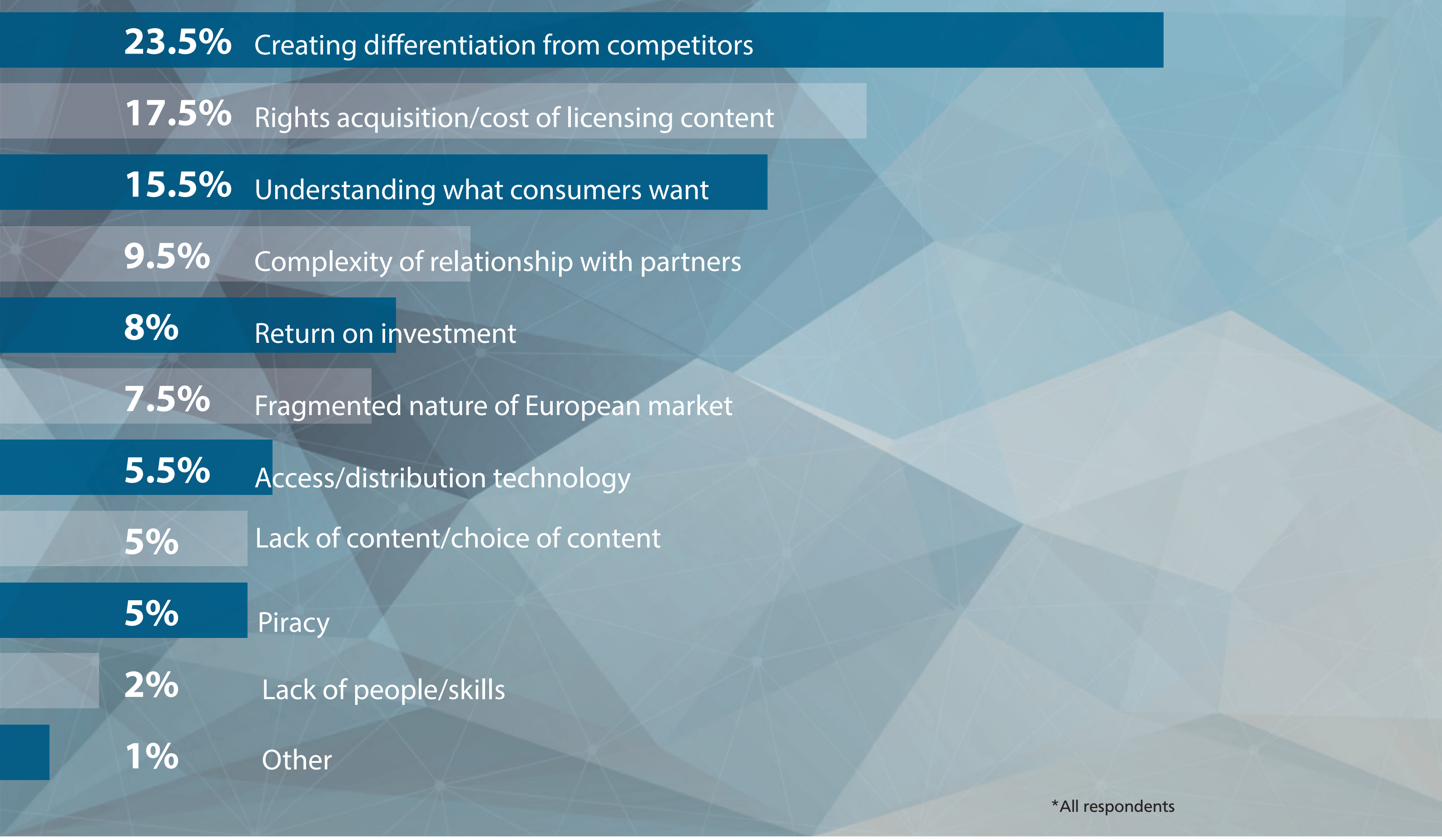
However, one respondent said: "There is no single 'most valuable' content to offer, just as there is no single one target group for digital content as such. In order for a telco brand to lock customers' attention and own a lasting client relationship, telcos ideally need to offer the complete portfolio of digital entertainment content."

There appears more work still to be done by operators' content teams to persuade the wider business that their efforts are bearing fruit. A significant number of operator respondents indicated they were ambivalent as to whether progress had been made in terms of strategy during the past 12 months and as to whether they are impressed with what's on offer to subscribers. Further, more operators said the content they provide is not providing any return on investment than those who said it is generating a significant RoI.

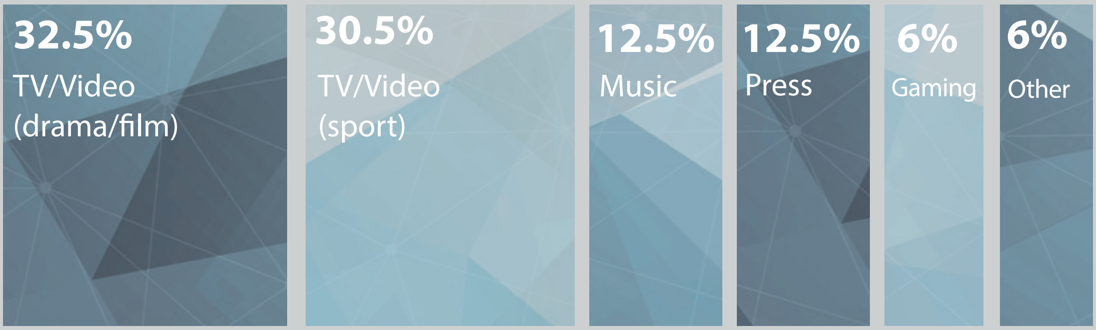
We also asked two new questions this year: the majority of operators think offering zero-rated content on mobile is important to their overall strategies, while catch-up and VoD offerings are expected to be the most popular methods of consumption by 2020.

You can read the full results of the survey over the next few pages. Of the 152 respondents to our online survey, 39 percent were operators and 30 percent were vendors. The remaining 31 percent of respondents work for other interested third parties, including analysts, consultants and regulators. Sixty nine percent of respondents were based in Europe, 15 percent in Asia-Pacific and nine percent in North America. The remainder were split evenly between the Middle East and Africa, and South America.

What do you regard as the biggest challenge to the success of operators' digital content strategies?

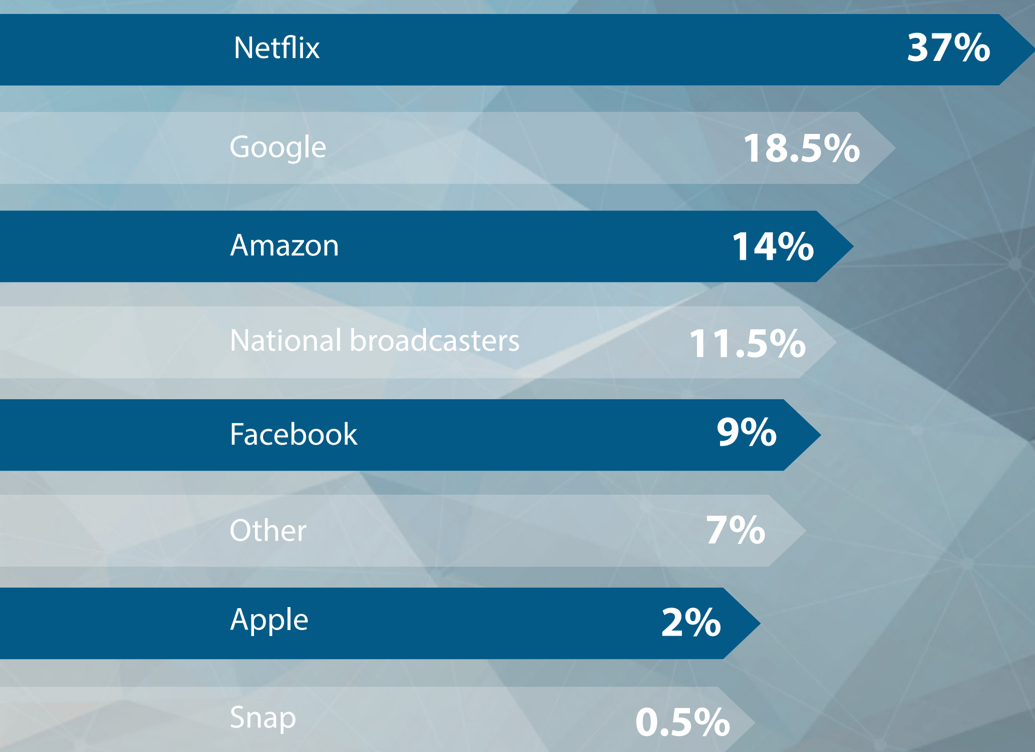


Which type of content do you regard as the most valuable to offer subscribers?

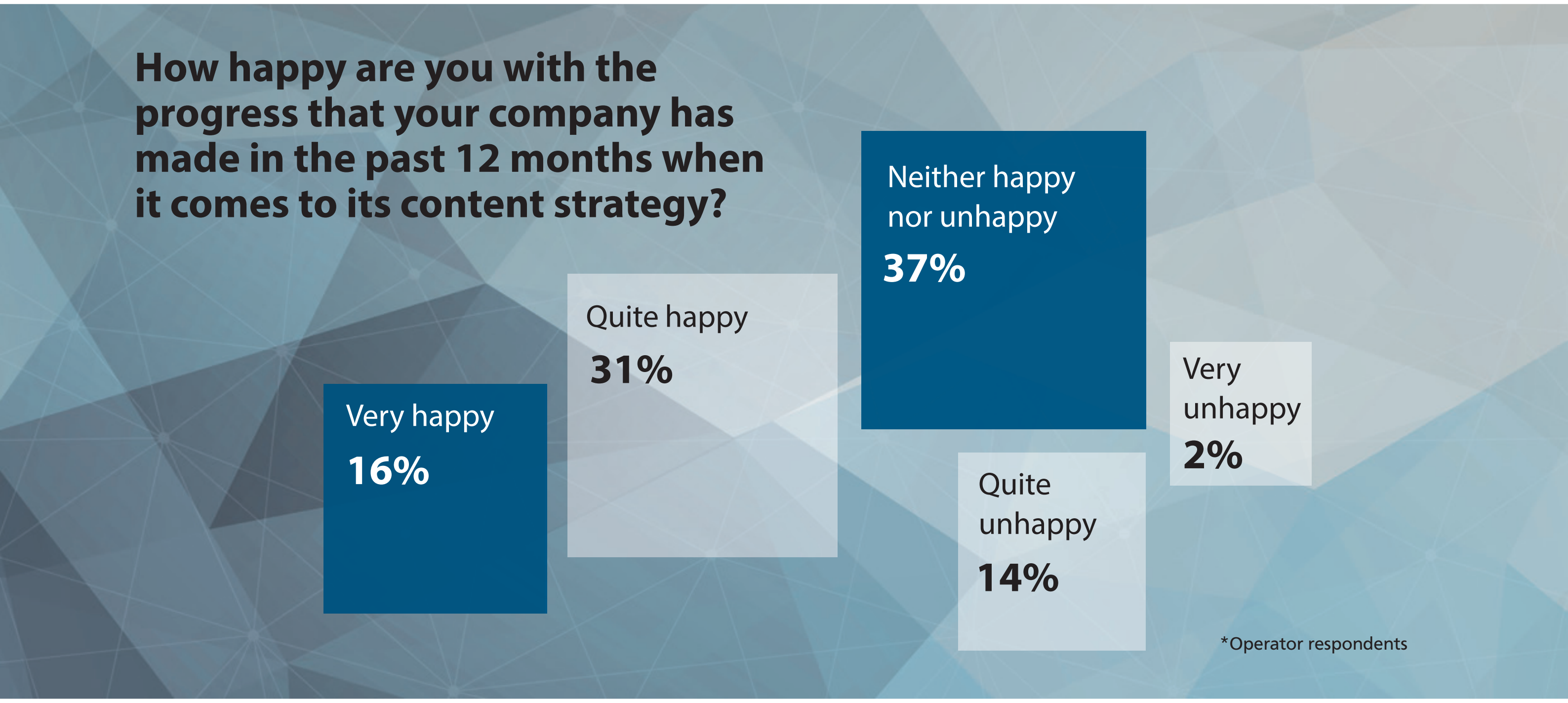


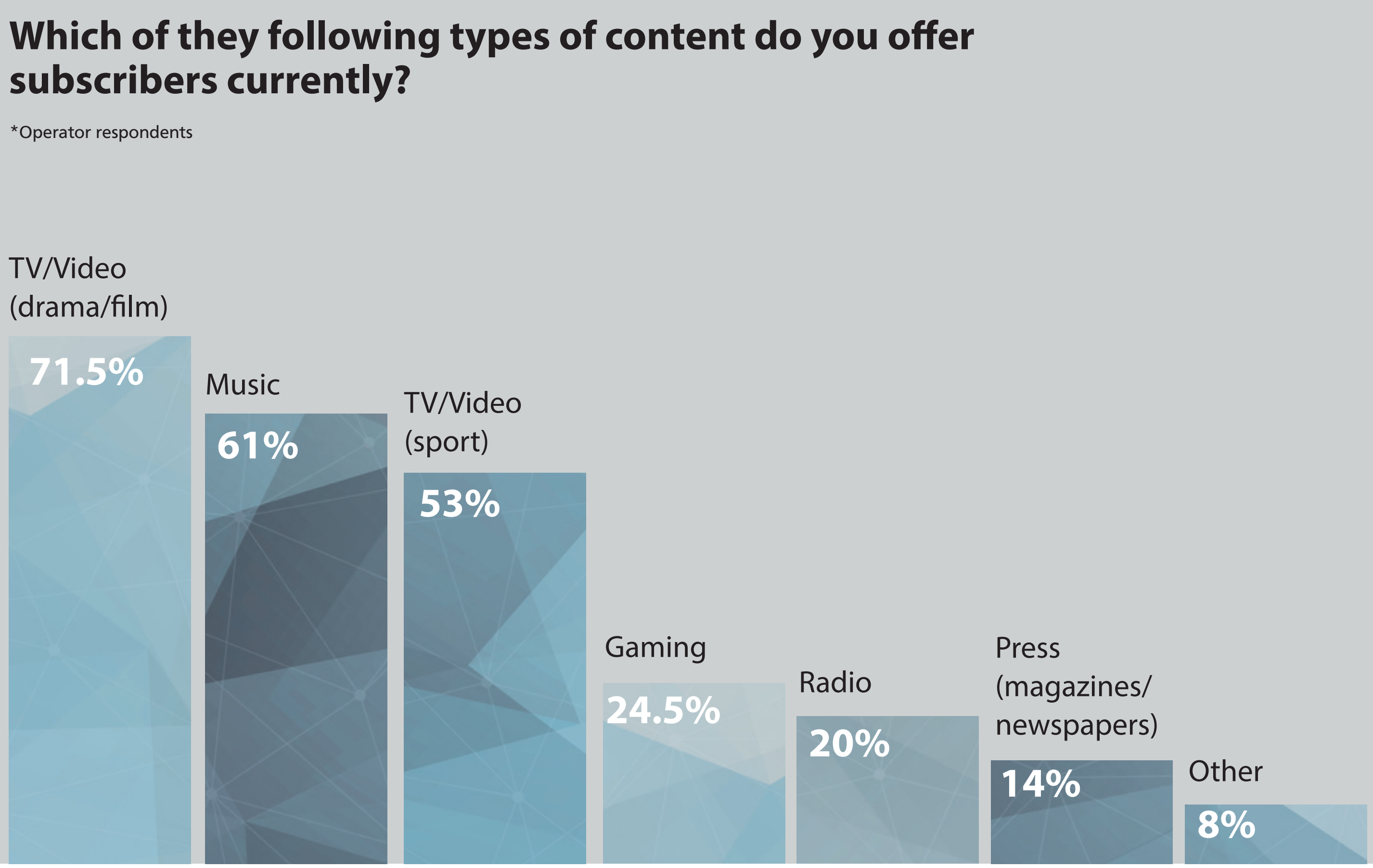
*All respondents

Which of the following do you consider to be the biggest competitor to operators in the content space?

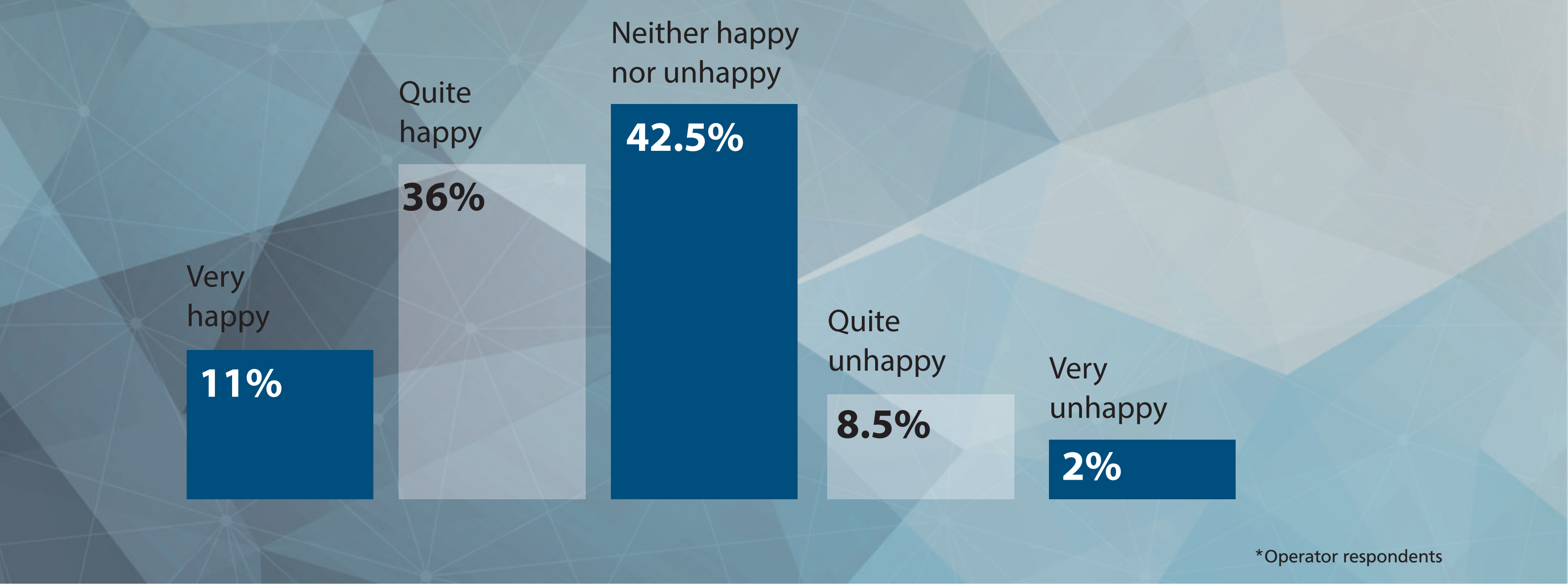


*All respondents

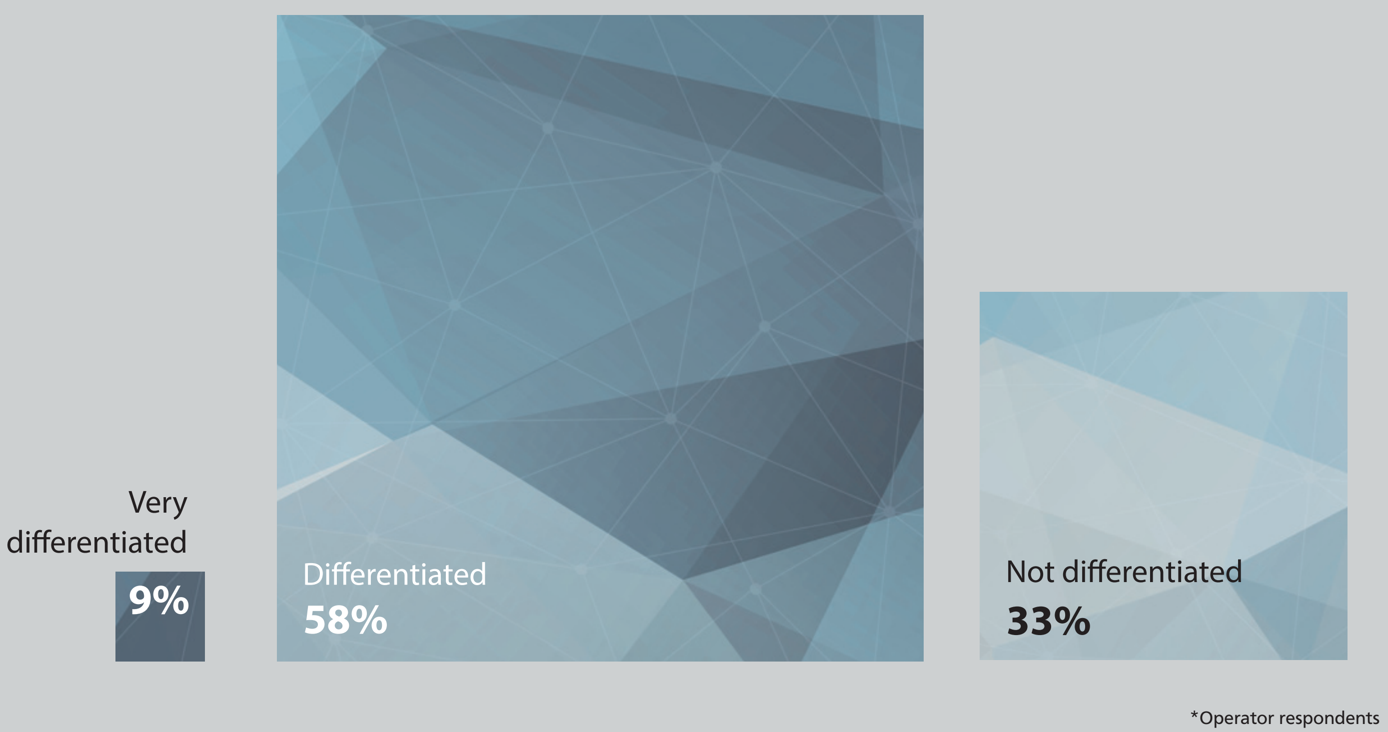

How happy are you with the progress that your company has made in the past 12 months when it comes to its content strategy?
Very happy
16%
Quite happy
31%
Neither happy nor unhappy
37%
Quite unhappy
14%
Very unhappy
2%
*Operator respondents


Which of they following types of content do you offer subscribers currently?
*Operator respondents
TV/Video (drama/film)
71.5%
Music
61%
TV/Video (sport)
53%
Gaming
24.5%
Radio
20%
Press (magazines/ newspapers)
14%
Other
8%

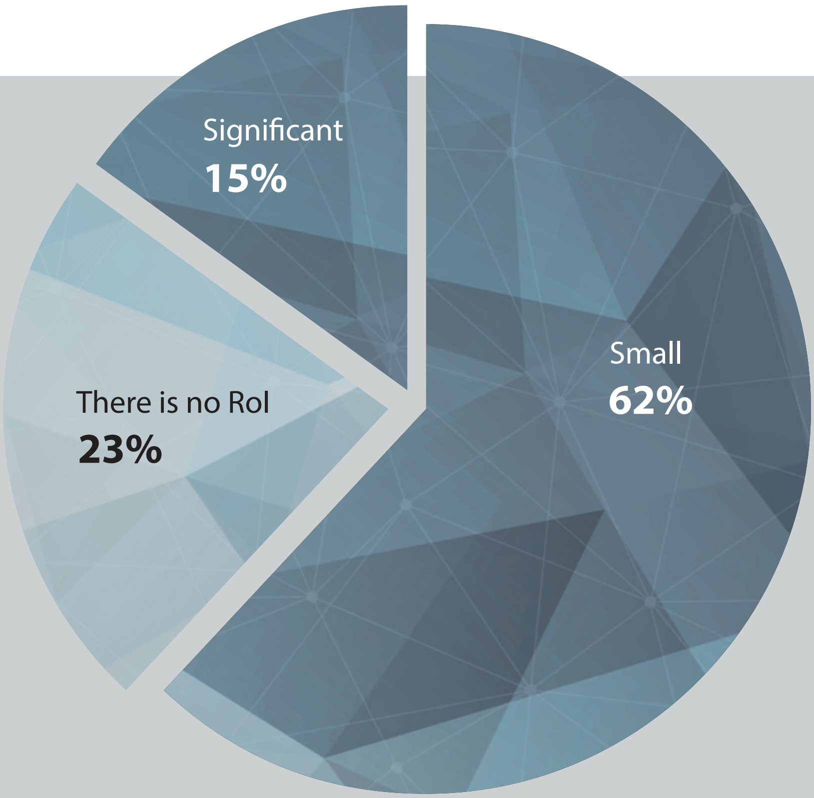
How happy are you with the choice of content that you offer your subscribers currently?



How differentiated do you think your content offering is currently compared to your competitors?

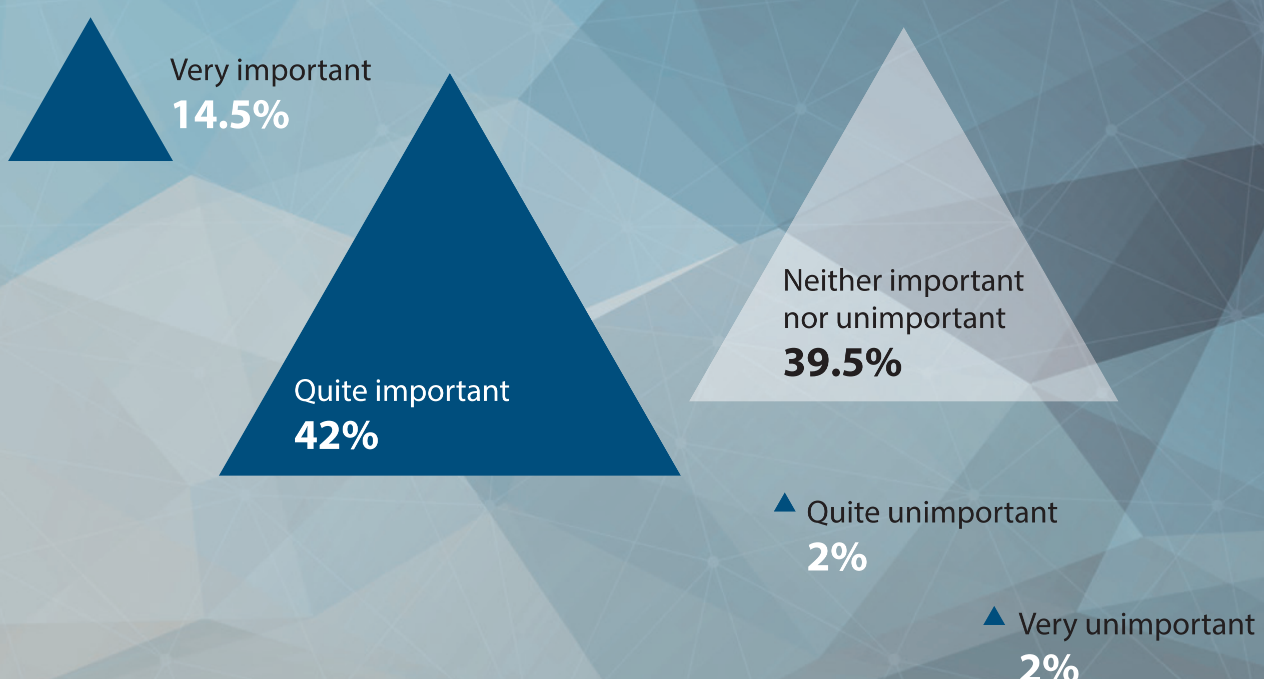


What is your assessment of the RoI you are getting from the content you provide currently?



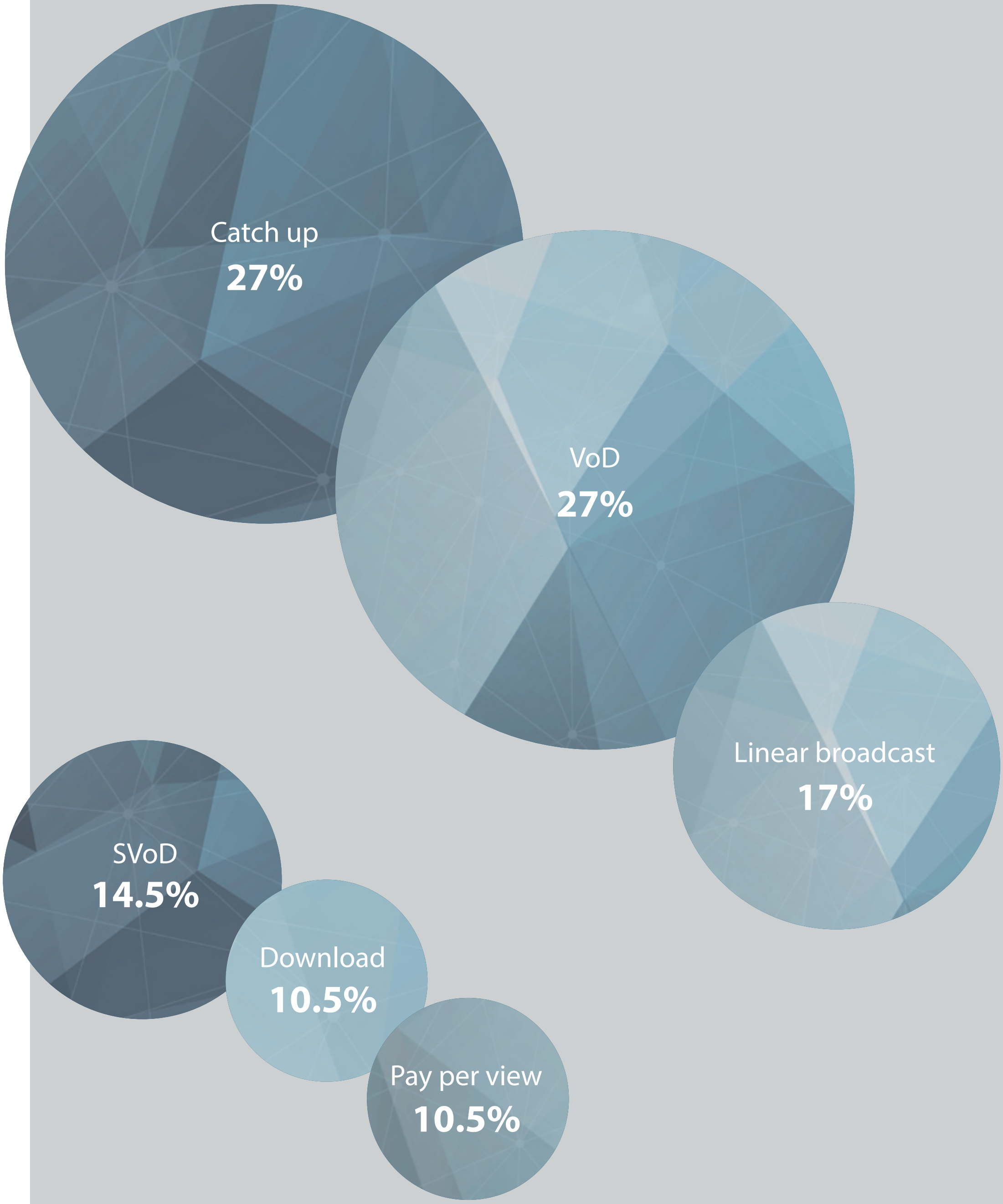
*Operator respondents

How important is offering zero-rated content on mobile to your overall strategy?



*Operator respondents

Which type of TV/video service do you think will be the most popular among your subscribers in 2020?



*Operator respondents

Proximus TV chief talks porn, VICE and niche audiences

Stephanie Rockmann, Director of Content and Media at Proximus, tells Marc Smith why the Belgium-based operator is happy to be an aggregator of content

It's not often that you get to discuss pornography with a telecoms exec, either on or off the record, but Stephanie Rockmann doesn't blink when this rather unusual topic is raised. Indeed, Proximus' Director of Content and Media goes so far as to educate me about a "new trend" in the Netherlands – adult content made for couples. "We offer that too," Rockmann says.

The discussion comes up after a look at the Belgian operator's website reveals one of four TV "offers" available to subscribers is adult content (the others are entertainment, kids and sports). Click on the "Learn more and order" button and you are faced with promises of "erotic clips and exciting videos", news that "it's getting hot on Proximus TV" and the reassurance that it is "discreet, secure and regularly updated". It is accompanied by an illustration of two scoops of ice cream shaped into women's breasts.

The surprise here is not that this sort of content is offered – most telcos do in some capacity – but that it can be accessed in just two clicks of a mouse at a company whose CEO and TV chief are both women. "I don't find it that prominent," Rockmann responds. "At the end of the day this is content that people want access to. We're responding to a very clearly expressed demand from parts of our customer base." She adds: "We're definitely not ashamed of it."

Rockmann goes on to assure me that Proximus has "very strict rules" about what it broadcasts and that there is an "equality chart" providers have to comply with.

"People say 'Why have this when everything is for free on the internet?'

Well, [what we have] is totally different, it's much higher quality," she says.

Stephanie Rockmann says tech enables telcos to hyper-serve niche audiences

Citing the novel Fifty Shades of Grey and its subsequent movie adaptation, Rockmann adds: "[This type of] content has become a lot more acceptable in society."

It is arguably a cultural thing. A look at the Orange TV website shows similar adult offers – the Bouquets Adulte et Charme – whereas there is no sign of any equivalent content bundles on BT TV, for example. Before I'm forever cast as the quintessential English prude, I move the discussion on. Rockmann, in her post since March 2014, heads up a team of 60 within Proximus's consumer business unit. While some operators – notably Orange, Altice and Telefónica – are pushing on into production, Proximus is very much in the camp that says it knows its own limits.

"We're not a media company, we're a telco," says Rockmann. "We consider content to be one of our pillars – it is what binds us to our customers. As such, our mission is to give access to content in the easiest, smoothest way. We're a content aggregator, not a content creator."

She adds a caveat: "There are a few exceptions – we produce our own sports channels – but there is clear differentiation from competitors who call themselves media companies."

Does she think those who are going down the production route are making a terrible mistake? "Every company is different but we just don't consider this to be our core business. It's not what we're

good at," Rockmann responds. "We're good at putting fibre in the ground, at maintaining a mobile network. The RoI of content production doesn't make sense. We're way better off investing in networks. You can have the best content but if it's delivered over a shitty network it's not going to work."

Keeping up with demand

Proximus offers 205 channels via linear TV, VoD and SVoD. Champions League football and some kids channels have been bought as exclusives, but most of the rest can found elsewhere.

Rockmann says she works with around 85 partners to provide the content that her customers want. The most recent is millennial favourite VICE MEDIA, whose TV arm produces programmes with titles such as Gaycation and Bong Appetit. Rockmann says the US-based company is a good example of the type of content partner she wants to work with. "They've very savvy about their own users," she explains. Allied to Proximus' distribution capabilities, this leads to "some very interesting discussions" that can benefit both parties, she says without expanding further.

However, given the number of times Rockmann namechecks Netflix during this interview it is clear which partner may be the most important out of the 85. "We've definitely decided to view them as a partner," she says when it is put to her that the majority of European Communications readers voted The House of Cards producer as the biggest competitor to operators in the content space.

"They're a phenomenally data driven company. What they've managed to do over the past few years is astounding, it's fundamentally changed media consumption."

Rockmann notes feedback from customers has confirmed that the addition of Netflix is "exactly what they want". But keeping on top of customer demands is key. "We're continuously busy with optimising our line up, [deciding] what channels should we keep," she says.

Proximus does "a lot" of market research to help it meet the evolving needs of its subscribers. Linear television "still rules" Rockmann says, with Belgians watching five hours a day on average. However, she notes audiences are on the decline: "The trick is to have a good mix."

Pulling off such a trick is complicated by the fact that Belgium is "basically two countries". "The north and the south have completely different line ups to some extent," Rockmann says, adding that the large expat community in Brussels adds another layer of complexity. The result is that a one-size-fits-all approach just won't wash.

Yet this can be a challenge if you're an aggregator. How do you differentiate your offering? "We're lucky, we're in an era where technology allows us to hyper-serve niche audiences," Rockmann responds. She splits the content market into three distinct parts to illustrate what she means. First, there is exclusive content that "will continue to be expensive". Second, there is the "fat belly" in the middle that represents content people regard as being "important but not that important". Third, is a long tail of niche content that is for "a few people but for whom it is extremely important".

While Proximus offers a very limited selection of exclusive content – "it's not the keystone," Rockmann says – and rather more fat belly, the exec sees a big opportunity in the third area. "Traditionally, we haven't been able to serve the long tail due to limitations in technology and finance. Now we can, it's going to make a big difference," Rockmann says.

The partnership with VICE is one example of this long tail; mobile-only content could be another. "Its definitely something we're looking at," Rockmann says. "How do you monetise/valorise this is still the biggest question. The user group's willingness to pay is limited."

Dreaming of hulu

As of September, Rockmann will be reporting to a new line manager. Guillaume Boutin was hired from French pay TV channel Canal+, where he served as Chief Marketing Officer, in June. Boutin also spent 14 years at French operator SFR, so should we be well placed to work with Rockmann on pushing Proximus' content strategy forward.

"I'm very excited to have him join us. [His arrival] is testament to how important content is," Rockmann says. The pair had already met, with Rockmann tapping him for information in 2016 on how SFR was bundling content amid "the hurricane arrival of Free Mobile" on the French market. "He's an absolutely charming person, super bright," Rockmann says.

The pair will work together to keep Proximus TV on an upward curve. The operator added 75,000 TV customers in 2016 and a further 44,000 in the first half of 2017, taking its total TV subscriber base to 1.53 million.

Looking forward, Rockmann says her biggest challenge is finding the best content possible to offer subscribers: "The media industry is one of the most disrupted industries out there right now. Being a telco you're part of the ecosystem and the fact that people are fundamentally changing the way they consume media is deeply affecting our business." She adds: "If you don't listen, don't meet their demands and don't satisfy their needs they will go somewhere else."

Rockmann hints that she is working on a new content offering, but won't reveal any details. She is happier to talk about what she would offer her customers, if money and a host of other potential barriers were no object. "I'd love to be able to offer hulu. They don't seem to have international expansion plans but they might one day. They've done a great job in keeping interest in linear content in a non-linear way and in keep creating value around content – that is going to be the biggest nut for everyone to crack."

Whether Rockmann gets to add hulu as a partner in the future remains to be seen, it is clear she will leave no stone unturned to get what her customers want. ec

Telcos look to make local drama out of studio giants' global crisis

Telecoms providers are getting into content production in a big way. But how can they possibly compete with Netflix and Amazon when even old kings of content like Time Warner are seeking help? James Blackman reports

Florence Le Borgne, a lead analyst at European think-tank IDATE, reflects on a conversation she had with a Time Warner executive earlier this summer. "He said to me, 'AT&T will probably buy Time Warner just because, you know, both of them need to be bigger'." She pauses, momentarily. "I mean, Time Warner," she resumes. "It says something about the state of the market when one of the most powerful media companies in the world says it needs to be bigger."

The $85 billion deal between these two companies, currently under review by the US Justice Department, will see the world's third largest telecoms provider with the world's third largest entertainment company. It is the most significant deal so far between the two sectors, putting the $48.5 billion AT&T paid for DirecTV in 2015 in the shade, and dwarfing the €706.8 million Telefónica spent on the Spanish arm of Canal+ the same year.

Moves by Altice, Orange, Telefónica and Liberty Global in Europe in recent months confirm what the AT&T deal signposted: that these parallel markets are on converging paths. More significantly, the Time Warner aside tells of a media market that has been reimagined and re-ordered by OTTs going straight to consumers with content of their own.

Netflix, 10 years old as a streaming service and five years old as a production house, said in July it has surpassed 100 million paid subscribers globally, with the majority now residing outside of the US. If the old movie studios are feeling bullied, and telecoms providers are struggling to make their infrastructure pay, it is only because the rules have changed. "The numbers don't lie," says Paolo Pescatore, Vice President of Multiplay and Media at analyst house CCS Insight. "Netflix has paved the way. It has shown the appetite among consumers to pay for video."

In search of distinctiveness

Operators in Europe agree with the logic. 2017 began with Telefónica backing itself to become the leading provider of Spanish content, by committing €70 million to four productions this year, with another 10 scheduled for 2018 with new investment. The Spain-based operator 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. "Our strategy has worked so far; customer loyalty has increased. But we need our own content as well, so we aren't just relying on foreign content and sports," says Domingo Corral, Director of Original Content at Movistar+. The early response to its new titles has been positive, with international distribution rights agreed for three already, even as they are in pre-production.

> "We need our own content as well, so we aren't just relying on foreign content and sports"

Altice launched a cooking channel featuring British chef Jamie Oliver in April as part of a wider MY Cuisine brand that incorporates a print magazine and a mobile app. It is the latest in a long line of moves the Portugal Telecom and SFR owner has made over the past 18 months as it looks to turn itself into "a transatlantic converged communications player".

In July, Orange committed €100 million over five years to produce a number of original dramas, including with HBO, and launched a new division, Orange Content, to combine content production and distribution. The same month, Liberty Global teamed up with investment firm TPG Growth to launch a global TV production and distribution studio called Platform One Media that is tasked with curating, developing, producing and distributing new content. This follows a deal Liberty signed with UK-based All3Media, in which it owns a 50 percent stake, to produce exclusive content for its operating companies – including Virgin Media in the UK, Unitymedia in Germany and Ziggo in the Netherlands – in a deal stretching to four original drama series over two years.

David Bouchier, Chief Digital Entertainment Officer at Virgin Media, echoes Corral on foreign imports. "What production and co-production give you is distinctiveness. That is very important, especially in mature markets like the UK. You can't just recycle everyone else's programming," he says.

Sky is at it too, with plans to co-produce two drama series per year with HBO as part of a $250 million agreement. It has also collaborated with Amazon on upcoming series Britannia and with Altice on 10-part drama series, Riviera, the premiere of which on Sky Atlantic was the channel's biggest launch this year.

"There's definitely been an increase in

the volume of original content being produced by companies across the industry," says Gary Davey, Managing Director of Content at Sky. "For us, this is the year when we are really seeing the results of our strategy to develop more high-end scripted drama – 2017 is already one of our biggest years on screen for Sky."

Bouchier acknowledges that Netflix's strategy has set the tone, and prompted the response from the telecoms and TV industries. "That [investment in original content] has always been a critical component of the pay TV offer. What has changed is Netflix has fragmented that offer and taken it into a sort of skinny bundle," he explains.

Netflix has made a virtue of its user interface, he suggests, presenting a simplified library of high-quality content on-demand. "There is lots of content on Netflix that you don't watch. The difference is customers perceive it as choice, whereas lots of channels are considered a cost. It's about perception. As a new entrant, you get to knock the skittles away. The challenge for us is to re-set the narrative," he says.

It requires the industry to move from "multi-channel television to multi-service television", with more flexible access and clearer promotion of content, whether it is bought-in or homemade. "It's difficult for an industry to pivot like that, to meet the challenge of subscription video services that are easy to obtain and to churn from," he says. "We have to move with the times in the offers we make to customers."

Its content production falls into this broader review. New shows will be available on-demand from Virgin Media, and online in 12 international markets. Linear channels are good for marketing, but require "constant feeding", says Bouchier. "With all the other great channels we have, we only need to drop in a few [programmes] of our own to sprinkle a little difference," he says.

Leveraging local expertise

Ultimately, telecoms providers' investment in the content market is rooted in their existential struggle for differentiation. "They're great at laying cable in the ground, but it's a cutthroat business that comes down to price and service," says Pescatore. "The only way to drive traffic and subscriptions is to offer content."

On set at La Peste, Telefónica's new drama production

He points to BT's eye-watering investments in live sports, including £1.2 billion for the latest Champions League rights, up 32 percent on its previous investment. "If you look at its subscriber uptake, its strategy has been a great success," he says.

But for pure drama, what hope do telecoms providers, historically bounded by licensing deals, have against Netflix and Amazon, investing up to $6 billion a year? Le Borgne says the telecoms sector's major protagonists have the only hopes. "They are the only ones more powerful than the media companies," she says. Their tactical approach should be to leverage local expertise and undercut the "global, American-style content" from online players. "People want local content as well. There is still room for that," she says.

HBO, working with Sky and Orange, agrees that home-grown content does best, and local telecoms providers have the inside track. "As proud as we are of our original US productions, we know indigenous programming has proven to be more popular among local audiences," says Casey Bloys, the company's President of Programming. "Quality programming is emerging around the globe. Orange and Sky bring a local expertise that is vital for such productions. These are countries where we don't have HBO services and these are proven producers of high quality content. Shared resources and skill sets will result in some very dynamic projects."

Unsurprisingly, Netflix says it is making "big investments" in local content as well. Telefónica's Corral is not unduly worried: "Yes, Netflix is making local content, and Amazon will make steps as well, but our approach is unique," he says. "The shows we have in production feature Spanish writers, directors and stars. No one else is serving our market in the same way."

Customers perceive Netflix and Amazon as "additions, not alternatives," reckons Sky's Davey. He says his company's local knowledge goes deeper: "We have a very close connection to our customers. We are at our best when we serve our local markets with world-class content." ec

Digital transformation roundtable: Cutting through the complexity

European Communications brought together telecoms executives from across Europe to discuss the thorny topic of digital transformation. Strategy, staffing, technology and challenges were some of the areas hotly debated by participants. Alex Sword reports.

What does digital transformation mean to you? It's a good place to start this roundtable as it can mean many things to many people. For Telia it is about "renewing, reinventing the business", says Sari Leppanen, Head of Business and Technology Transformation at Telia Finland. She describes digital transformation as a "long journey" that Telia started in 2014 and is "heavily customer experience and customer behaviour driven". Pointing out that digital transformation is not simply replacing IT architecture, Leppanen adds: "What we have is really business transformation supported by technology." At Orange, Christian Luginbuhl wears two hats: he is in charge of technology for the operator's European subsidiaries outside of France and part of the innovation, marketing and technology team at group level. On the one hand, says Luginbuhl, digital transformation is "very much driven by the requests from [enterprise] customers". The France-based operator then uses that knowledge to help transform internally, Luginbuhl says. On the other hand, he says digital transformation is driven by "the requests of our [retail] customers to have digital interfaces to our company". Orange has a target at group level to have half of all interactions with customers made digitally.

Like Luginbuhl, Aurelia Aubugeau is French but works in London for Norway-based Telenor's Wholesale division as Director of Digital Innovation. Like Orange, one of Telenor's digital transformation goals is to increase the number of digital interactions it has with customers. But it's also about moving towards virtualised networks

Participants

Kevin Paige,
CITO, Manx Telecom

Erick Cuvelier,
CIO, Orange Belgium

Vinod Kumar,
COO, Subex

Ashwin Chalapathy,
CTO, Subex

Richard Swinford,
Partner, Arthur D Little

Christian Luginbuhl,
SVP Technology Europe & Global Performance Innovation, Marketing & Technologies, Orange

Aurélia Aubugeau,
Director, Digital Innovation, Wholesale and International, Telenor

Marc Smith,
Editor, European Communications

Sari Leppanen,
Head of Business and Technology Transformation, Telia Finland

and operations, as well as creating a “digital culture”, Aubugeau adds. Zooming out, she says: “It is about survival and making sure we’re not missing the train.”

For Kevin Paige, CITO at Manx Telecom, digital transformation “gives us an opportunity to really make a big difference to the way our company operates, both from a customer-facing perspective as well as our processes and the way our business culture works”. Although a smaller operator, he thinks it is “absolutely essential” to digitalise and says Manx has had a transformation programme up and running for a few years. The main goal is improving customer experience, partly through automating the core business “as efficiently as possible”, but also to grow the company outside of traditional telecoms services.

Erick Cuvelier, CIO of Orange Belgium, also thinks digital transformation provides “a unique opportunity” to enter new areas. “The Orange Bank launch in France is a perfect example of what it means to use digital opportunities to add new businesses,” he says.

Richard Swinford, Partner at management consultants Arthur D Little, agrees that new business areas are one goal of digital transformation efforts at many operators, but warns that there are several barriers. “One of those barriers is regulation,” he says. “There is not a level playing field between a telco and an OTT [player], or a bank, who is offering a similar set of digital services, but often under a different set of regulations.”

Vinod Kumar, COO at Subex, brings to the table findings from a recent McKinsey report. Three-quarters of companies that embarked on digital transformation in the last five years have started to see their growth coming down, according to the report, which also noted that first mover advantage is significant and strategy is more important than the execution. Reflecting on the discussion thus far, Kumar says getting the strategy right is absolutely key. He quotes one executive from the McKinsey report to illustrate the point: “It’s good to keep running but in the case of digital it’s better to be stationary than running in the wrong direction.”

Telia’s Leppanen picks up on this, saying it is important to be “very precise” about what you are looking to achieve. Telia “crystallised” its thinking in 2016, two years after its digital transformation initiative began, moving away from a technology-focused approach to business-focused goals. As part of this, the CEO and his team were fully engaged in the process to ensure the process was company-wide. Leppanen warns that having “a separate ivory tower programme” with a brief to create “a new digital machine” that will be handed over when it’s ready simply doesn’t work. “Everyone in the company needs to be involved,” she says. “The people who will be running this new digital machinery so to speak must build it themselves from day one.” Ultimately, digital transformation is “only a vehicle” to get to a pre-determined goal, according to Leppanen.

Flat organisations

Once goals have been decided upon, you then need to create a structure staffed by the right people to deliver them. Orange Belgium’s Cuvelier, who says that he was given permission as CIO to “clarify more or less what digital transformation could mean”, did so partly through his choice of staff. For example, he recruited IT directors with a combination of business and technology experience in an effort to break down existing siloes. This meant finding people who are “close to complex processes in the back end” but who also look at operations in terms of customer rather than technical results. In addition, Cuvelier says he “flattened the organisation” in an attempt to bring ownership of delivering different solutions to the highest point possible in the company.

At Telenor, Aubugeau explains, there is a group level Chief Transformation Officer who is served by different programme directors responsible for various aspects

of digital transformation. These include connectivity, customer interactions and culture. The programme directors work with local business units, so "each programme is actually handled by group and by the [local] operation together". Telenor has also taken a "cluster" approach, where similar market areas are grouped together. "Some of our markets are very similar and some are completely different, so you cannot run [the same] transformation programme [for] everyone," Aubugeau says. It is important to build a cross-functional team and use resources from the individual business units, she adds.

Orange's Luginbuhl also highlights the importance of group leadership. Rather than naming a Chief Digital Officer, he says Group CEO Stéphane Richard took responsibility for providing the "impulsion" for digital transformation across the company. Orange Bank is emblematic of this, explains Luginbuhl – it was driven and pushed by Richard and when it goes live will become the company's first 100 percent digital product and business line.

At Manx Telecom, the CEO and the board led digital transformation discussions, Paige says. The process began when the company found that making incremental changes to the business did not lead to any substantial changes in revenues or profits. The programme covers a number of workstreams, including customer experience and sales enablement.

"It's a whole stack with business leaders looking after each one of those elements," Paige says. The company is now in the process of maturing those activities, according to the CITO, but has not fully reached the digital state it is trying to get to. "We've laid people off and refreshed the organisation to try and attempt to change culture, because you can't just change culture with the people that you have there today," he says.

European Communications Editor Marc Smith highlights a story about Deutsche Telekom sending its executives back to business school in the US to teach them digital skills. Can digital transformation be taught, he asks. Aubugeau of Telenor thinks it can be taught but adds: "It's also about using the existing resources… I think the big groups are in general very bad at talent management." There is a tendency to treat an employee as a "one-trick pony", Aubugeau says, who will do the same thing for their entire career. In fact, people can be trained, Aubugeau says. "Some people are looking forward to that change," she adds. "Some people are a bit more resistant. So that's where you have to identify and have a proper talent management programme."

Leppanen agrees that telcos are "not very good" at talent management. As part of its digital transformation efforts, Telia identifies the competencies – both new and old – that are required, which are then used to create a structured plan for the human resources team. The company can then identify the best way to get the competencies, whether through new hires or retraining, Leppanen says.

Paige says Manx Telecom is trying to endorse "process owners", whereby even if a process extends over the entire business one person is in charge of it. This is an effort to bring accountability back into the organisation, he says, as there are disputes between product teams and sales teams over who is responsible for certain functions. Leppanen adds that a strategy is needed to define what is going to be kept within the organisation and what will be run by partners. "When you outsource the IT operations you actually move the focus within the staff onto [new areas such as] innovation," she says.

Luginbuhl reveals that Orange looks to market itself as a "digital and caring employer" in an effort to get employees to transform without putting too much pressure on them. He doesn't believe in big programmes such as sending execs to business school; rather, Orange believes in triggering employees to want to transform themselves. Cuvelier thinks that it is often the middle management that can be difficult. Smith backs up this thought with comments from research house IDC, who said in a recent report that middle management often put the brakes on digital transformation processes, despite enthusiasm and commitment from the

leadership and rank and file. "This is why you need to flatten your organisation," Cuveiler responds. You need to "squeeze" the middle management, he adds, but also show them by example that things can be done better. "Suddenly they just say, it can be done, I want that for my project too," Cuveiler says. Telia works towards three-month sprints, Leppanen says, and this has won many converts in the company. This solves the problem of middle management reluctance, she claims, as these teams want to be "part of the news story". Like Cuvelier, Leppanen also talk about the need for a "really flat" organisational structure.

Virtualised platforms

Strategy and structure will only get digital transformation efforts so far, of course. Technology plays a key role too. Luginbuhl outlines Orange's three priorities in this area, beginning with connectivity. He says the IP network is key as without it an operator is unable to deliver digital transformation. Luginbuhl also highlights the importance of virtualised platforms in making digitalisation "accessible to many different partners or clients and involving them much more in the process than before". The first step in this is providing APIs for these partners to connect, he says. But this open approach is not necessarily a natural one for telcos, given their desire "to control things". The third key area is deciding to what extent the company plans to use the public cloud.

Paige says the majority of Manx's core fixed infrastructure has now been migrated to a virtualised platform. The operator views the new platform as the main vehicle from which to launch new services. There is a broader philosophy at work here – moving away from vertical stacks supplied by a single vendor to its own horizontal cloud stack, according to the CITO. Citing the billing and customer relationship management stack it took from one vendor, Paige says "some parts were good, some parts were behind the curve". He therefore split the stack between two vendors. Cuvelier also highlights the importance of working out where to innovate in terms of technology and where to accept that "good is good enough". It may not be necessary to reinvent everything, the CIO says, sometimes a bit of simplification is all that is required. By way of example, he says that the four vendors Orange Belgium uses for its enterprise resource planning (ERP) technology will be scaled down to just one. Leppanen offers the example of Telia revising its own transformation approach, away from using "one gigantic BSS solution and then some channels on top of that" towards a more layered approach that takes into account how different parts of the stack can be upgraded at different speeds and combined through well-defined APIs.

Paige moves the conversation on to end customers. "[They] want more information about what they're consuming, how they're consuming it, what other products and services are, which you can draw from the API infrastructure quite easily, and you can continually evolve that," he says. The keys are proposition change and intelligence around how customers use your services, Paige notes. "If you get those two elements right, you make a big uplift in the customer experience." He then brings in some of the more future-gazing technologies: AI and virtual agents. AI is already being looked at "seriously" in the back-end of Manx's network management, while virtual assistants will be trialled in the next few months, he says. Leppanen is also interested in AI for the back-end, saying it could replace the "huge amount of manual transactions that take time".

Kumar asks how important analytics are. Leppanen highlights how sales and marketing can be brought together, using data not only to provide recommendations but also to "surprise" the customer with products and services they don't expect. However, she says it is important to define what data is being used for and design the analytics accordingly. Further, she says that you will not have big data before you have a unique identifier for the customer. In her own experience, achieving a single sign-on for customers

was the “battle [she] jumped into first”. Cuvelier chimes in with a sentiment many may agree with on big data: “The worst thing for IT is buzzwords. It’s probably the worst one.” He says creating a framework of the why before the how is key as people ask for things without knowing what they want it for.

For Aubugeau, who is less involved on the technology side, the platform model is the key part. Operators need to open up their communication APIs so that developers can embed voice and SMS within their own applications, she says. But with their use of data, operators need to understand customers better, she adds. “We need to touch the right customer at the right time at the right place with the right product,” she explains.

Cuvelier also looks to link technology back to customer experience. He says the best customer experience is very often the simplest one. His go-to example is Amazon, which he calls by far “one of the less sexy websites in the world”. But the fact is it is consistent with Amazon’s promise, he explains. “You order, it’s easy, you click, you pay, it deliver.” From there, Leppanen chimes in, it is about differentiating on top of this basic experience by “enhancing, enriching the offering that the customer can choose with”, rather than with the “basic plumbing”.

No discussion of technology can be complete without touching on the companies who provide it. What, Kumar wants to know, can vendors do to help deliver the things that operators need in their digital transformation journeys? “The problem with vendors is they are as un-agile as we are,” says Luginbuhl. “What we would expect is that they would help us to become more agile.” Paige says vendors are “creating more complexity than what’s actually needed.” For Leppanen, they have not bought enough into the pay-per-use cloud mentality and want customers to sign up to long licence commitments. Meanwhile, Aubugeau wants to see more co-creation. Vendors usually come with a set, off-the-shelf, portfolio that a company can take or leave, she says, but this leaves no space for customisation.

Key challenges

Citing research European Communications undertook earlier this year, Smith notes that the biggest digital transformation challenge cited by respondents was that projects were too big, complex and time-consuming. Leppanen says it is about categorisation. In theory, she says, an operator builds a new BSS to sit alongside a legacy system, and is supposed to move “overnight” from one to the other. In practice, it doesn’t work like that: the legacy system is never in a “stable situation” and the new BSS ends up sitting around for years waiting to be used. She says this is why it is important to split digital transformation into parts and have a clear roadmap on what to do deliver first.

With the cost of digital transformation projects being another key challenge, Swinford notes it is important to demonstrate the revenue benefits, not just the savings. Leppanen says telcos are currently in an “invest to grow” phase, while Cuvelier thinks digital transformation creates efficiencies to enable companies to invest. “Changing an ERP system is not about changing the customer journey, it’s just to save €15 million in three to four years that we can use to do something else,” he says. As the discussion draws to a close, the last word goes to Leppanen. “The most difficult thing for all companies, not just telcos, [is deciding] what the new business model should be, what the revenue share is, what the shared delivery chain is and how we make that seamless,” she concludes.

Supporting the telco revolution

Consulting firm everis, part of NTT DATA, has a mission to improve operator efficiency, increase revenue, shorten development cycles and help telcos to connect better with customers. Its Head of Telecommunications in Europe, Eva Labarta, tells European Communications how the company plans to do it.

European Communications: What is your view of the European telecommunications industry currently?

Eva Labarta: If I have to choose three dynamics to describe the current market, undoubtedly they would be: content, collaboration with third parties and customer relations. All these are causing what I like to call "the telco revolution".

There is a tough fight among telcos for retail customers who are shifting fast from the traditional business to content based services. In the retail market, content is key to differentiation and a perfect bridge to other digital services.

But this is hard for telcos since they need either to produce their own content or get it from third parties. The former is very complex, though some telcos are being successful at it, while the latter means losing some control of their business.

Strategies may vary depending on the size and positioning of a telco. Larger telcos usually benefit from investing in premium, expensive content that helps them to improve acquisition, ARPU and AMPU, while reducing churn. On the other hand, smaller telcos usually avoid the large investments that premium content requires, through partnerships.

Collaboration with third parties can help telcos to create new, disruptive revenue streams beyond content, such as by collaborating with other OTTs. Again, there are different strategies to follow: incumbent telcos tend to be more protectionist, while challengers tend to be more open, and benefit from this openness.

This is already leading telcos to weave a network of alliances. The better a telco is in building these alliances and profiting from them, the more successful it is going to be. Not to forget other potential partnering initiatives, such as by the increasingly popular strategy of network sharing that can help telcos to be more efficient.

There is the additional challenge to understand the customers in a changing, fast-spinning, digital world. In the end, a telco will need to transform itself, improve the way it relates with its customers, and become a conglomerate of different digital businesses, in order to be differential and successful. This opens up incredible opportunities for telcos.

How can everis support this telco revolution?

Telcos are struggling to create tight bonds with their customer base, and are in need of better insights. We

have recently delivered our "Telco Connected Index" survey across several geographies; it shows that there is still room for improvement in some areas, particularly those related to how customers perceive their relationship with the telcos.

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About Eva Labarta

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People will pay more for the best mobile network

TDC Chief Executive Pernille Erenbjerg said people are prepared to pay slightly more to access the best mobile network. The CEO made the comment as mobility service revenues ticked up 3.6 percent to DKK698 million in Q2 thanks to higher mobile voice ARPU and data growth.

was the “battle [she] jumped into first”. Cuvelier chimes in with a sentiment many may agree with on big data: “The worst thing for IT is buzzwords. It’s probably the worst one.” He says creating a framework of the why before the how is key as people ask for things without knowing what they want it for.

For Aubugeau, who is less involved on the technology side, the platform model is the key part. Operators need to open up their communication APIs so that developers can embed voice and SMS within their own applications, she says. But with their use of data, operators need to understand customers better, she adds. “We need to touch the right customer at the right time at the right place with the right product,” she explains.

Cuvelier also looks to link technology back to customer experience. He says the best customer experience is very often the simplest one. His go-to example is Amazon, which he calls by far “one of the less sexy websites in the world”. But the fact is it is consistent with Amazon’s promise, he explains. “You order, it’s easy, you click, you pay, it deliver.” From there, Leppanen chimes in, it is about differentiating on top of this basic experience by “enhancing, enriching the offering that the customer can choose with”, rather than with the “basic plumbing”.

No discussion of technology can be complete without touching on the companies who provide it. What, Kumar wants to know, can vendors do to help deliver the things that operators need in their digital transformation journeys? “The problem with vendors is they are as un-agile as we are,” says Luginbuhl. “What we would expect is that they would help us to become more agile.” Paige says vendors are “creating more complexity than what’s actually needed.” For Leppanen, they have not bought enough into the pay-per-use cloud mentality and want customers to sign up to long licence commitments. Meanwhile, Aubugeau wants to see more co-creation. Vendors usually come with a set, off-the-shelf, portfolio that a company can take or leave, she says, but this leaves no space for customisation.

Key challenges

Citing research European Communications undertook earlier this year, Smith notes that the biggest digital transformation challenge cited by respondents was that projects were too big, complex and time-consuming. Leppanen says it is about categorisation. In theory, she says, an operator builds a new BSS to sit alongside a legacy system, and is supposed to move “overnight” from one to the other. In practice, it doesn’t work like that: the legacy system is never in a “stable situation” and the new BSS ends up sitting around for years waiting to be used. She says this is why it is important to split digital transformation into parts and have a clear roadmap on what to do deliver first.

With the cost of digital transformation projects being another key challenge, Swinford notes it is important to demonstrate the revenue benefits, not just the savings. Leppanen says telcos are currently in an “invest to grow” phase, while Cuvelier thinks digital transformation creates efficiencies to enable companies to invest. “Changing an ERP system is not about changing the customer journey, it’s just to save €15 million in three to four years that we can use to do something else,” he says. As the discussion draws to a close, the last word goes to Leppanen. “The most difficult thing for all companies, not just telcos, [is deciding] what the new business model should be, what the revenue share is, what the shared delivery chain is and how we make that seamless,” she concludes. ec

Supporting the telco revolution

Consulting firm everis, part of NTT DATA, has a mission to improve operator efficiency, increase revenue, shorten development cycles and help telcos to connect better with customers. Its Head of Telecommunications in Europe, Eva Labarta, tells European Communications how the company plans to do it.

European Communications: What is your view of the European telecommunications industry currently?

Eva Labarta: If I have to choose three dynamics to describe the current market, undoubtedly they would be: content, collaboration with third parties and customer relations. All these are causing what I like to call "the telco revolution".

There is a tough fight among telcos for retail customers who are shifting fast from the traditional business to content based services. In the retail market, content is key to differentiation and a perfect bridge to other digital services.

But this is hard for telcos since they need either to produce their own content or get it from third parties. The former is very complex, though some telcos are being successful at it, while the latter means losing some control of their business.

Strategies may vary depending on the size and positioning of a telco. Larger telcos usually benefit from investing in premium, expensive content that helps them to improve acquisition, ARPU and AMPU, while reducing churn. On the other hand, smaller telcos usually avoid the large investments that premium content requires, through partnerships.

Collaboration with third parties can help telcos to create new, disruptive revenue streams beyond content, such as by collaborating with other OTTs. Again, there are different strategies to follow: incumbent telcos tend to be more protectionist, while challengers tend to be more open, and benefit from this openness.

This is already leading telcos to weave a network of alliances. The better a telco is in building these alliances and profiting from them, the more successful it is going to be. Not to forget other potential partnering initiatives, such as by the increasingly popular strategy of network sharing that can help telcos to be more efficient.

There is the additional challenge to understand the customers in a changing, fast-spinning, digital world. In the end, a telco will need to transform itself, improve the way it relates with its customers, and become a conglomerate of different digital businesses, in order to be differential and successful. This opens up incredible opportunities for telcos.

How can everis support this telco revolution?

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37 **Digital transformation roundtable:** Cutting through the complexity

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COMMUNICATIONS

Content production is for the few, not the many

The Q3 issue of European Communications magazine means two things: our annual OTT/digital content special report is here and the TV industry's IBC event is around the corner. In the former, our survey reveals that telcos continue to struggle to differentiate themselves when it comes to all things content. It is one of the reasons why several of Europe's largest operators have set a marker by investing in content production this year. We investigate the pros and cons of this in more detail in the report, which also features an in-depth interview with Proximus' Director of Content and Media. "The RoI of content production doesn't make sense. We're way better off investing in networks," Stephanie Rockmann says. I sense she speaks for the many, not the few.

This issue is being published in time for the IBC show in Amsterdam and I am keen to see what impact telcos make. 2016 was the first year I have seen network operators making keynote speeches but, as I wrote at the time, they really failed to shine. A look at the conference agenda suggests they haven't been invited back to showcase what they're doing when it comes to content production, so we'll be on the show floor to find out why.

Our c-suite section focuses on the UK and Ireland this issue. O2 UK Chief Executive Mark Evans shares his thoughts on his first year in charge, while eir Chief Marketing Officer Henry Dummer – just 10 months into the job after arriving from Tesco last November – explains how he plans to reposition the operator's brand. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

This issue also features a write-up of a digital transformation roundtable we hosted before the summer. Digital transformation has been one of the industry's biggest buzzwords over the past couple of years, so we invited execs from Manx Telecom, Orange, Telenor and Telia to discuss what it means to them and how their businesses are looking to change.

Enjoy the issue.

Marc Smith, Editor

Editor
Marc Smith
marc.smith@eurocomms.com
T: +44 (0) 207 933 8999
Twitter: @eurocomms

Publisher
Wayne Darroch
WayneD@sjpbusinessmedia.com
T: +44 (0) 207 933 8999

Staff Writer: Alex Sword
alexs@eurocomms.com
T: +44 (0) 207 933 8999

Design and Production: Alex Gold

Account Director: Fidi Neophytou
fidin@sjpbusinessmedia.com
Tel: +44 (0) 207 933 8997

Subscriptions/Circulation
SJP Business Media
PO Box 6009
Thatcham
Berkshire RG19 4TT
United Kingdom

T: +44 (0) 1635 879361
F: +44 (0) 1635 868594
E: europeancomms@circdata.com
W: eurocomms.com

European Communications is published quarterly by:
SJP Business Media,
52-54 Gracechurch Street
London, EC3V 0EH


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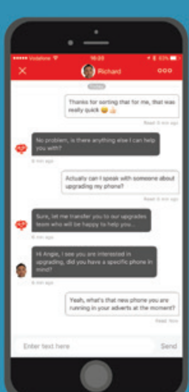
Opinion

Use zero-rating to turn revenue protection into revenue generation
By Mark Collins, Senior Product Manager, Openet

Q&A

Graham Sutherland has led BT's expanded Business and Public Sector division since it formed last year. He discusses progress to date, Brexit and future opportunities.



Analysis

Vodafone UK reboots in bid to become a forward-thinking customer service brand
Vodafone UK is moving out of recovery mode and going on the offensive, its Director of Customer Services and Operations has claimed.

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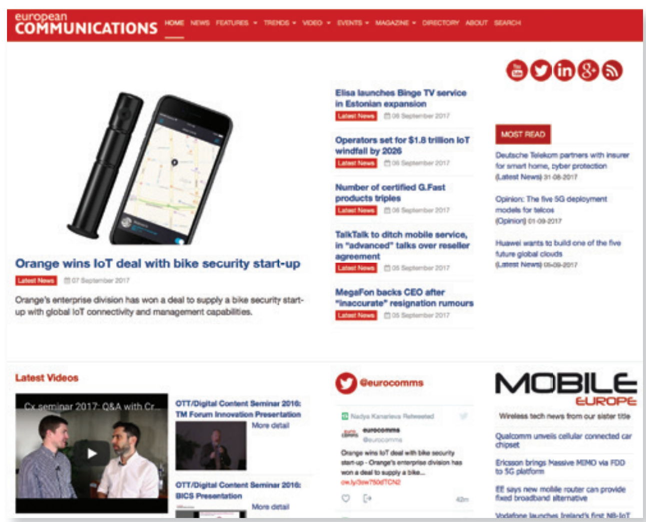

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European Communications

German telecoms market

Germany is the focus of the second instalment of our feature that picks out key data points from the European telecoms market. The latest stats show that O2 is the leading mobile provider, incumbent Deutsche Telekom dominates broadband and Vodafone is hanging on as the destination of choice for TV customers

Deutsche Telekom

Mobile: **42.01 million** (+873,000)
Broadband: **13.04 million** (+265,000)
TV: **3.02 million** (+247,000)

united internet

Mobile: **4.57 million** (+710,000)
Broadband: **4.45 million** (+60,000)

O2

Mobile: **45.19 million** (+2.05 million)
Broadband: **2.1 million** (-33,000)

Mobile: **340,000** (-18,300)

Broadband: **3.39 million** (+182,000)

TV: **6.39 million** (-55,900)

Mobile:

3.77 million (+768,000)

TV: **5.12 million**

(+350,000)

*Sky figures are for Germany and Austria

Mobile: **30.84 million** (+568,000)

Broadband: **6.36 million** (+425,000)

TV: **7.71 million** (-131,000)

Figures, which show customer numbers, are correct as of 30 June 2017. Year-on-year increase/decrease shown in brackets.

Customer engagement: Are we seeing more roses than thorns in the digital garden?

Over recent years, traditional telecommunication services have become increasingly commoditised and undifferentiated, leading to price competition that has driven considerable value out of the industry, writes Dr Janne Ohtonen, Director of Customer Experience Management at Openet.

Frustratingly, dropping prices, while undermining revenue, has not helped Communications Service Providers (CSPs) to hang on to their customers. Churn rates continue to be stubbornly high and CSPs continue to rely on contracts that lock customers in for 12-, 24- or even 36-month periods. While many customers see these as highly restrictive, CSPs feel they have little choice if they are to sustain a viable business. So, why do CSPs struggle to retain their customers and is there a more enlightened and rewarding approach than constantly ratcheting down prices?

In this challenging competitive landscape, customer experience has become a key battlefront - a way to retain customers that is less easily imitated by competitors than service or pricing innovation, and more likely to extend lifetime value. Delivering great customer experience isn't easy, however, and CSPs face many challenges in meeting customer expectations and improving the quality of their engagement. Success to date has been evident in the low Net Promoter Scores (NPS) that CSPs typically record – invariably well to the bottom of cross-industry comparisons – as well as customer attitudes that tend to be lukewarm at best in periodic surveys of customer satisfaction. Customer service is often poor enough that regulators have had to step in; in the UK, for example, Ofcom has imposed multimillion pound penalties on leading CSPs for failings in customer billing.

The need to maintain and work with older systems that weren't designed for agile service creation, real-time responsiveness or to enable speed to market has both slowed down service innovation and made it harder for long-established CSPs to offer consistent and coherent customer support. It also doesn't help that many are not even aware of customer issues until they receive complaints and/or see themselves being discussed in unflattering terms in the national press and on social media.

New operational solutions are needed quickly – solutions that will enable operators to deliver and, just as importantly, support services quickly and economically. Few CSPs can afford a nine-to-eighteen month deployment cycle at multimillion dollar cost when markets can shift radically in the space of just a few weeks. Customers are highly sensitive to market changes, particularly in these social media days, and will take any opportunity to switch to an attractive proposition from a competing CSP as soon as their contracts allow them to.

Undoubtedly, CSPs have much to gain and little to lose by taking digital customer engagement seriously and deploying solutions that will help them address their customers' needs in a more agile, responsive and engaging way – not least as customer experience improvements are clearly shown to have a direct positive impact on bottom-line results.

The challenges and opportunities of improved customer engagement

In mid-2017, Openet, with European Communications, surveyed the telecoms industry to establish the current state of customer engagement. The resulting report identified key issues and challenges, made industry-specific recommendations and drew some interesting conclusions.

For example, over 50 CSPs believed themselves to be performing well regarding market relevance and ease of use, but more poorly in driving the positive emotional responses that are vital for customer retention in all customer-facing industries today. This view conflicts somewhat with other research reports, such as the UK CSI, which reveal that end-customers are more inclined to see CSPs as problematic to deal with.

Regarding customer service channels, self-service websites, mobile apps and call centres are currently seen as performing relatively well and making the greatest contribution to a competitive customer experience – perhaps not surprising, as these channels are likely to have seen the highest investments by most CSPs in recent years.

Self-service websites and apps are typically rated highly for their ability to serve customers independent of time and location. Good as they are, however, these channels are rarely able to deliver consistent and comprehensive customer service. While an experienced agent can help the customer to resolve issues and meet their service needs, it's still rare for a mobile app or web service to provide the same breadth and depth of service.

This lack of consistency generates great and ongoing dissatisfaction amongst telecoms customers. One of the

biggest steps that European CSPs could take to improve customer satisfaction (CSAT) scores would be consistency of service, and more broadly functional self-service channels would certainly be a step in the right direction.

According to the Openet/European Communications report, the key challenges faced by CSPs in delivering competitive customer engagement today are:

- **Network coverage and performance issues.** According to Ofcom, almost nine in 10 broadband customers were satisfied with the reliability of their service, and 83 percent were satisfied with their online speeds. For mobile, 86 percent of customers were satisfied with their coverage. Though these numbers may look high as percentages, it leaves millions of customers unsatisfied across all operators and networks.
- **Poor product and service quality.** One investigation by Ofcom found that over 10,000 pay-as-you-go customers lost out when Vodafone failed to credit their accounts after they topped up their mobile phone credit. The affected customers collectively lost £150,000 over a 17-month period.
- **Inconsistent call centre experiences.** In the UK, on average, landline telephone and broadband customers had to wait over twice as long to speak to a customer services advisor (2 minutes, 51 seconds) than mobile customers (1 minute). Calls to technical support took two and a half minutes longer on average to answer than sales calls.
- **Meeting customer expectations of service quality.** As recent research quoted in this article has pointed out, there is a big variation between companies on how they meet customer expectations with their service quality.
- **Poorly contextualised customer communications.** Barely half of broadband and mobile customers who complained to their provider were satisfied overall with complaint handling (56 percent and 57 percent respectively) and much of their dissatisfaction derived from communication issues.

These challenges are not insurmountable, however. When we look outside telecoms, we see that many companies are believed to engage well with their customers. Our respondents cited, in particular, Amazon for its remarkable delivery logistics, Apple for product usability and Deutsche Telekom for innovative customer engagement approaches (such as Europe's biggest 360-degrees YouTuber meetup). These and other examples of innovative customer value and operational efficiency without compromising customer experience suggest that although things may not look so rosy today, there is great potential for improvement in the near future.

The financial benefits of better customer engagement have been well-established in various bodies of research. My book, The 5-Star Customer Experience, published in 2017, demonstrates that the higher the customer experience score, the greater the impact on annual revenue per customer. This is a view supported by Capgemini's research, showing that companies with a high NPS outperform their lower performing peers in revenue growth by 33 percent on average.

The Openet/European Communications research showed that 70 percent of CSPs are persuaded that customers are willing to pay more for a better experience. Unveiling TDC's Q2 2017 financials, the Chief Executive said that people are prepared to pay more to access the best mobile network experience. Since for many CSPs network experience is one of the highest drivers of overall customer experience satisfaction, it makes sense to work on the network to improve it.

Clearly, CSPs need to move away from price competition and locking customers into rigid contracts. They can certainly take steps to work on the key issues of network and customer experience quality in 2017, in particular through agile technology approaches such as micro-services and DevOps, which, backed with flexible back office and network infrastructure, enable companies to respond more quickly to the ever-changing demands of the market. By combining smart, real-time data processing capabilities with self-care user interfaces, the door is open for CSPs to create much greater customer satisfaction as well as significantly reduced customer and employee effort across all channels.

Improve digital engagement

Openet recently created a playbook of ideas to improve digital engagement in telecommunications. If you're looking for more help in achieving your customer engagement goals, download it from the Openet website: www.openet.com/learning-centre

The C-Suite

Interviews with senior execs from Europe's top operators

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O2 UK Chief Exec: The future is mobile and we're in the best position to succeed

Mark Evans has just completed his first year in charge of the UK's second largest mobile operator. He tells Marc Smith why customer experience, not convergence, is the future

Mark Evans says quad-play will be viewed as a curious moment in telecoms history

"Busy" is the word Mark Evans chooses to describe his first 12 months at the helm of O2 UK. So busy in fact, that he is having to do this interview from his holiday sun lounger. Our original meeting got cancelled when Evans, who stepped up to replace Verizon-bound Ronan Dunne last August, was summoned to Madrid, home of O2's parent Telefónica. It is perhaps this that prompts him to say that what has most surprised him during his inaugural year is "the amount of engagement that the job requires with a variety of different stakeholders, including journalists!"

Less surprising is what O2's former CFO regards as the biggest disappointment of his first year in charge – issues around spectrum. As this interview takes place, the UK's mobile operator community is throwing around legal threats in relation to the terms of an upcoming spectrum auction – a mixture of bandwidth for 4G and 5G services.

Three has launched court action over a 37 percent cap to the total spectrum any operator can hold by 2020. It wants a lower cap but EE, which responded with its own threat to head to the courts, wants the cap to be scrapped entirely. O2 is sympathetic to Three's argument, but has no plans to get lawyers involved.

Evans dismisses both legal threats as "self-serving" and says he is more concerned with getting the part of the auction that relates to "immediately useable" spectrum underway as quickly as possible.

He says Ofcom "can and must act" to auction this 2.3GHz spectrum "either on a permanent or temporary basis". This would allow a legal process in relation to the 3.4GHz spectrum, earmarked for 5G-related services, to be contested separately, he argues.

"The UK mobile market remains imbalanced in terms of spectrum holdings," Evans says. "Spectrum asymmetry is and will continue to be one of the key areas that will determine whether the UK has a viable long-term, competitive mobile market. It is vital that Ofcom remains focused on ending the imbalanced allocation of spectrum and that the regulatory environment remains consistent and predictable. Failure to do so risks losing an opportunity to promote consumer choice, competition and investment in the sector."

No need for fixed

O2's position hinges on two key points. First, it holds just 14 percent of the UK's current useable mobile spectrum, which is less than Three (15 percent), Vodafone (29 percent) and BT/EE (42 percent). Second, having seen a previous attempt to sell the company to Three blocked by the European Commission, Telefónica is now looking at an IPO of its UK subsidiary in an effort to pay down its debt pile. However, O2 will not go public before its Spain-based parent knows what its future spectrum holding in the UK looks like. Evans says his relationship with Madrid is "very strong and supportive", and that Telefónica CEO José María Alvarez-Pallete and new COO Ángel Vilá both have "a huge passion and interest in the UK market".

He denies that the uncertainty about O2's future – let's not forget the deal with Three dates back to March 2015 – has affected its performance. "You only need to look at our first half financial results to see how we continue to deliver a winning proposition for our shareholder," he says. Indeed, like-for-like sales rose 2.3 percent year-on-year in the six months to June to €3.21 billion, while operating income increased 2.2 percent to €849 million. However, the operator's mobile customer base fell from 25.5 million to 25.1 million as growth in contract subscribers could not offset a decline in the prepay base. This more or less wiped out the 444,000 customers O2 gained during 2016, when its market share slipped slightly from 27.2 percent to 26.8 percent.

Evans says: "We've strengthened our focus on having the customer at the heart of our business, whether that be through the increased investment in our network and services (up 19 percent in 2016 versus 2015), reinforcing O2 Priority through our renewed deals for The O2, O2 Academies and England Rugby, increasing customer interactions with our Gurus (up 177 percent) or strengthening our position in both the public and private sectors."

O2 remains the second largest mobile player in terms of subscribers behind EE, but Evans claims he is not focused on catching its larger rival. "To us it's not about being big, it's about putting the customer first," he explains. "Other operators have been chasing us in terms of customer loyalty and satisfaction so we're comfortable with our position in the market. We respond first and foremost to what our customers need and invest heavily in the customer experience. That is, and always has been, our differentiator."

The CEO says the biggest success of his first 12 months in charge has been a restructure designed "to really embed our strategy of customer-led mobile first". Yet questions remain over whether O2 can prosper in the long term as a mobile-only player in a market that continues to move towards the provision of converged services.

Evans responds with a barrage of stats; he cites O2-commissioned research showing that mobile plays a far more important role in peoples' lives than fixed line – 48 percent versus 10 percent – and that 46 percent of people "cannot live without mobile", compared to just 15 percent who say the same for fixed line.

He adds: "To put it another way, our competitors need to be in mobile, but we don't need to be in fixed." Evans says BT buying EE and Sky launching a mobile service back up his argument.

"I believe in time that quad-play will be seen as a curious moment in telecoms history - especially with the introduction of 5G in 2020," he adds.

Simple business model

Given this, it would not be a surprise if O2 launched a fixed-wireless offering down the line. But Evans is coy when asked to speculate about what 5G services may be in the pipeline. "I'm excited about many things that 5G will bring," he says. "5G will build on the foundations already created of 2G, 3G and 4G as higher data speeds and increased capacity will herald more options for Internet of Things, whether for smart homes, smart cities or connected cars."

O2 has already dabbled in one of these when it became the first UK operator to launch a smart home service in September 2016. Details of how the offering, based on AT&T's Digital Life platform, has fared are scant. Evans describes the launch as "a commercial trial", given it was only on offer to select customers in London. He talks up unspecified "positive results" and gaining "the learnings we needed to refine our offer and sales model".

He adds: "The O2 Home commercial trial has helped us understand the importance of advice and assisted selling at this early stage of market evolution. While awareness of smart home is growing fast, engagement and consideration to purchase is lower in some segments."

Regardless of his caginess, the CEO says the service "absolutely" has a future. "Over the next decade connectivity and intelligence will become built into everything we use and interact with," he explains. "Within this context there's no doubt that the connected home will be one of the big consumer categories."

O2 Home is one of a number of so-called digital services that the company has launched, not all successfully. O2 Store & Share and O2 Guard closed down in May, but car insurance product O2 Drive continues to operate. But again precise details of how it is performing are hard to come by. Evans says: "I believe it's critical that we innovate our offers to play a broader role in helping our customers. This in turn will help increase differentiation and loyalty for our mobile business as well as drive new revenues. It's my ambition to take O2 into a new adjacent category at scale and I'm pleased with the initial progress we've made with innovative new services like O2 Home and O2 Drive."

Other strings to O2's bow include community-based MVNO giffgaff and Tesco Mobile, a joint venture with the supermarket chain. Evans oversees the former and is Chairman of the latter. He says both businesses demonstrate that O2 "is not an island". He adds: "We recognise that there are market segments that can be better reached through partnerships. Tesco has a very customer centric vision for shoppers, giffgaff presents a completely different model for mobile phone ownership. Both ventures have been successful as they complement our own O2 direct channels and attract customers we may not otherwise be able to reach."

All told, Evans is in an optimistic mood. "I believe O2 is the best-positioned operator in the UK market to capture the opportunities of a data-hungry economy, fuelled by the best interests of the customer," he says. "The future is mobile and our simple business model allows us to apply a relentless focus on the mobile needs of our customers."

Things could change very quickly of course, particularly if O2 doesn't get what it needs in the spectrum auction and uncertainty over its ownership structure continues. Such concerns, however, are clearly far from Evans' mind as he relaxes after what he regards as a job well done. ec

eir CMO: Marketing the art of the possible

Irish operator eir is reinventing itself again, this time by ditching its long-established Meteor brand and uniting its quad-play interests as a single "brand of possibility". The company's Group Marketing Director Henry Dummer tells all to James Blackman

Irish operator eir is on its third major rebranding project in a little over two years, having simplified the eircom brand in late 2015, and brought Setanta Sports under its own moniker last summer. This time it's different, reckons Henry Dummer, the company's new Group Marketing Director.

Its latest move to reposition the brand – which includes dropping the name of prepay provider Meteor altogether, and uniting its parallel interests around a more comprehensive and complementary quad-play proposition – has been in the works since the start of the year, and has delved deep into the company's character to define a new creative platform for its operations to rally around.

Its marketing spend, estimated at €3-€4 million for its Q1 through-the-line activity, is serious and mounting, as befits such an ambitious project. "We now have one big brand for our quad-play ambitions, with strong attributes in home broadband, content and mobile," says Dummer.

Dummer was recruited at the end of November 2016 to mastermind the project. His appointment, from Tesco Ireland, where he was Marketing Director for six years, was part of an organisational restructure that effectively foretold its external realignment: eir conflated its small business and consumer divisions as a single operational unit, and Dummer was handed charge of a new centralised marketing function, covering everything.

He arrived just as the Christmas rush was in full swing. "That was the first thing I encountered," he says. But the seasonal heat of Christmas trading was hardly new. "I was going from fire to fire," he says, suggesting there are "more parallels between the sectors than you think – even if one is about a Sunday joint [of meat], and the other's about a mobile phone".

His new remit, to fan the flames of brand loyalty whilst keeping sales red hot, was rather like his old one. He had plotted just such a brand narrative at Tesco Ireland. "It was the same challenge, to build a brand while maintaining sales – and to bring a business together around a new approach."

Nevertheless, the complexity of the task prompted him to seek familiar faces among the supporting cast. Long-standing strategic partner DDF-H&B was dropped in January for creative agency Rothco, which had supplied Dummer with the creative spark and strategic support on the Tesco account.

"It was reassuring to go from one challenge to the other and see I had the same job to do," he says. "At Tesco, it was a challenge to create that confidence. But we were very successful. When I left, the brand had great momentum in Ireland."

In search of a common truth

At the start of the year, the eir management team was already nurturing a long-held ambition to unite the group's various business units, and a vague inclination to ditch its Meteor brand. It just lacked a definitive position, and a carefully orchestrated game plan.

"That was one of the reasons I joined – this great ambition and desire to build a well loved brand," explains Dummer. "The timing was less defined. They knew what they wanted, but they were less sure how to achieve it."

Dummer took the diversity of the business, and sought a "common truth" within its broad remit, leading he says to a "common glue" to bind it. With the agency, he set about interviewing every member of staff – from the shop floor to the boardroom – in an attempt to boil down the essence of their pride and passion in the business.

"That was the most powerful thing we did," he says. The key was to ask the right question – to allow staff to zoom out, and open up. "Ask about their passion for the brand, and they are more reflective. You get a different level of response," he says.

The result? "The common theme was this idea we are a brand of possibility – it is not about what this company makes happen, but what it makes possible; what people want to do with our products and services. That's where people found their common sense of pride," he explains.

The subsequent brand position, set out in the grammatically curious tagline Let's Make Possible, informs all of the company's future activity, and defines its advertising creative and marketing messages. "All of our game planning for the year ahead comes back to this question of what we're making possible – of getting everyone to explore this big idea," says Dummer.

The new tagline replaces the Live Life On Eir slogan, introduced with the company's rebranding from eircom in late 2015. "That was an invitation to join us; this is about making possibilities happen," he says.

Derived from 50 hours of staff interviews, it revealed the company's special character in the Irish market. "This business is unique – we are a big player in the Irish market, but Ireland is our only market. Our competitors are big multinational brands," he says.

Its affinity with its home market is total, he observes. "What we saw in the interviews was this deep desire to make a meaningful impact." He points to its

mission to bring fibre broadband to rural Ireland, including areas often made up of one-off housing and farms. The company is investing €30 million in County Kerry, in the country's far southwest, for example, also establishing an Innovation Hub in the county town of Dingle.

"Remote homes in deepest County Kerry will get download speeds equivalent to modern apartments in Tokyo. We are the only brand in Ireland doing that. It comes from this latent passion, which we've never articulated, to make a difference in our home market, our only market," he explains.

"One of the country's big social questions is this migration to big cities, and the challenge for rural communities. eir is breaking with the pack, and investing in fibre rollout in rural communities as well."

But "making possible" is not just about socially minded infrastructure projects; it is also about showing market leadership and expanding customer choice. eir is the first Irish mobile operator to launch Wi-Fi calling, points out Dummer, while eir Sports is the only TV provider showing Gaelic football.

Meteor downed

The removal, on 8 September, of Meteor as a mobile brand – from shops, phones, websites and bills – has been carefully plotted into the unfurling brand narrative. Meteor, around for 16 years, is third in the prepay market behind Vodafone and Three. By contrast, eir Mobile is a marginal post-pay player, which gets bundled with broadband.

"The smaller brand has swallowed the bigger one," observes Dummer, from the point of view of market watchers in the mobile space. Of course, mobile is only a single line of its business. In parallel, eir leads the market for broadband, from Virgin and Sky, and

Henry Drummer

has taken a position as the country's top sports pay-TV brand following the acquisition of Setanta Sports in late 2015, and as a challenger brand for TV more broadly.

The withdrawal of the Meteor brand, on the cards anyway, is logical in the context of its parent's broader scope, and more premium offers in broadband, TV and content. "Meteor is a resilient brand, it is holding its own, and it has a very loyal fan base," says Dummer. "But when I looked at the bigger picture, to position the eir brand as a distinctive market leader for quad-play, it was clear it brought limitations."

The marketing narrative has been carefully organised over the past six months to raise the brand's profile in mobile, by making clear related benefits such as sports content and bundled connectivity, whilst also re-positioning the parent brand itself, climaxing with the multi-million euro advertising campaign that started back in July.

As a sub-plot, it has been required to make clear the lineage and perks for its large and loyal base of Meteor customers ahead of the changeover. "We have passed on the premium benefits of being part of the eir Group to the Meteor base. They have seen good news in the months to September."

But eir has already bombarded its home market with grand statements, including rebranding the business from eircom in late 2015, with a €16 million ad campaign and a chest-thumping Gaelic theme song, and the rebranding of Setanta Sports as eir Sport a year ago, attended by a promotional below-the-line campaign.

Will the latest campaign strike a deeper chord, so Irish customers perceive eir as the home team among multi-play telecoms providers, developing the country's digital infrastructure and services? "We have done a very good job in the past two years, but we haven't, perhaps, had a really crisp position, and all of these consumer impacts have lacked a common glue as a consequence," says Dummer.

"By having a common narrative, and a more consistent creative platform, we have an opportunity to communicate that. But we have to build that brand relationship, so consumers see the benefits of the brand making things possible for them – in a distinct way, in Ireland and for Ireland. That is our opportunity." EC

Amdocs: The intelligent approach to improved operations

In a rapidly transforming market, service providers need to continuously innovate, streamline new feature delivery and automate operations to drive step changes in the customer experience. Digital strategies including DevOps, cloud, artificial intelligence (AI) and IT modernisation help to reduce time to market and improve business agility, efficiency, service quality and customer and operational insight.

But that's a lot for an established operator to handle. Eric Updyke, Group President of Amdocs Services, gives the industry insider's view of where the majority of operators are today, the issues they continue to grapple with and shares Amdocs' approach to realising results quickly.

European Communications: Where are the majority of European operators today in their digital journey, their ability to harness the latest technologies available to them, and in being able to deliver the kind of customer proposition and experience they're aiming for?
Eric Updyke: It's still early days. If you look back 5-10 years, most service providers were operationally reactive, driven by operational KPIs, and supported by multiple manual processes. Most of their technology infrastructure was housed on premise, and was siloed in serving the different parts of the business. Now, we're starting to see a less reactive scenario, the start of self-healing networks, more automated or semi-automated processes, and more business-led KPIs. Meanwhile the IT and network worlds are converging and moving to the cloud. Most operators aren't even halfway there. There's still a long way to go.

What have been the main barriers to progress?
The new world is a complex one, and service providers can struggle to know where to start. Some of our customers look to what Netflix has achieved, and believe that should be their objective or aspiration. But even Netflix took 7-8 years to make a success of what it's doing, and that was without the legacy of a traditional telco. So it's not a realistic comparison. Operators don't need to be any less ambitious, but their opportunities are likely to differ. We remind them of the huge competitive advantage they have – the rich data they have accumulated. Their challenge is to harness this data.

You can't browse a publication or news feed at the moment without being bombarded with predictions about artificial intelligence and how it will change everything. How is AI relevant to service providers' digital transformation journey, and where should they be focusing their attention?
Although AI isn't a new concept, momentum is rapidly accelerating. It's something we are investing in heavily. AI was behind the launch of two key strategic initiatives for Amdocs – intelligent operations and aia. Launched in February at Mobile World Congress, aia is a digital intelligence platform that enables telcos to use real-time data to feed processes and business activity. In terms of intelligent operations, we use AI capabilities such as machine learning to drive efficiency as well as advanced analytics to provide new levels of insight, finding opportunities for continuous and rapid improvements.

Take predictive analytics for example. If a system is about to run out of memory, as a pre-emptive measure it can close apps or take other appropriate action to protect the customer experience. Predictive analytics can also help operators deliver the most appropriate products to the right people at the best time through the best channel. Our aia offering and intelligent operations bring all of this to life.

In terms of where operators are with all of this at the moment, many are anxious. There are technology suppliers selling them slick stories they want to believe, but the transition does take a bit of time so it's important to take this one step at a time.

Could it be that operators are preoccupied with automated assistants like Alexa, seeing this type of development as the key to exploiting AI?
Alexa, IBM Watson, Cortana and so on are something we can help leverage, but these are just the engines. Successfully exploiting AI needs domain expertise, i.e.

an understanding of what this means and how it will work in communications service provisioning. It's about using the right data in the right situation with the right business processes to deliver something meaningful and of value. That's where Amdocs' Services organisation comes in, and why we're winning ground from large, generic systems integrators who don't have the industry breadth and depth of experience in driving value from intelligence.

Can you give some examples of the kinds of projects you've been working on involving AI and intelligent operations?
In developing and emerging markets, Tier-1 operators have come to us because they've been disillusioned with their experiences with generic systems integrators. Although these technology companies are considered to be leaders in AI, when it came down to it they had the engines but not the relevant industry expertise. We talk about 'economies of focus' rather than 'economies of scale', for instance – starting with small projects and doing something well, rather than trying to ramp up everything at once.

And we get results. Within just a couple of months, we've been able to help operators automate key processes to accelerate billing processing and improve accuracy – with better results than their previous suppliers could have achieved over a period of years. In the case of a large service provider, with over 100 million subscribers and more than 90 bill cycles, we were able to run these with 100 percent accuracy in under 48 hours, something that was inconceivable previously. This has given them a faster path to revenue, improved cash flow, reduced customer care burden (due to more accurate billing), and lowered churn.

In more developed markets, we've helped service providers see beyond the Netflix ideal and exploit the huge advantage they have in their existing data, using a bimodal approach to IT in which legacy systems run alongside innovative digital projects.

Our experience shows that one of the things that customers value most is execution – delivering on the promise.

In the case of a Tier-0 North American operator, we provided an infrastructure-as-a-service solution delivered using DevOps methodology. They needed to move very fast, so we recommended a cloud-enabled, virtualised approach which meant they could launch within 90 days, and with a 70 percent reduction in hardware and software costs compared to traditional systems provisioning. They used our next-generation suite of products to launch solutions for each different aspect of their business, starting with enterprise and more recently consumer and SMEs.

Where an operator's priority is to enable autonomous operations, what is their best approach?
There are three key elements: real-time data visibility; accurate predictions via analytics to enable pre-emptive alerts; and then pre-emptive automation based on these predictions. This requires that the system is able to continuously learn so that it increasingly gets better over time.

What's the key to delivering results within an acceptable timeframe?
We advocate a bimodal approach, in which we find a way to harness the rich data and insight from an operator's legacy systems and expose it so they can achieve the business agility they need at the front end of the business. It isn't a case of abandoning legacy investments, but being able to draw from them in a more efficient and profitable way. Key enablers for this would be microservices and DevOps methodologies.

When we talk about microservices, we refer to modularising key aspects of software and exposing APIs and some of the critical business processes, to meet the needs of fast-moving front-end systems – without having to rewrite or adapt back-office systems. By investing in microservices, operators can start to expose the benefits of the rich information they are sitting on, and achieve the business agility they want (the ability to react much more quickly to opportunities).

In terms of DevOps, we mean a mapped-out journey to greater business agility which starts with quick wins, but works towards greater transformation, acknowledging that systems from multiple vendors will be involved but that someone needs to take the lead.

What does that mean in practice?
It means seeing through the journey, end-to-end. We've always taken accountability for the impact of the solutions and services we provide. We take a holistic view and harness automation to take everything up a gear.

The benefits of automation in network self-healing, pre-emptive intervention and the ability to operate with zero-touch efficiency are becoming increasingly clear. What other benefits can service providers expect from intelligent operations?
Removing the scope for human error results in a higher-quality customer service experience. Then there is the increased speed which operators crave. Aided by DevOps-driven release automation and agile deployment via the cloud, service providers can expect to launch new products and services in days rather than months. They can also bring partners onboard much more swiftly. And legacy systems become an asset, rather than a disadvantage.

What final advice do you have for operators who now need to turn their vision into something more tangible?
Service providers need to consider carefully with whom to partner. As with anything else, success doesn't rely solely on the technology. It's what you do with it, how you do it and in what context. That means working with someone who not only has the technical prowess, but who can draw on a broad range of industry experience and best practices to ensure timely and sustainable results.
www.amdocs.com

IBC hails golden age of broadcasting on gold anniversary

IBC, the world's leading media, entertainment and technology show, celebrates its 50th anniversary this year, writes Michael Crimp, CEO of IBC. While the broadcast landscape has been transformed in that time, the show still seeks to be the leading global forum where the real issues of the industry are discussed and new strategies developed. Back in 1967 the founders of IBC knew that to be a success the event had to have three strands: a comprehensive exhibition, a visionary conference, and the networking opportunities to share ideas. Fifty years on we have a huge amount to talk about: from Ultra HD to 5G connectivity; from IP to cyber security. And IBC is still the best place to do that.

This year's conference is subtitled Truth, Trust and Transformation, and has five tracks running over five days. Session topics range from the deeply technical, like new codec design, to the topical and strategic, like "fake news". Broadcasters have traditionally been the trusted brand for news: is the era of social media and universal internet access changing that?

Our conference theme has resonances in other ways than the obvious, too. One of the challenges of the transition to IP connectivity is the risk that the media industry will become a major target for malware and hackers. As the transport platform becomes more open, the more we need to focus on cyber security and the intrinsic design of safe, secure systems.

Platforms for debate

Issues around OTT and social media delivery run right through the conference. Sometimes seen as "disruptive", though probably "transformative" is the better word, it brings new challenges for creativity and business. The keynote session from Brian Sullivan, President of the digital consumer group at Fox, looks at these challenges, or as he says: "In a digital world the consumer has the power. Deal with it."

The Technology Forward Keynote, 'What's Happening in VR, AR and Mixed Reality', is delivered by Rikard Steiber, President, Viveport and SVP Virtual Reality, HTC, who will look at the emerging swathe of consumer devices and services, as well as showcasing successful VR experiences across platforms.

New this year is the C-Tech Summit: two days of specialist presentations and debates, presented on the same behind-closed-doors basis as the Leaders' Summit. The event will provide technological debate at a strategic level, aiming to help C-level executives understand the implications for business transformation. Friday's session will discuss the critical issue of cyber security, while on Saturday it will be the possibilities of 5G and persistent, universal high speed connectivity.

We have also added the biggest temporary structure we have ever built for an IBC to house Hall 14, dedicated to Content Everywhere. This area combines a curated exhibition with a Hub Theatre and other features specifically designed to help visitors expand their knowledge and understanding of the latest trends, strategies and developments in online TV and video.

In addition we will present the IP Showcase. IP is no longer the future – real-time IP for production, playout and contribution is a practical, flexible, efficient reality that is rapidly taking hold in mainstream broadcast operations. The IP Showcase will offer demonstrations, real-world scenarios and education sessions, showing the full potential of IP workflows.

There will be many opportunities around the show for visitors to immerse themselves in cutting edge technologies and learn about the accelerating trends that are enhancing, customising or otherwise transforming the user experience (UX). The Business Transformation conference session entitled 'Broadcast is about to be Transformed' sees speakers from Google, Freeview Australia, DMC and DTG discussing the myriad disruptions currently facing broadcast on all fronts, from IP-only delivery to personalised user experiences, while the series of Tech Talks on Sunday 17 September also features several must-see sessions that step further into the future.

We've come a long way since 1967; maybe this year's IBC will give us a glimpse of what the next 50 years will bring.
show.ibc.org


Michael Crimp, CEO, IBC

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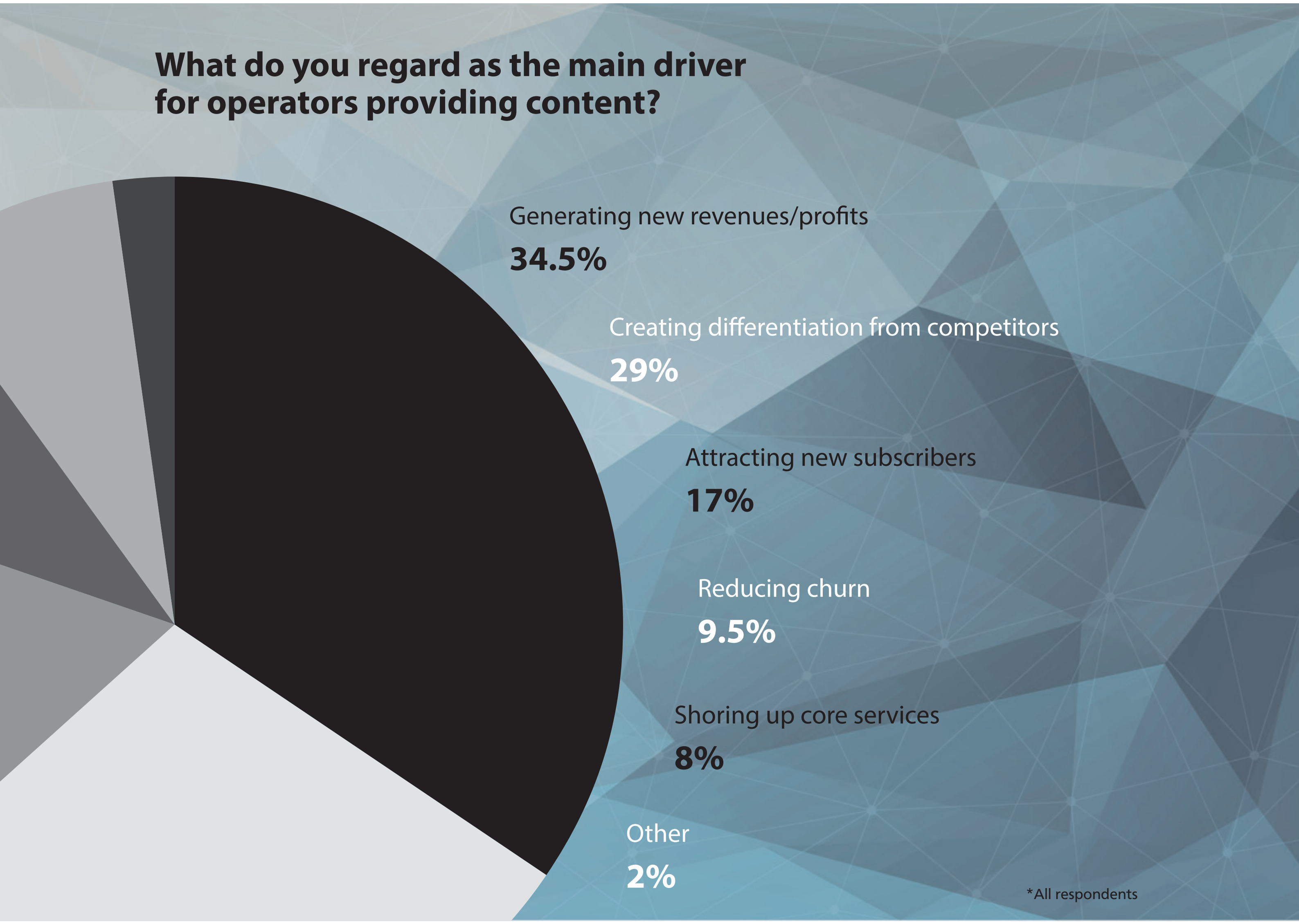
Q3 survey: Struggle for financial gain, differentiation to be continued…

The telecoms industry thinks drama, film and sport can deliver revenues and profits, regards Netflix as operators' biggest competitor and says differentiation is the biggest challenge to successful content strategies. These are the headline findings from European Communications' latest annual OTT/digital content survey, which polled 152 people in June and July 2017.

Generating new revenues and profits overtook creating differentiation as the main driver for operators providing content this year. The latter dropped 12 percentage points versus last year's survey, but was top when it came to the biggest challenge respondents think the industry faces. Operators seem to agree with the wider industry, given just eight percent describe their offering as "very differentiated" from competitors.

Operators also seem to be in sync with the rest of the industry in terms of what type of content is the most important. The industry at large thinks drama and film is the most valuable,



while over 71 percent of operators say they offer this type of content. This is interesting, given how the industry views Netflix – a company telcos continue to get into bed with – as operators' biggest competitor in the field.

However, one respondent said: "There is no single 'most valuable' content to offer, just as there is no single one target group for digital content as such. In order for a telco brand to lock customers' attention and own a lasting client relationship, telcos ideally need to offer the complete portfolio of digital entertainment content."

There appears more work still to be done by operators' content teams to persuade the wider business that their efforts are bearing fruit. A significant number of operator respondents indicated they were ambivalent as to whether progress had been made in terms of strategy during the past 12 months and as to whether they are impressed with what's on offer to subscribers. Further, more operators said the content they provide is not providing any return on investment than those who said it is generating a significant RoI.

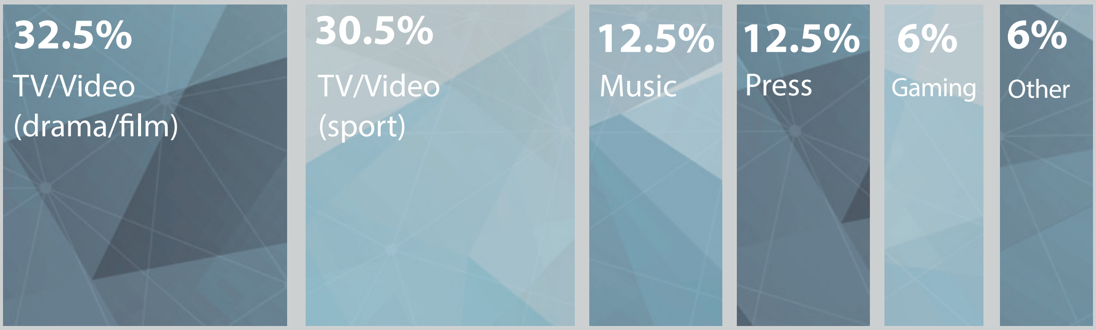
We also asked two new questions this year: the majority of operators think offering zero-rated content on mobile is important to their overall strategies, while catch-up and VoD offerings are expected to be the most popular methods of consumption by 2020.

You can read the full results of the survey over the next few pages. Of the 152 respondents to our online survey, 39 percent were operators and 30 percent were vendors. The remaining 31 percent of respondents work for other interested third parties, including analysts, consultants and regulators. Sixty nine percent of respondents were based in Europe, 15 percent in Asia-Pacific and nine percent in North America. The remainder were split evenly between the Middle East and Africa, and South America.

What do you regard as the biggest challenge to the success of operators' digital content strategies?

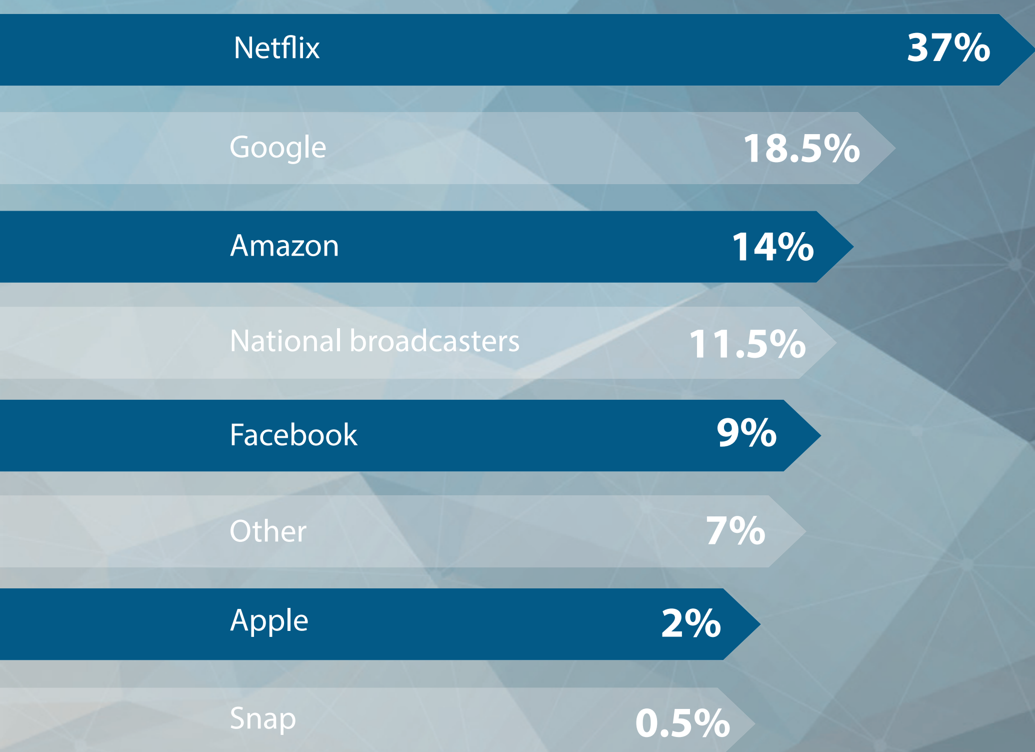
*All respondents

Which type of content do you regard as the most valuable to offer subscribers?



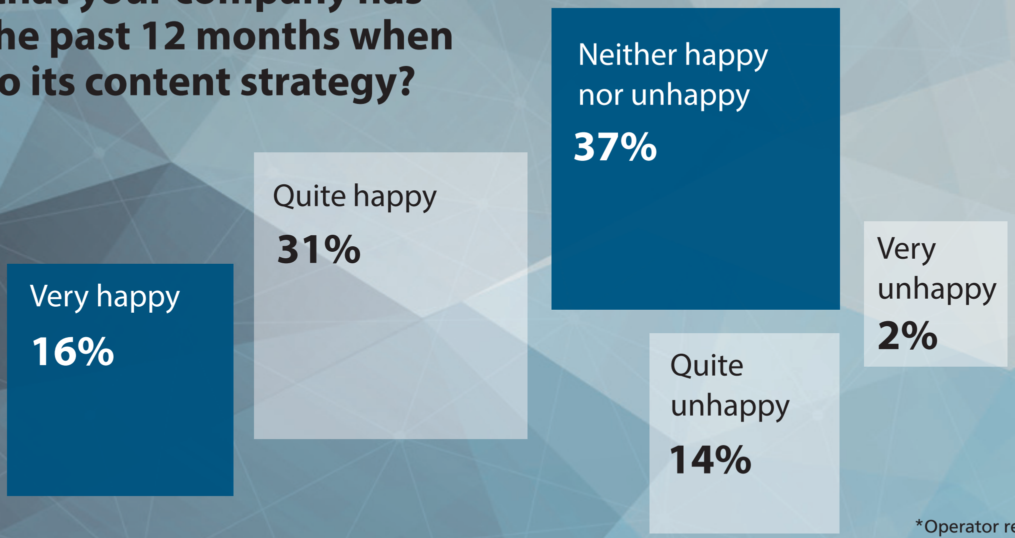
*All respondents

Which of the following do you consider to be the biggest competitor to operators in the content space?



*All respondents

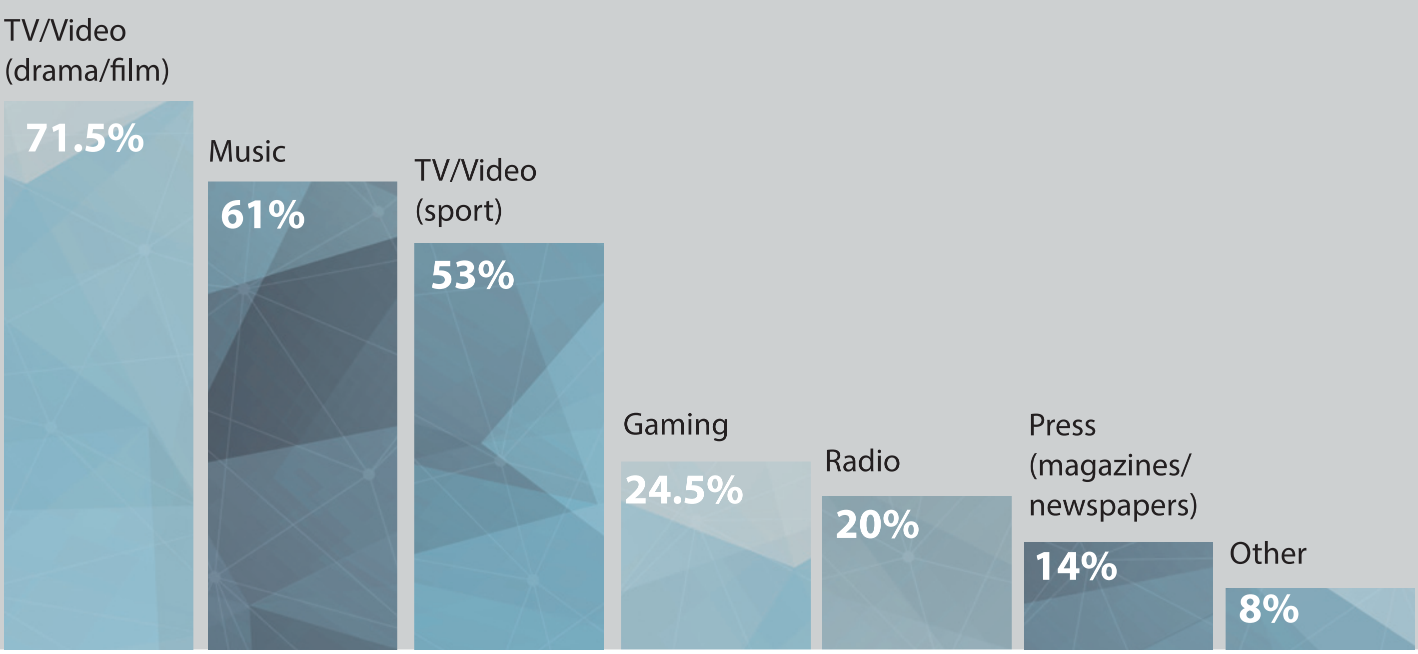
How happy are you with the progress that your company has made in the past 12 months when it comes to its content strategy?



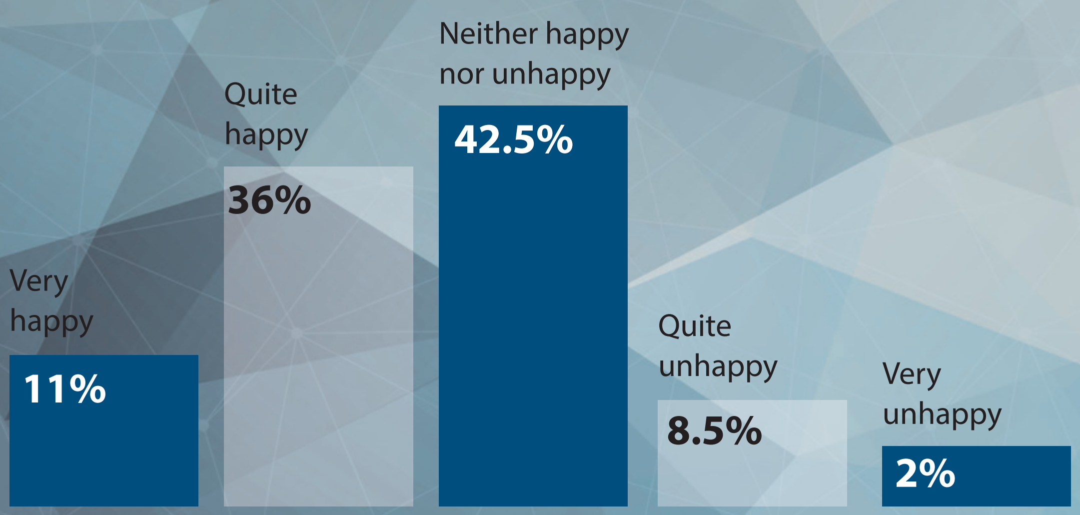
*Operator respondents

Which of they following types of content do you offer subscribers currently?

*Operator respondents



How happy are you with the choice of content that you offer your subscribers currently?

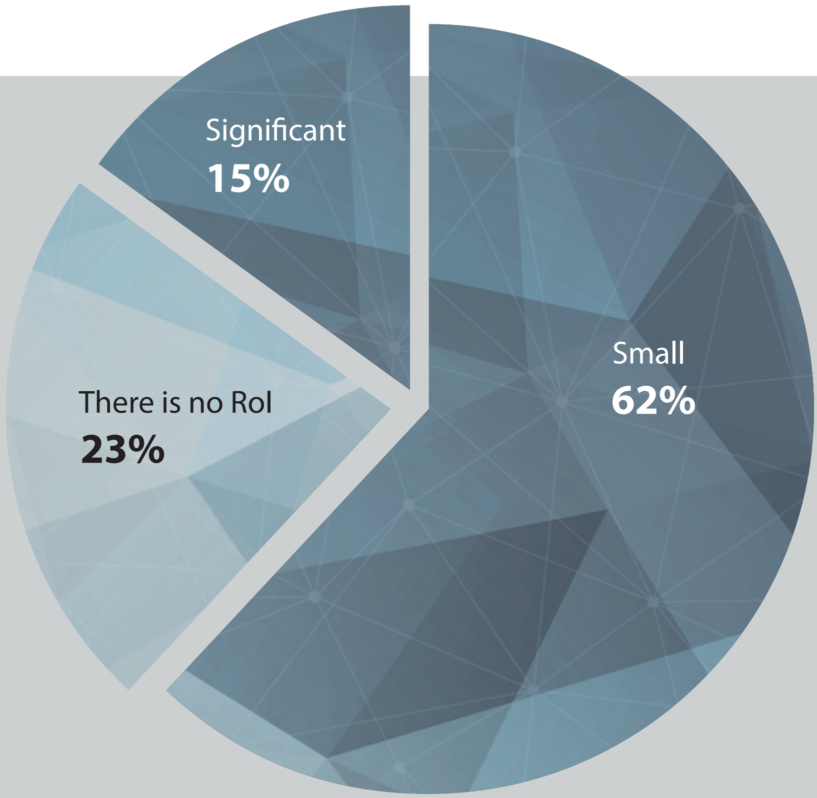


*Operator respondents

How differentiated do you think your content offering is currently compared to your competitors?

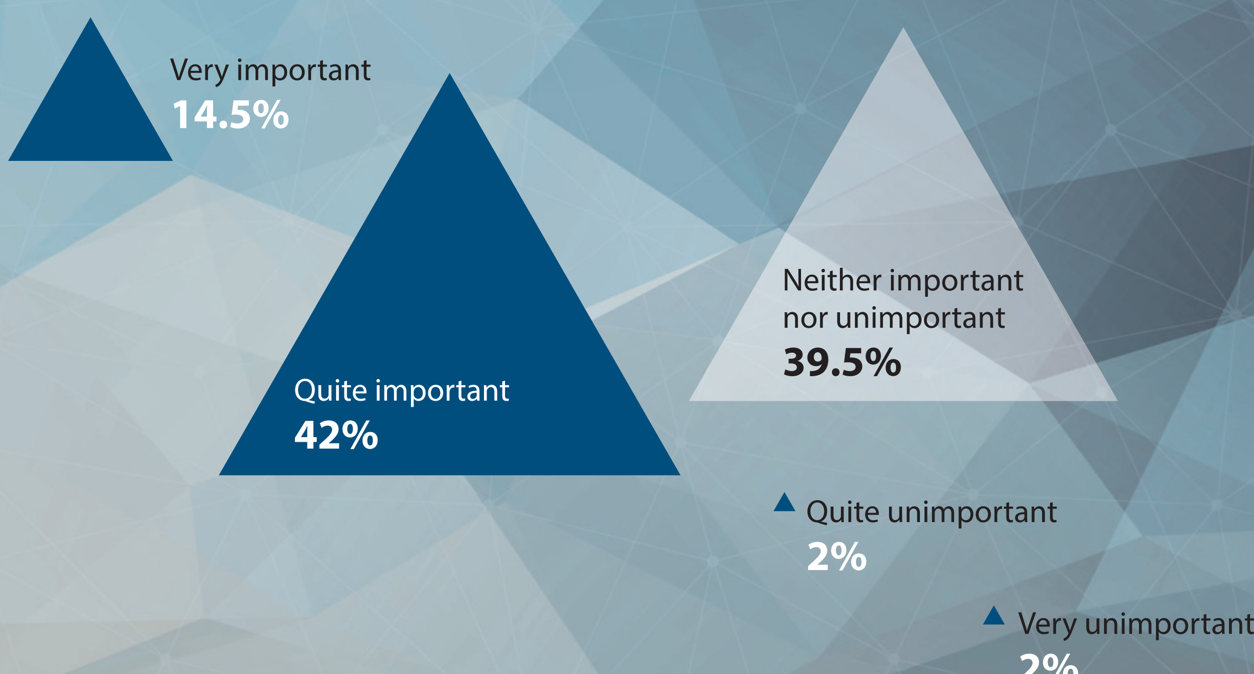
*Operator respondents

What is your assessment of the RoI you are getting from the content you provide currently?



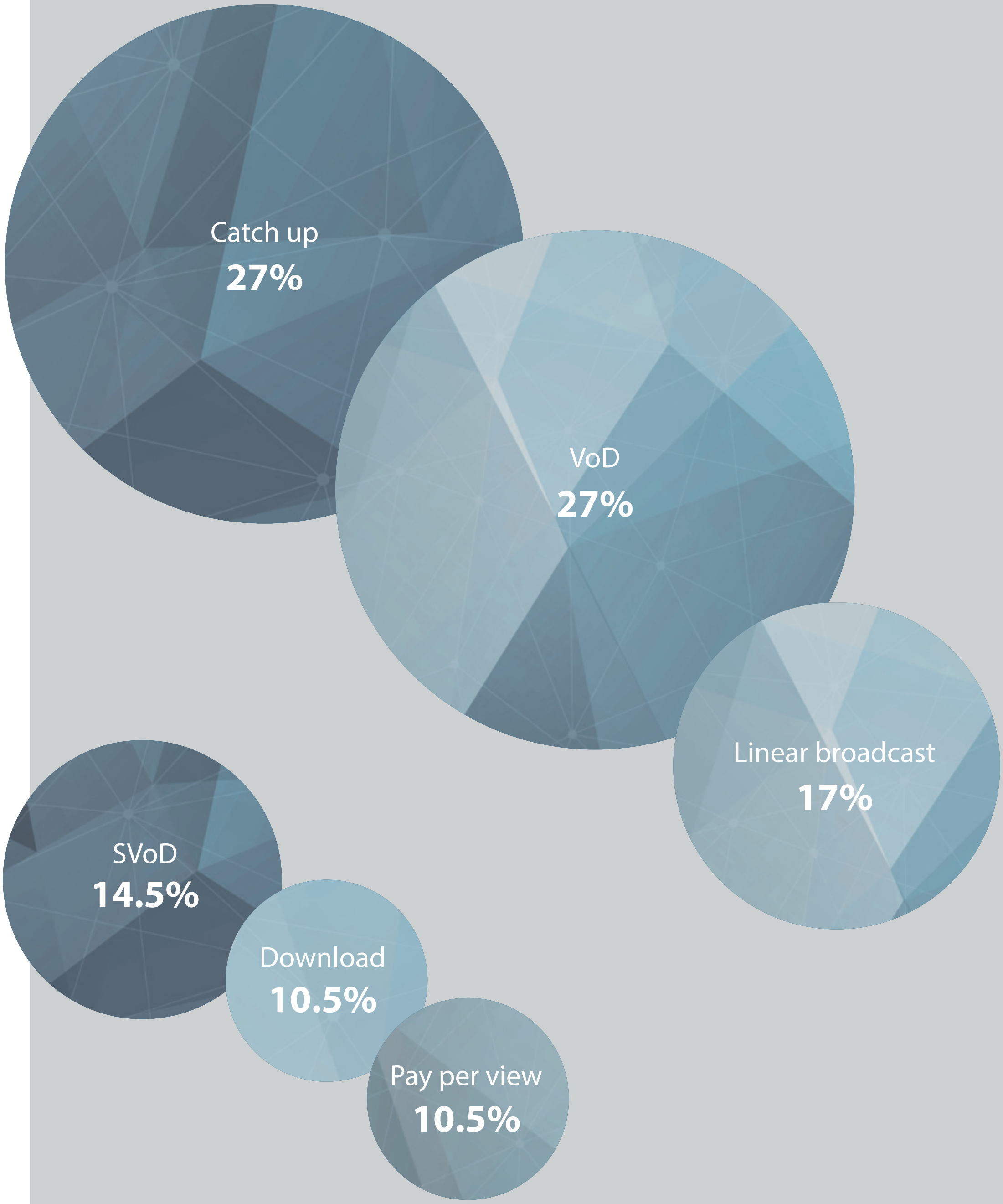
*Operator respondents

How important is offering zero-rated content on mobile to your overall strategy?



*Operator respondents

Which type of TV/video service do you think will be the most popular among your subscribers in 2020?



*Operator respondents

Proximus TV chief talks porn, VICE and niche audiences

Stephanie Rockmann, Director of Content and Media at Proximus, tells Marc Smith why the Belgium-based operator is happy to be an aggregator of content

It's not often that you get to discuss pornography with a telecoms exec, either on or off the record, but Stephanie Rockmann doesn't blink when this rather unusual topic is raised. Indeed, Proximus' Director of Content and Media goes so far as to educate me about a "new trend" in the Netherlands – adult content made for couples. "We offer that too," Rockmann says.

The discussion comes up after a look at the Belgian operator's website reveals one of four TV "offers" available to subscribers is adult content (the others are entertainment, kids and sports). Click on the "Learn more and order" button and you are faced with promises of "erotic clips and exciting videos", news that "it's getting hot on Proximus TV" and the reassurance that it is "discreet, secure and regularly updated". It is accompanied by an illustration of two scoops of ice cream shaped into women's breasts.

The surprise here is not that this sort of content is offered – most telcos do in some capacity – but that it can be accessed in just two clicks of a mouse at a company whose CEO and TV chief are both women. "I don't find it that prominent," Rockmann responds. "At the end of the day this is content that people want access to. We're responding to a very clearly expressed demand from parts of our customer base." She adds: "We're definitely not ashamed of it."

Rockmann goes on to assure me that Proximus has "very strict rules" about what it broadcasts and that there is an "equality chart" providers have to comply with.

"People say 'Why have this when everything is for free on the internet?' Well, [what we have] is totally different, it's much higher quality," she says.

Stephanie Rockmann says tech enables telcos to hyper-serve niche audiences

Citing the novel Fifty Shades of Grey and its subsequent movie adaptation, Rockmann adds: "[This type of] content has become a lot more acceptable in society."

It is arguably a cultural thing. A look at the Orange TV website shows similar adult offers – the Bouquets Adulte et Charme – whereas there is no sign of any equivalent content bundles on BT TV, for example. Before I'm forever cast as the quintessential English prude, I move the discussion on. Rockmann, in her post since March 2014, heads up a team of 60 within Proximus's consumer business unit. While some operators – notably Orange, Altice and Telefónica – are pushing on into production, Proximus is very much in the camp that says it knows its own limits.

"We're not a media company, we're a telco," says Rockmann. "We consider content to be one of our pillars – it is what binds us to our customers. As such, our mission is to give access to content in the easiest, smoothest way. We're a content aggregator, not a content creator."

She adds a caveat: "There are a few exceptions – we produce our own sports channels – but there is clear differentiation from competitors who call themselves media companies."

Does she think those who are going down the production route are making a terrible mistake? "Every company is different but we just don't consider this to be our core business. It's not what we're

good at," Rockmann responds. "We're good at putting fibre in the ground, at maintaining a mobile network. The RoI of content production doesn't make sense. We're way better off investing in networks. You can have the best content but if it's delivered over a shitty network it's not going to work."

Keeping up with demand

Proximus offers 205 channels via linear TV, VoD and SVoD. Champions League football and some kids channels have been bought as exclusives, but most of the rest can found elsewhere.

Rockmann says she works with around 85 partners to provide the content that her customers want. The most recent is millennial favourite VICE MEDIA, whose TV arm produces programmes with titles such as Gaycation and Bong Appetit. Rockmann says the US-based company is a good example of the type of content partner she wants to work with. "They've very savvy about their own users," she explains. Allied to Proximus' distribution capabilities, this leads to "some very interesting discussions" that can benefit both parties, she says without expanding further.

However, given the number of times Rockmann namechecks Netflix during this interview it is clear which partner may be the most important out of the 85. "We've definitely decided to view them as a partner," she says when it is put to her that the majority of European Communications readers voted The House of Cards producer as the biggest competitor to operators in the content space.

"They're a phenomenally data driven company. What they've managed to do over the past few years is astounding, it's fundamentally changed media consumption."

Rockmann notes feedback from customers has confirmed that the addition of Netflix is "exactly what they want". But keeping on top of customer demands is key. "We're continuously busy with optimising our line up, [deciding] what channels should we keep," she says.

Proximus does "a lot" of market research to help it meet the evolving needs of its subscribers. Linear television "still rules" Rockmann says, with Belgians watching five hours a day on average. However, she notes audiences are on the decline: "The trick is to have a good mix."

Pulling off such a trick is complicated by the fact that Belgium is "basically two countries". "The north and the south have completely different line ups to some extent," Rockmann says, adding that the large expat community in Brussels adds another layer of complexity. The result is that a one-size-fits-all approach just won't wash.

Yet this can be a challenge if you're an aggregator. How do you differentiate your offering? "We're lucky, we're in an era where technology allows us to hyper-serve niche audiences," Rockmann responds. She splits the content market into three distinct parts to illustrate what she means. First, there is exclusive content that "will continue to be expensive". Second, there is the "fat belly" in the middle that represents content people regard as being "important but not that important". Third, is a long tail of niche content that is for "a few people but for whom it is extremely important".

While Proximus offers a very limited selection of exclusive content – "it's not the keystone," Rockmann says – and rather more fat belly, the exec sees a big opportunity in the third area. "Traditionally, we haven't been able to serve the long tail due to limitations in technology and finance. Now we can, it's going to make a big difference," Rockmann says.

The partnership with VICE is one example of this long tail; mobile-only content could be another. "Its definitely something we're looking at," Rockmann says. "How do you monetise/valorise this is still the biggest question. The user group's willingness to pay is limited."

Dreaming of hulu

As of September, Rockmann will be reporting to a new line manager. Guillaume Boutin was hired from French pay TV channel Canal+, where he served as Chief Marketing Officer, in June. Boutin also spent 14 years at French operator SFR, so should we be well placed to work with Rockmann on pushing Proximus' content strategy forward.

"I'm very excited to have him join us. [His arrival] is testament to how important content is," Rockmann says. The pair had already met, with Rockmann tapping him for information in 2016 on how SFR was bundling content amid "the hurricane arrival of Free Mobile" on the French market. "He's an absolutely charming person, super bright," Rockmann says.

The pair will work together to keep Proximus TV on an upward curve. The operator added 75,000 TV customers in 2016 and a further 44,000 in the first half of 2017, taking its total TV subscriber base to 1.53 million.

Looking forward, Rockmann says her biggest challenge is finding the best content possible to offer subscribers: "The media industry is one of the most disrupted industries out there right now. Being a telco you're part of the ecosystem and the fact that people are fundamentally changing the way they consume media is deeply affecting our business." She adds: "If you don't listen, don't meet their demands and don't satisfy their needs they will go somewhere else."

Rockmann hints that she is working on a new content offering, but won't reveal any details. She is happier to talk about what she would offer her customers, if money and a host of other potential barriers were no object. "I'd love to be able to offer hulu. They don't seem to have international expansion plans but they might one day. They've done a great job in keeping interest in linear content in a non-linear way and in keep creating value around content – that is going to be the biggest nut for everyone to crack."

Whether Rockmann gets to add hulu as a partner in the future remains to be seen, it is clear she will leave no stone unturned to get what her customers want. ec

Telcos look to make local drama out of studio giants' global crisis

Telecoms providers are getting into content production in a big way. But how can they possibly compete with Netflix and Amazon when even old kings of content like Time Warner are seeking help? James Blackman reports

Florence Le Borgne, a lead analyst at European think-tank IDATE, reflects on a conversation she had with a Time Warner executive earlier this summer. "He said to me, 'AT&T will probably buy Time Warner just because, you know, both of them need to be bigger'." She pauses, momentarily. "I mean, Time Warner," she resumes. "It says something about the state of the market when one of the most powerful media companies in the world says it needs to be bigger."

The $85 billion deal between these two companies, currently under review by the US Justice Department, will see the world's third largest telecoms provider with the world's third largest entertainment company. It is the most significant deal so far between the two sectors, putting the $48.5 billion AT&T paid for DirecTV in 2015 in the shade, and dwarfing the €706.8 million Telefónica spent on the Spanish arm of Canal+ the same year.

Moves by Altice, Orange, Telefónica and Liberty Global in Europe in recent months confirm what the AT&T deal signposted: that these parallel markets are on converging paths. More significantly, the Time Warner aside tells of a media market that has been reimagined and re-ordered by OTTs going straight to consumers with content of their own.

Netflix, 10 years old as a streaming service and five years old as a production house, said in July it has surpassed 100 million paid subscribers globally, with the majority now residing outside of the US. If the old movie studios are feeling bullied, and telecoms providers are struggling to make their infrastructure pay, it is only because the rules have changed. "The numbers don't lie," says Paolo Pescatore, Vice President of Multiplay and Media at analyst house CCS Insight. "Netflix has paved the way. It has shown the appetite among consumers to pay for video."

In search of distinctiveness

Operators in Europe agree with the logic. 2017 began with Telefónica backing itself to become the leading provider of Spanish content, by committing €70 million to four productions this year, with another 10 scheduled for 2018 with new investment. The Spain-based operator 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. "Our strategy has worked so far; customer loyalty has increased. But we need our own content as well, so we aren't just relying on foreign content and sports," says Domingo Corral, Director of Original Content at Movistar+. The early response to its new titles has been positive, with international distribution rights agreed for three already, even as they are in pre-production.

> "We need our own content as well, so we aren't just relying on foreign content and sports"

Altice launched a cooking channel featuring British chef Jamie Oliver in April as part of a wider MY Cuisine brand that incorporates a print magazine and a mobile app. It is the latest in a long line of moves the Portugal Telecom and SFR owner has made over the past 18 months as it looks to turn itself into "a transatlantic converged communications player".

In July, Orange committed €100 million over five years to produce a number of original dramas, including with HBO, and launched a new division, Orange Content, to combine content production and distribution. The same month, Liberty Global teamed up with investment firm TPG Growth to launch a global TV production and distribution studio called Platform One Media that is tasked with curating, developing, producing and distributing new content. This follows a deal Liberty signed with UK-based All3Media, in which it owns a 50 percent stake, to produce exclusive content for its operating companies – including Virgin Media in the UK, Unitymedia in Germany and Ziggo in the Netherlands – in a deal stretching to four original drama series over two years.

David Bouchier, Chief Digital Entertainment Officer at Virgin Media, echoes Corral on foreign imports. "What production and co-production give you is distinctiveness. That is very important, especially in mature markets like the UK. You can't just recycle everyone else's programming," he says.

Sky is at it too, with plans to co-produce two drama series per year with HBO as part of a $250 million agreement. It has also collaborated with Amazon on upcoming series Britannia and with Altice on 10-part drama series, Riviera, the premiere of which on Sky Atlantic was the channel's biggest launch this year.

"There's definitely been an increase in

the volume of original content being produced by companies across the industry," says Gary Davey, Managing Director of Content at Sky. "For us, this is the year when we are really seeing the results of our strategy to develop more high-end scripted drama – 2017 is already one of our biggest years on screen for Sky."

Bouchier acknowledges that Netflix's strategy has set the tone, and prompted the response from the telecoms and TV industries. "That [investment in original content] has always been a critical component of the pay TV offer. What has changed is Netflix has fragmented that offer and taken it into a sort of skinny bundle," he explains.

Netflix has made a virtue of its user interface, he suggests, presenting a simplified library of high-quality content on-demand. "There is lots of content on Netflix that you don't watch. The difference is customers perceive it as choice, whereas lots of channels are considered a cost. It's about perception. As a new entrant, you get to knock the skittles away. The challenge for us is to re-set the narrative," he says.

It requires the industry to move from "multi-channel television to multi-service television", with more flexible access and clearer promotion of content, whether it is bought-in or homemade. "It's difficult for an industry to pivot like that, to meet the challenge of subscription video services that are easy to obtain and to churn from," he says. "We have to move with the times in the offers we make to customers."

Its content production falls into this broader review. New shows will be available on-demand from Virgin Media, and online in 12 international markets. Linear channels are good for marketing, but require "constant feeding", says Bouchier. "With all the other great channels we have, we only need to drop in a few [programmes] of our own to sprinkle a little difference," he says.

Leveraging local expertise

Ultimately, telecoms providers' investment in the content market is rooted in their existential struggle for differentiation. "They're great at laying cable in the ground, but it's a cutthroat business that comes down to price and service," says Pescatore. "The only way to drive traffic and subscriptions is to offer content."

On set at La Peste, Telefónica's new drama production

He points to BT's eye-watering investments in live sports, including £1.2 billion for the latest Champions League rights, up 32 percent on its previous investment. "If you look at its subscriber uptake, its strategy has been a great success," he says.

But for pure drama, what hope do telecoms providers, historically bounded by licensing deals, have against Netflix and Amazon, investing up to $6 billion a year? Le Borgne says the telecoms sector's major protagonists have the only hopes. "They are the only ones more powerful than the media companies," she says. Their tactical approach should be to leverage local expertise and undercut the "global, American-style content" from online players. "People want local content as well. There is still room for that," she says.

HBO, working with Sky and Orange, agrees that home-grown content does best, and local telecoms providers have the inside track. "As proud as we are of our original US productions, we know indigenous programming has proven to be more popular among local audiences," says Casey Bloys, the company's President of Programming. "Quality programming is emerging around the globe. Orange and Sky bring a local expertise that is vital for such productions. These are countries where we don't have HBO services and these are proven producers of high quality content. Shared resources and skill sets will result in some very dynamic projects."

Unsurprisingly, Netflix says it is making "big investments" in local content as well. Telefónica's Corral is not unduly worried: "Yes, Netflix is making local content, and Amazon will make steps as well, but our approach is unique," he says. "The shows we have in production feature Spanish writers, directors and stars. No one else is serving our market in the same way."

Customers perceive Netflix and Amazon as "additions, not alternatives," reckons Sky's Davey. He says his company's local knowledge goes deeper: "We have a very close connection to our customers. We are at our best when we serve our local markets with world-class content." ec

Kerlink: M2M stalwart claims IoT leadership with biggest-ever LoRa network

As the Internet of Things gathers pace, and opens up new roads, French technology provider Kerlink wants to show the way. "We are well positioned, with the right solutions, and the right vision," says the company's Chairman and Chief Executive William Gouesbet. "We are well positioned not just to anticipate and innovate in the market, but also to lead it."

It is a grand vision, especially for an engineering firm that is unaccustomed to the spotlight, operating in a market that is bustling with bright young things. But Kerlink is not just another start-up, making hay in the modish Internet of Things (IoT) space. Indeed, it has form and history with connected machines, it led the way with smart metering at home in France, and has played a central role in the rise of LoRa® technology across the world.

The business was founded in 2004 by Gouesbet and Yannick Delibie, its CTIO and deputy CEO; the pair worked together at French M2M module maker Wavecom, eventually acquired by Sierra Wireless, and quickly perceived the expansive role of wireless technologies in sectors such as fleet management, asset tracking and telemetry.

But Kerlink has pushed the envelope as well, launching a range of products for transportation applications in addition to the familiar discipline of fleet management, such as passenger information, onboard infotainment, fuel-efficiency monitoring and car sharing. It has also championed new RF technologies to connect machines, quickly innovating around emerging low-power wide-area (LPWA) solutions.

"When we started 13 years ago, M2M solutions held sway, and required GSM SIM cards. Operating costs were higher, and devices not only cost more, they used a lot more energy than now. Plus, the business model was less flexible," explains Gouesbet. "It would have been impossible to address the IoT market, as it is today, with usual M2M technology. SIM-based cellular solutions are just too expensive for an increasing number of IoT use cases."

Kerlink also helped to develop and implement the Wireless M-Bus, or Meter-Bus, standard for gas, water, electric and heat metering, promoting its usage in Europe. Importantly, its work with French gas company GrDF saw it engage with LPWA solutions provider Cycleo, snapped up by US semiconductor outfit Semtech in 2012, just as Cycleo was developing its own proprietary RF modulation technology, called LoRa®.

Indeed, Kerlink was there from the start of the new LPWA revolution. "We are a unique early adopter of LoRa® technology because of our close partnership with Semtech, and Cycleo before it. We were the first solution provider to support LoRa® technology; we built the world's first commercially available LoRaWAN™ gateway, the Wirnet station, in 2014," says Gouesbet.

"That's why we are a leading player in the field now. Our pioneering spirit informed our heritage with smart metering, which ensured we were one of the first in this space."

Two pillars

LoRa®, making use of ISM license-free sub-1GHz spectrum bands, brings unprecedented capabilities for IoT applications, in terms of extensive coverage, low energy consumption, deep penetration, and cost-efficiency, reckons Gouesbet. "The reduced capex and opex offer more flexibility for players to make the decision to invest in such an IoT dedicated network, and offer faster returns," he says.

"There are no licensing fees, because it is running in unlicensed spectrum, and it is fast to deploy, and quick to bring to market, so the return on investment is rapid. LoRa® is the right technology at the right time to unlock many segments and offer innovative business models. It also perfectly fits in the strategy of public operators, like telcos or cable operators, and private companies or cities, that want to deploy their own networks."

By 2014, through its first engagement with Semtech and its founding role in the open, non-profit LoRa Alliance™, Kerlink had developed a range of outdoor carrier-grade LoRaWAN™ base stations – the first of their kind – recently augmented by indoor solutions. It soon padded out its LoRa® proposition with network planning services, covering network design and deployment, as well as core-network, radio-network and gateway-management services. These services are included in the Wanesy™ RAN Management Center suite.

"Our value proposition relies on two pillars: connectivity and services for applications, offered through a mix of hardware products, software solutions and professional services," explains Gouesbet. His company provides the full-service wrap, he says, from hardware and operations, through to a reference design so third-party developers can rapidly integrate their own LoRa®-based IoT solutions. The company also focuses on value-added services like network-based geolocation, and recently announced device-management capabilities to remotely monitor and manage connected devices.

Kerlink's progress over the past five years has been like a rolling scrum, on a field of play completely transformed by wide-area networking and smart applications. The company has installed over 70,000 gateways and base stations for M2M and IoT networks for more than 260 clients in Europe and Asia, including telecom providers such as Tata Communications, and utilities such as GrDF and Suez. It recently announced a deal with a South American partner to deploy a network across Argentina.

Since 2013, its compound annual growth rate (CAGR) has exceeded 50 percent. Just as the remit of machine communications has gone beyond the old boundaries of fleet management and utility metering, into disciplines like agriculture, smart cities and asset tracking, so Kerlink has retained its pioneering spirit.

"Innovation is in our DNA," says Gouesbet. The company dedicates 25 percent of its revenue to research and development. It added a network-based geolocation service, leveraging radio and core-network components, to its LoRa® gateways last year. The service replaces GPS and enables network LPWA operators to add native location services to end nodes without increasing the bill of material or draining batteries.

Last year also saw Kerlink's debut on the Euronext Growth exchange in Paris, following an initial public stock offering of €13.2 million. Revenue jumped 90 percent in the year. It raised a further €20.7 million via a capital increase with preferential shareholder subscription rights in the second quarter of 2017.

Biggest deal

Its current status is assured, reckons Gouesbet. "We are the leading service provider for LPWA IoT network equipment and software solutions, serving broadband and telecom operators, smart cities and private companies alike, across the world." As if to confirm it, Tata Communications has just confirmed Kerlink's role in the deployment of the largest LoRa® network in the world.

The pair ran a trial behind the scenes during the second half of 2016, in Mumbai, Delhi, and Bangalore, featuring "several hundred" Kerlink network gateways. "The goal was to cover four million people in three major cities in India," says Gouesbet. "It confirmed the design, performance and reliability of our equipment."

They signed a contract in February, announced it in June, and are presently engaged in the "initial phase of the deployment", working towards a nationwide rollout of a LoRa® network covering 27 cities, 2,000 communities and 400 million people.

Alongside its requisite LoRa® features, Kerlink's LoRaWAN™ Wirnet iBTS Compact gateway offers a 3G / 4G dual-SIM modem to ensure backhaul continuity of service, plus a geolocation-ready design for new types of services. For this first step, Tata Communications will deploy more than 10,000 of the gateways in India, creating the largest network of LoRa® stations anywhere on the planet.

Such scale has presented certain technical and logistics challenges, acknowledges Gouesbet. "The challenge was to keep pace and maintain quality. We had to evolve our product and add new features very quickly, we had to adapt our processes in France and India, to orchestrate the perfect execution of the plan, and we had to increase our overall production capacity," he says.

To that end, it partnered with "Sketch-to-Scale™" solutions provider Flex to increase its production capacity by leveraging Flex's reach and know-how in wireless networks and RF-based fronthaul and backhaul connectivity solutions like small cells and radio access base stations.

"We had to show our major customers that we could deliver large-scale projects, with a large volume of base stations, while maintaining quality and reactivity. That's why we partnered with Flex, which can meet demand for equipment manufacturing, delivery and support anywhere in the world," says Gouesbet.

Indeed, the arrangement with Flex buoys Kerlink's global expansion plans into booming IoT regions like Asia Pacific and North America, where it established subsidiaries in earlier 2016 and 2017, respectively.

Future paths

Gouesbet declines to speculate on the likely applications that will be developed for the Tata Communications network in India, but says Kerlink currently sees three primary markets for its LoRaWAN™ based solutions: smart cities, covering sub-verticals such as lighting, parking, buildings, metering and transportation; smart industry, with particular focus on asset tracking and management; and smart agriculture for monitoring crops and livestock, and such aspects as air quality and temperature.

The company is on the right track, clearly. Its customers are enthusiastic, even if it does say so itself. "We have had very strong feedback from customers, because we were so early to market, and have such long experience, which is reflected in our ability to integrate technology solutions into our network," says Gouesbet.

Interoperability and integration are essential for the burgeoning IoT sector, and its founding technologies, he observes. "Kerlink wants to promote an open ecosystem with third parties playing a key roles," he says, pointing to its vigorous, continuing membership of the LoRa Alliance™, which now has 500+ members pushing the network, and Kerlink's key role on its technical, certification and marketing committees.

"It is the largest and fastest-growing alliance in the technology sector. Its growth makes clear the interest in the technology. We are one of the co-founders, and remain an active member, working every day to further develop the technology."

Gouesbet also makes reference to the importance of security and privacy in network building, especially when unlicensed spectrum is being used to carry public and private data. "Customers also appreciate the security of our network design, and the management of our gateway and platform," he says.

The order of the day is more of the same, it seems. "We want to confirm our leadership in delivering leading IoT equipment and solutions. We also want to leverage the distinctive character of our value proposition, covering our deployment expertise, network management and operator support."

www.kerlink.com, email us at contact@kerlink.com or follow us on Twitter @kerlink_news.

Optimising IoT-connected devices in LPWA networks over their lifetime with remote device management

Low-Power wide-area (LPWA) Internet of Things technologies allow service providers and enterprises to offer long-range Internet of Things (IoT) connectivity for battery-powered objects that consume little energy. The most popular use cases for LPWA devices involve temperature and environmental sensors, smart meters for gas, electricity and water, asset and inventory tracking, as well as industrial monitoring. One of the common attributes of almost all LPWA devices is the longevity of the device: generally a sensor or a meter is expected to operate for more than 10 years.

Device management, a critical asset to deploy and manage IoT end devices

But low-power and longevity requirements of IoT-connected endpoints make device management (DM) an essential and challenging function of IoT networks. It is vitally important for companies deploying IoT solutions to streamline their operations, adapt to changing expectations and generate new revenue streams. With billions of sensors, meters, actuators and other devices expected to be connected to the IoT, remotely managing them allows service providers and enterprises to:

- Directly manage network provisioning, including device subscription
- Launch and support new functionalities and applications
- Ensure compliance with changing telecommunication standards
- Ensure compliance with changing regional radio regulations
- Provide security management including, for example, keys management for authentication
- Manage radio performance, with dynamic LPWA network behaviour monitoring
- Optimise radio footprint to manage device power consumption.

Kerlink's Wanesy™ Device Management Centre offers mobile network operators, smart cities and enterprise customers a complete, secure and standard solution to manage and optimise all connected devices over their entire lifetime.

Device management for LPWA networks using ISM bands

LPWA networks are based on the same star network topology as 3GPP networks, including the presence of a core network and base stations, and management of radio communications, sensors/devices and their commissioning. This enables network operators to focus on high-quality security, the use of rating, billing and other operations systems, and the use of various application-server interfaces.

But there are some key differences between LPWA and other 3GPP technologies. On the radio side, LPWA networks often use unlicensed and free spectrum for transmission and reception (industrial, scientific and medical, aka ISM bands) as defined for geographical regions:

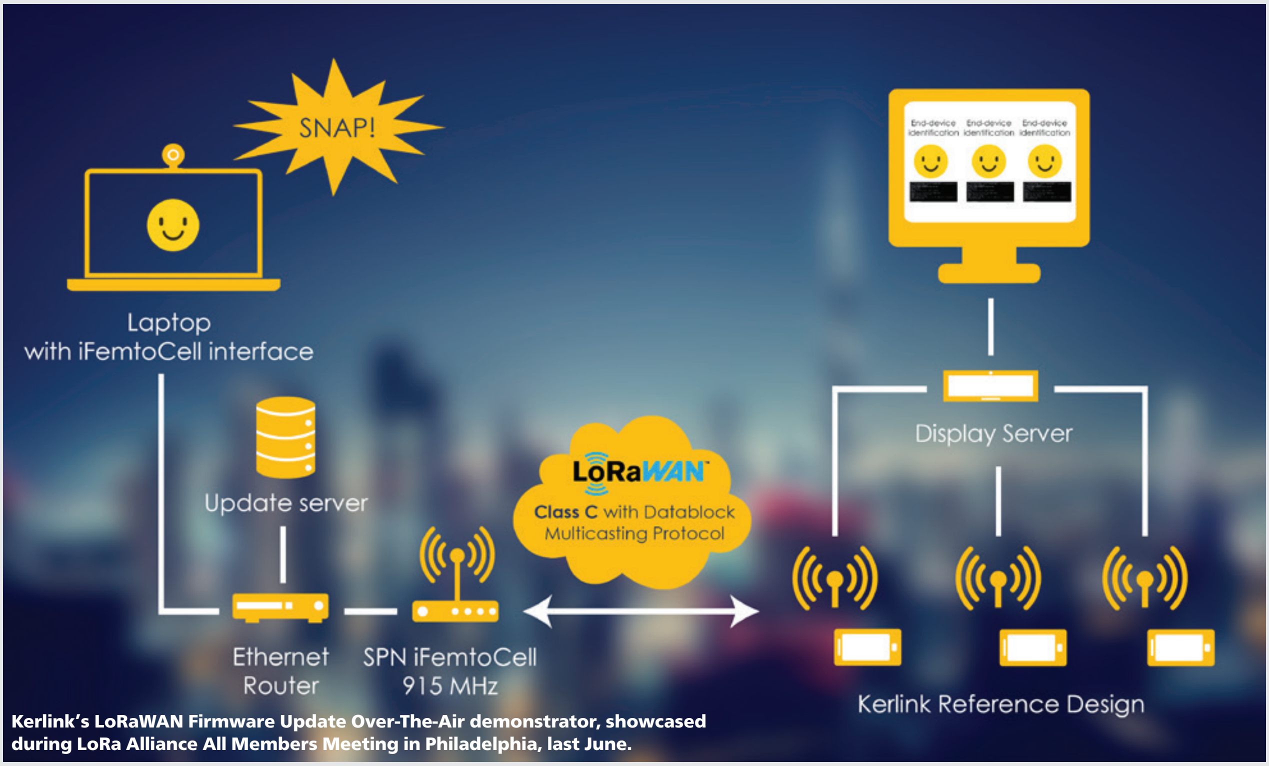
- Europe: 863-873Mhz
- North and South America: 902-928Mhz
- Asia: 915-928Mhz.

These unlicensed bands must meet certain parameters that increase LPWA quality, but they also impose some constraints on the network, especially duty-cycle limitations of typically one percent on-air and transmission power of less than 14dBm-25mW to share radio resources. In addition, to maximise sensitivity up to -141dBm to facilitate long-range communications, the radio modulation (Ultra Narrow Band or LoRa®) uses low data rates, typically below 1kbit/s.

For Kerlink customers, **IoT device management** is powered by a set of technological tools and features for managing the lifecycle of IoT-connected equipment, including LPWA end devices. These tools allow DM users to:

- Configure applicative parameters, including logical name, application destination and wake-up behaviour
- Configure protocol parameters, such as net address or radio parameters (channel, modulation)
- Ensure device security, key management and network subscription (commissioning)
- Monitor device behaviour, including power consumption and radio footprint
- Manage network performance with over-the-air adaptive channel configuration, while managing radio footprint and cell scalability related to regional radio constraints, and
- Conduct complete or partial over-the-air firmware updates (batches or campaigns).

IoT DM is commonly used in mobile communications based on a



Kerlink's LoRaWAN Firmware Update Over-The-Air demonstrator, showcased during LoRa Alliance All Members Meeting in Philadelphia, last June.

standardised solution from the Open Mobile Alliance called OMA-DM. This standard implements the protocol for LightweightM2M (LwM2M) over CoAP (Constraint Application Protocol), which is generally well adapted to 3GPP topology networks. The Internet Engineering Task Force (IETF) is also defining a suite of protocol for LPWAN, through the CoMI package (CoAP Management Interface).

Interestingly, the very high-quality parameters of LPWA networks using ISM bands impact some features of LPWA device management. By adapting their solutions for the unique requirements of LPWA, vendors like Kerlink that offer LPWA device management can provide important LPWA-specific features. These include off-line and maintenance status without updating, multi-cast capabilities with large volumes of data (firmware binary) sent once for all targeted devices, and low-latency protocol adaptation, such as LwM2M that is supported by a large number of telecommunications service providers.

A key component in LPWA IoT network management suites

IoT remote device management is a critically important component of any IoT solution. The ability to cost-efficiently and securely manage IoT devices is relevant to all IoT deployments. Kerlink's broad experience with customers around the world over the past 12 years has identified three reasons why device management is essential in LPWA installations, and has helped guide the company's R&D for this critical feature.

1. Executing cost-efficient and scalable operations requires well-adapted tools as part of a global solution

- **Communicating with extremely high numbers of IoT LPWA devices requires automated, bulk-device lifecycle management (provision, update, deprovision).** LPWA devices are generally part of large-scale deployments and benefit from bulk provisioning processes. In addition, a quality LPWA device-management platform vendor supporting large-scale deployments should, (1) provide continuous quality assurance and patches to the platform as needed, (2) adapt the platform to the customer's evolving operational environment with firmware, hardware and software updates, and (3) offer value-rich new features to increase the functionality of the platform.
- **Bandwidth constraints require smarter, automated deployment of software and firmware to LPWA devices.** Due to bandwidth constraints, operations departments must take into account usage patterns to prevent interference with usual operational or commercial communications.
- **Revenue per device may be low,** which requires automation to keep operational costs down and ensure operations scalability in the long run.
- **Third-party systems and platforms often interact with device installations and end-devices API** for efficient bulk

operations and batch processes: interoperability and open solutions remain key for efficient deployment.

2. Longevity of LPWA devices requires unique features to support long-term operation and security of end devices

- **Connected devices have an expected lifetime of 10 years or more without physical access to the devices, in many cases.** This requires that they be monitored and updated by configuration or firmware switching to prevent overconsumption of power and bandwidth on the radio network.
- **Intelligent device management** maximises the efficiency of power used for transmission, so that a device's battery life is not unnecessarily diminished.
- **Device management must allow the rollout of security updates** that will be inevitable due to LPWA devices' longevity.
- **Devices require end-device radio configuration and firmware updates** to stay up to date with the latest developments and changes in regulations.
- **Devices must be monitored** to identify faults and prevent major problems upstream, before they occur.

3. Lack of LPWA IoT device accessibility requires zero-touch, remote device management

- **Devices must be easy to install, manage and diagnose remotely.** Installation and maintenance crews will frequently lack deep technical knowledge or adequate tools to triage the connectivity elements of these LPWA devices on the spot.
- **Many IoT devices are deployed in areas that are difficult or costly to access physically.** Device management must provide capabilities to configure and maintain a device remotely once installed to allow easy troubleshooting and operation.
- **Fast, simple provisioning** allows solutions to be deployed quickly to ensure the solution is replicable in a cost-effective way.

Operator and enterprise benefits of LPWA device management

LPWA device management has several financial and operating benefits for a service provider or enterprise. These include:

- **Optimising the total cost of ownership (TCO) and return on investment (ROI) of LPWA network deployment.** By using remote, automated device lifecycle management, a service provider or enterprise can minimise manual device management procedures and lower ongoing operations costs, while guaranteeing a constant high level of quality.
- **Adapting the embedded application during the lifetime of the device.** Using over-the-air updates, a service provider or enterprise can update embedded applications to keep up with market or connected services evolution to meet evolving end-customer expectations.
- **Increasing the ability to leverage predictive and preventative maintenance** to orchestrate multicast update or configuration campaigns.
- **Addressing maintenance operations and trouble resolution with high efficiency**. Using the real-time monitoring and alerting features of an IoT DM platform, a service provider or enterprise can provide enhanced maintenance to quickly find and repair troubles with devices or the underlying LPWA network.
- **Managing the device fleet in a consistent way.** LPWA device management allows a service provider or enterprise to manage its IoT devices with the same tools as it would manage a fleet of mobile phones. And some of these tools might be based on OMA-DM standards for LwM2M to provide a standards-based solution.
- **Reconfiguring devices to optimise network use.** IoT device management allows a service provider or vendor to reconfigure devices on an LPWA network to maximize network efficiencies and ensure global quality of service (QoS) across the network.

Kerlink's device management solution

By providing its Wanesy™ Device Management Platform on top of its existing core network Wanesy™ RAN Management Center, Kerlink now offers a full suite for public or private service providers or enterprises to remotely and securely operate their connected devices. Combining state-of-the-art LPWA network stations, core network management solutions and end-device remote monitoring and configuration tools, Kerlink enables existing players and new entrants to quickly roll out and operate a highly reliable connectivity network to streamline their operations and generate new revenue streams. Focused on leveraging industry-proven open solutions and promoting interoperability, Kerlink is dedicated to building a vibrant ecosystem around its solutions to boost the IoT growth in verticals where use cases can be efficiently supported by LPWA connectivity. These include smart-city, industry, agriculture, transport and asset-management applications.

The company is a founder and board member of the LoRa Alliance™ and a world leading LoRaWAN™ IoT equipment and solutions provider. It has installed more than 70,000 Kerlink stations and other equipment in Europe, South Asia and South America for more than 260 clients. For more information, visit us at **www.kerlink.com**, email us at contact@kerlink.com or follow us on Twitter @kerlink_news.

Digital transformation roundtable: Cutting through the complexity

European Communications brought together telecoms executives from across Europe to discuss the thorny topic of digital transformation. Strategy, staffing, technology and challenges were some of the areas hotly debated by participants. Alex Sword reports.

What does digital transformation mean to you? It's a good place to start this roundtable as it can mean many things to many people. For Telia it is about "renewing, reinventing the business", says Sari Leppanen, Head of Business and Technology Transformation at Telia Finland. She describes digital transformation as a "long journey" that Telia started in 2014 and is "heavily customer experience and customer behaviour driven". Pointing out that digital transformation is not simply replacing IT architecture, Leppanen adds: "What we have is really business transformation supported by technology." At Orange, Christian Luginbuhl wears two hats: he is in charge of technology for the operator's European subsidiaries outside of France and part of the innovation, marketing and technology team at group level. On the one hand, says Luginbuhl, digital transformation is "very much driven by the requests from [enterprise] customers". The France-based operator then uses that knowledge to help transform internally, Luginbuhl says. On the other hand, he says digital transformation is driven by "the requests of our [retail] customers to have digital interfaces to our company". Orange has a target at group level to have half of all interactions with customers made digitally.

Like Luginbuhl, Aurelia Aubugeau is French but works in London for Norway-based Telenor's Wholesale division as Director of Digital Innovation. Like Orange, one of Telenor's digital transformation goals is to increase the number of digital interactions it has with customers. But it's also about moving towards virtualised networks

Participants

Kevin Paige,
CITO, Manx Telecom

Erick Cuvelier,
CIO, Orange Belgium

Vinod Kumar,
COO, Subex

Ashwin Chalapathy,
CTO, Subex

Richard Swinford,
Partner, Arthur D Little

Christian Luginbuhl,
SVP Technology Europe & Global Performance Innovation, Marketing & Technologies, Orange

Aurélia Aubugeau,
Director, Digital Innovation, Wholesale and International, Telenor

Marc Smith,
Editor, European Communications

Sari Leppanen,
Head of Business and Technology Transformation, Telia Finland

and operations, as well as creating a "digital culture", Aubugeau adds. Zooming out, she says: "It is about survival and making sure we're not missing the train."

For Kevin Paige, CITO at Manx Telecom, digital transformation "gives us an opportunity to really make a big difference to the way our company operates, both from a customer-facing perspective as well as our processes and the way our business culture works". Although a smaller operator, he thinks it is "absolutely essential" to digitalise and says Manx has had a transformation programme up and running for a few years. The main goal is improving customer experience, partly through automating the core business "as efficiently as possible", but also to grow the company outside of traditional telecoms services.

Erick Cuvelier, CIO of Orange Belgium, also thinks digital transformation provides "a unique opportunity" to enter new areas. "The Orange Bank launch in France is a perfect example of what it means to use digital opportunities to add new businesses," he says.

Richard Swinford, Partner at management consultants Arthur D Little, agrees that new business areas are one goal of digital transformation efforts at many operators, but warns that there are several barriers. "One of those barriers is regulation," he says. "There is not a level playing field between a telco and an OTT [player], or a bank, who is offering a similar set of digital services, but often under a different set of regulations."

Vinod Kumar, COO at Subex, brings to the table findings from a recent McKinsey report. Three-quarters of companies that embarked on digital transformation in the last five years have started to see their growth coming down, according to the report, which also noted that first mover advantage is significant and strategy is more important than the execution. Reflecting on the discussion thus far, Kumar says getting the strategy right is absolutely key. He quotes one executive from the McKinsey report to illustrate the point: "It's good to keep running but in the case of digital it's better to be stationary than running in the wrong direction."

Telia's Leppanen picks up on this, saying it is important to be "very precise" about what you are looking to achieve. Telia "crystallised" its thinking in 2016, two years after its digital transformation initiative began, moving away from a technology-focused approach to business-focused goals. As part of this, the CEO and his team were fully engaged in the process to ensure the process was company-wide. Leppanen warns that having "a separate ivory tower programme" with a brief to create "a new digital machine" that will be handed over when it's ready simply doesn't work. "Everyone in the company needs to be involved," she says. "The people who will be running this new digital machinery so to speak must build it themselves from day one." Ultimately, digital transformation is "only a vehicle" to get to a pre-determined goal, according to Leppanen.

Flat organisations

Once goals have been decided upon, you then need to create a structure staffed by the right people to deliver them. Orange Belgium's Cuvelier, who says that he was given permission as CIO to "clarify more or less what digital transformation could mean", did so partly through his choice of staff. For example, he recruited IT directors with a combination of business and technology experience in an effort to break down existing siloes. This meant finding people who are "close to complex processes in the back end" but who also look at operations in terms of customer rather than technical results. In addition, Cuvelier says he "flattened the organisation" in an attempt to bring ownership of delivering different solutions to the highest point possible in the company.

At Telenor, Aubugeau explains, there is a group level Chief Transformation Officer who is served by different programme directors responsible for various aspects

of digital transformation. These include connectivity, customer interactions and culture. The programme directors work with local business units, so "each programme is actually handled by group and by the [local] operation together". Telenor has also taken a "cluster" approach, where similar market areas are grouped together. "Some of our markets are very similar and some are completely different, so you cannot run [the same] transformation programme [for] everyone," Aubugeau says. It is important to build a cross-functional team and use resources from the individual business units, she adds.

Orange's Luginbuhl also highlights the importance of group leadership. Rather than naming a Chief Digital Officer, he says Group CEO Stéphane Richard took responsibility for providing the "impulsion" for digital transformation across the company. Orange Bank is emblematic of this, explains Luginbuhl – it was driven and pushed by Richard and when it goes live will become the company's first 100 percent digital product and business line.

At Manx Telecom, the CEO and the board led digital transformation discussions, Paige says. The process began when the company found that making incremental changes to the business did not lead to any substantial changes in revenues or profits. The programme covers a number of workstreams, including customer experience and sales enablement.

"It's a whole stack with business leaders looking after each one of those elements," Paige says. The company is now in the process of maturing those activities, according to the CITO, but has not fully reached the digital state it is trying to get to. "We've laid people off and refreshed the organisation to try and attempt to change culture, because you can't just change culture with the people that you have there today," he says.

European Communications Editor Marc Smith highlights a story about Deutsche Telekom sending its executives back to business school in the US to teach them digital skills. Can digital transformation be taught, he asks. Aubugeau of Telenor thinks it can be taught but adds: "It's also about using the existing resources… I think the big groups are in general very bad at talent management." There is a tendency to treat an employee as a "one-trick pony", Aubugeau says, who will do the same thing for their entire career. In fact, people can be trained, Aubugeau says. "Some people are looking forward to that change," she adds. "Some people are a bit more resistant. So that's where you have to identify and have a proper talent management programme."

Leppanen agrees that telcos are "not very good" at talent management. As part of its digital transformation efforts, Telia identifies the competencies – both new and old – that are required, which are then used to create a structured plan for the human resources team. The company can then identify the best way to get the competencies, whether through new hires or retraining, Leppanen says.

Paige says Manx Telecom is trying to endorse "process owners", whereby even if a process extends over the entire business one person is in charge of it. This is an effort to bring accountability back into the organisation, he says, as there are disputes between product teams and sales teams over who is responsible for certain functions. Leppanen adds that a strategy is needed to define what is going to be kept within the organisation and what will be run by partners. "When you outsource the IT operations you actually move the focus within the staff onto [new areas such as] innovation," she says.

Luginbuhl reveals that Orange looks to market itself as a "digital and caring employer" in an effort to get employees to transform without putting too much pressure on them. He doesn't believe in big programmes such as sending execs to business school; rather, Orange believes in triggering employees to want to transform themselves. Cuvelier thinks that it is often the middle management that can be difficult. Smith backs up this thought with comments from research house IDC, who said in a recent report that middle management often put the brakes on digital transformation processes, despite enthusiasm and commitment from the




leadership and rank and file. "This is why you need to flatten your organisation," Cuveiler responds. You need to "squeeze" the middle management, he adds, but also show them by example that things can be done better. "Suddenly they just say, it can be done, I want that for my project too," Cuveiler says. Telia works towards three-month sprints, Leppanen says, and this has won many converts in the company. This solves the problem of middle management reluctance, she claims, as these teams want to be "part of the news story". Like Cuvelier, Leppanen also talk about the need for a "really flat" organisational structure.

Virtualised platforms

Strategy and structure will only get digital transformation efforts so far, of course. Technology plays a key role too. Luginbuhl outlines Orange's three priorities in this area, beginning with connectivity. He says the IP network is key as without it an operator is unable to deliver digital transformation. Luginbuhl also highlights the importance of virtualised platforms in making digitalisation "accessible to many different partners or clients and involving them much more in the process than before". The first step in this is providing APIs for these partners to connect, he says. But this open approach is not necessarily a natural one for telcos, given their desire "to control things". The third key area is deciding to what extent the company plans to use the public cloud.

Paige says the majority of Manx's core fixed infrastructure has now been migrated to a virtualised platform. The operator views the new platform as the main vehicle from which to launch new services. There is a broader philosophy at work here – moving away from vertical stacks supplied by a single vendor to its own horizontal cloud stack, according to the CITO. Citing the billing and customer relationship management stack it took from one vendor, Paige says "some parts were good, some parts were behind the curve". He therefore split the stack between two vendors. Cuvelier also highlights the importance of working out where to innovate in terms of technology and where to accept that "good is good enough". It may not be necessary to reinvent everything, the CIO says, sometimes a bit of simplification is all that is required. By way of example, he says that the four vendors Orange Belgium uses for its enterprise resource planning (ERP) technology will be scaled down to just one. Leppanen offers the example of Telia revising its own transformation approach, away from using "one gigantic BSS solution and then some channels on top of that" towards a more layered approach that takes into account how different parts of the stack can be upgraded at different speeds and combined through well-defined APIs.

Paige moves the conversation on to end customers. "[They] want more information about what they're consuming, how they're consuming it, what other products and services are, which you can draw from the API infrastructure quite easily, and you can continually evolve that," he says. The keys are proposition change and intelligence around how customers use your services, Paige notes. "If you get those two elements right, you make a big uplift in the customer experience." He then brings in some of the more future-gazing technologies: AI and virtual agents. AI is already being looked at "seriously" in the back-end of Manx's network management, while virtual assistants will be trialled in the next few months, he says. Leppanen is also interested in AI for the back-end, saying it could replace the "huge amount of manual transactions that take time".

Kumar asks how important analytics are. Leppanen highlights how sales and marketing can be brought together, using data not only to provide recommendations but also to "surprise" the customer with products and services they don't expect. However, she says it is important to define what data is being used for and design the analytics accordingly. Further, she says that you will not have big data before you have a unique identifier for the customer. In her own experience, achieving a single sign-on for customers

was the "battle [she] jumped into first". Cuvelier chimes in with a sentiment many may agree with on big data: "The worst thing for IT is buzzwords. It's probably the worst one." He says creating a framework of the why before the how is key as people ask for things without knowing what they want it for.

For Aubugeau, who is less involved on the technology side, the platform model is the key part. Operators need to open up their communication APIs so that developers can embed voice and SMS within their own applications, she says. But with their use of data, operators need to understand customers better, she adds. "We need to touch the right customer at the right time at the right place with the right product," she explains.

Cuvelier also looks to link technology back to customer experience. He says the best customer experience is very often the simplest one. His go-to example is Amazon, which he calls by far "one of the less sexy websites in the world". But the fact is it is consistent with Amazon's promise, he explains. "You order, it's easy, you click, you pay, it deliver." From there, Leppanen chimes in, it is about differentiating on top of this basic experience by "enhancing, enriching the offering that the customer can choose with", rather than with the "basic plumbing".

No discussion of technology can be complete without touching on the companies who provide it. What, Kumar wants to know, can vendors do to help deliver the things that operators need in their digital transformation journeys? "The problem with vendors is they are as un-agile as we are," says Luginbuhl. "What we would expect is that they would help us to become more agile." Paige says vendors are "creating more complexity than what's actually needed." For Leppanen, they have not bought enough into the pay-per-use cloud mentality and want customers to sign up to long licence commitments. Meanwhile, Aubugeau wants to see more co-creation. Vendors usually come with a set, off-the-shelf, portfolio that a company can take or leave, she says, but this leaves no space for customisation.

Key challenges

Citing research European Communications undertook earlier this year, Smith notes that the biggest digital transformation challenge cited by respondents was that projects were too big, complex and time-consuming. Leppanen says it is about categorisation. In theory, she says, an operator builds a new BSS to sit alongside a legacy system, and is supposed to move "overnight" from one to the other. In practice, it doesn't work like that: the legacy system is never in a "stable situation" and the new BSS ends up sitting around for years waiting to be used. She says this is why it is important to split digital transformation into parts and have a clear roadmap on what to do deliver first.

With the cost of digital transformation projects being another key challenge, Swinford notes it is important to demonstrate the revenue benefits, not just the savings. Leppanen says telcos are currently in an "invest to grow" phase, while Cuvelier thinks digital transformation creates efficiencies to enable companies to invest. "Changing an ERP system is not about changing the customer journey, it's just to save €15 million in three to four years that we can use to do something else," he says. As the discussion draws to a close, the last word goes to Leppanen. "The most difficult thing for all companies, not just telcos, [is deciding] what the new business model should be, what the revenue share is, what the shared delivery chain is and how we make that seamless," she concludes. ec

This roundtable was kindly sponsored by SUBEX

Supporting the telco revolution

Consulting firm everis, part of NTT DATA, has a mission to improve operator efficiency, increase revenue, shorten development cycles and help telcos to connect better with customers. Its Head of Telecommunications in Europe, Eva Labarta, tells European Communications how the company plans to do it.

European Communications: What is your view of the European telecommunications industry currently?

Eva Labarta: If I have to choose three dynamics to describe the current market, undoubtedly they would be: content, collaboration with third parties and customer relations. All these are causing what I like to call “the telco revolution”.

There is a tough fight among telcos for retail customers who are shifting fast from the traditional business to content based services. In the retail market, content is key to differentiation and a perfect bridge to other digital services.

But this is hard for telcos since they need either to produce their own content or get it from third parties. The former is very complex, though some telcos are being successful at it, while the latter means losing some control of their business.

Strategies may vary depending on the size and positioning of a telco. Larger telcos usually benefit from investing in premium, expensive content that helps them to improve acquisition, ARPU and AMPU, while reducing churn. On the other hand, smaller telcos usually avoid the large investments that premium content requires, through partnerships.

Collaboration with third parties can help telcos to create new, disruptive revenue streams beyond content, such as by collaborating with other OTTs. Again, there are different strategies to follow: incumbent telcos tend to be more protectionist, while challengers tend to be more open, and benefit from this openness.

This is already leading telcos to weave a network of alliances. The better a telco is in building these alliances and profiting from them, the more successful it is going to be. Not to forget other potential partnering initiatives, such as by the increasingly popular strategy of network sharing that can help telcos to be more efficient.

There is the additional challenge to understand the customers in a changing, fast-spinning, digital world. In the end, a telco will need to transform itself, improve the way it relates with its customers, and become a conglomerate of different digital businesses, in order to be differential and successful. This opens up incredible opportunities for telcos.

How can everis support this telco revolution?

Telcos are struggling to create tight bonds with their customer base, and are in need of better insights. We

have recently delivered our "Telco Connected Index" survey across several geographies; it shows that there is still room for improvement in some areas, particularly those related to how customers perceive their relationship with the telcos.

At the same time B2B2C models are becoming more common, so telcos also need to understand how to play a leading role in the value chain and enable other businesses to be successful. They still strive to understand the complexities of the large businesses that they target. At everis, we understand large companies in different sectors of activity very well thanks to our different market vertical practices. This can be of great help to telcos.

Regarding collaboration with third parties, collaborating with startups is becoming more usual. But doing it with the right startups at the right time, before your competitor does it so you can really win the differentiation you are looking for, will become a matter of survival. We can also help in this matter. We have built "everis Next", the world's largest B2B startup repository according to the renowned Singularity University, which is a window to accelerate disruptive innovation for large corporations. We are wrapping "everis Next" with consulting services to make the most of the new disruptive business models approaching any industry, including telecoms.

I believe that our vision is disruptive on the one hand and realistic on the other since our core business is solution implementation. We are following this approach with a number of relevant telcos, helping them become Open Telcos, through the definition of their digital strategy, the implementation of digital enablers at all levels – digital channels, digital enabling systems, virtualisation of the core network following an SDN/NFV adoption strategy, etc – or even the set-up of new cross-industry businesses, such as banking, and media.

How does everis keep up-to-date to all these changes?

Our vision is not just to be up-to-date with the market, but to be two steps ahead. The challenges that come from digital apply to telcos, but also to banks, insurance companies, utilities and consulting firms. We have faced these challenges ourselves and invested in building a digital mindset, which is now embedded within our core and our teams. We use the digital paradigms like cloud, social, AI and mobility within our services and our service management methods, so even the more traditional services are delivered innovatively and efficiently. We apply lean start-up and design thinking practices to build, test and deliver our value proposition. We learn from other industries and build new businesses together with some of our long-standing clients. We collaborate with third parties, not just the large vendors but also smaller niche players and disruptive start-ups. We have gone through a similar transformation, essentially, and the lessons learnt from it are very useful to our clients.

One thing that we plan to do in the near future is to increase sharing our thought leadership with the market. We have built open microsites for our "Telco Connected Index" and "everis Next" initiatives, as well as for "everis Cloud" or "everis Moriarty" – our amazing Cognitive Application Development Platform. We intend to work more closely with market associations such as TM Forum, and we are building closer relationship with relevant market research firms and media partners.

During this quarter, we will be delivering a European OTT market report, through European Communications. I think it will be a great demonstration of what I have just described.

What has becoming part of the NTT DATA Group meant for everis?

NTT DATA is a truly global innovator and one of the top 10 systems' companies in the world, and part of the NTT Group. It is a privilege being part of NTT DATA and the NTT family, while still having a great amount of autonomy to drive our business. We have now access to an impressive amount of assets and R&D initiatives that we are leveraging at our customers. This year, NTT DATA will invest more than €50 million on R&D and the NTT Group will invest more than €1.5 billion.

We also have an extended geographical reach that is very useful when working with multinationals. We have a great insight of what is happening in the telco market in Japan, where many trends originate. And it is an ever more exciting privilege to start providing consulting services to other group's companies, something we are already doing, leveraging all the everis world-class consulting expertise.

When everis joined NTT DATA in 2014 we were a €591 million revenue company; three years later we have almost doubled our business, recording €1.03 billion sales in our last financial year. We now have 19,000 employees working across a wide range of industries in 14 countries.

www.everis.com

About Eva Labarta

Eva Labarta was appointed Head of Telecoms Europe at everis last year. Her areas of specialisation include business management, new business development, consulting and IT services. Eva has a degree in Economics and Business from the University of Barcelona and a Master in Business Administration from ESADE.

People will pay more for the best mobile network

TDC Chief Executive Pernille Erenbjerg said people are prepared to pay slightly more to access the best mobile network. The CEO made the comment as mobility service revenues ticked up 3.6 percent to DKK698 million in Q2 thanks to higher mobile voice ARPU and data growth.