THE BUSINESS
OF TOMORROWS

The **Business of Tomorrows** report gives us an insight into how operators around the globe see the future of their companies, and what impact current and emerging technologies will have on the wider telecoms ecosystem.

This in-depth report quizzed large operators across the world on some of the biggest issues facing their businesses today. The idea was to garner a perspective on what ails today's operators and what measures they are likely to take to resolve those issues.

The report is split into six of the market's most important segments; Overall Industry Landscape, Mobile Payments, 5G networks, Content, Customer Analytics and Mobile Broadband. We found that the results highlighted a wide range of opinions from operators on the impact and development these technologies and services will have on both the enterprise side, as well as the end consumer.

Overall Industry Landscape

To gain an insight into some of the broader issues facing operators in their quest to shape their business for future challenges, our analysis sought to gain a 'big picture' view.

This first survey section looked into gaining information on what will be an operator's biggest priorities, where new revenue will come from, and the biggest challenges they are likely to come up against.

Biggest priorities

Customer experience management (CEM) ranked as the highest priority for operators going forward, with 27 per cent of respondents putting this ahead of other key metrics like big data, cloud computing, network function virtualisation and BSS/OSS transformation.

From Comviva's experience, it is clear that as mobile operators improve their systems to understand the pattern of customers, usage, network quality, and how their businesses are performing against competitors, it becomes ever more essential to match real time data collection with customer experience.

Big data followed in close second as a top priority. Indeed, we have found, that, as technology evolves and new sources of data are uncovered, service providers are seeing an unprecedented rise in volume, variety and velocity of information due to the rollout of next generation mobile networks, increased use of smartphones and the rise of social media.

With a quarter (25 per cent) of survey respondents placing big data as a top priority, it suggests operators are keen to step up their efforts and investment in this area, with strategies now imperative for all to increase market share, as well as drive external revenue streams.

This also comes as no surprise, particularly when taking into account latest forecasts from IDC, which finds that businesses continue to accelerate their transformation into data-driven companies, and will lead to an annual spend on big-data related infrastructure, software and services of $48.6 billion by 2019.

Perhaps more surprising, Augmented Reality and Virtual Reality was only a main priority for 2 per cent of respondents, an indication that some of the early hype generated around the technology could be set to wane.

However, the same cannot be said about the Internet of Things.

27%

of respondents believe CRM is the biggest operator priority

Which of the following will be an operator's biggest priority going forward?
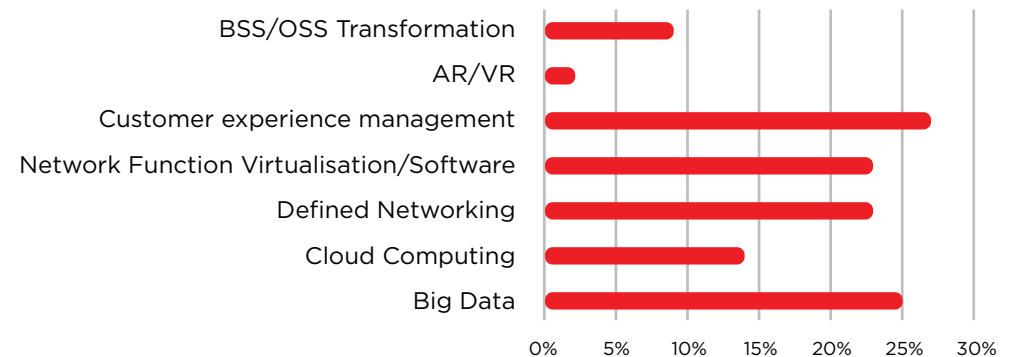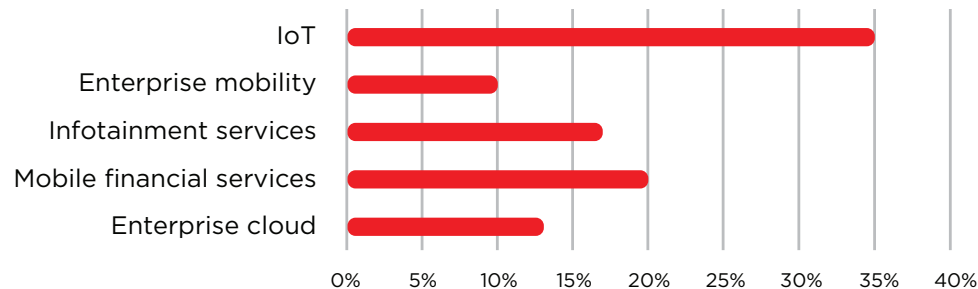
$3 TRILLION

IoT revenue opportunity by 2025

IoT - the big opportunity

More than a third of respondents (35 per cent) said IoT would be the prevailing digital service to generate incremental revenue rises for operators in developed markets, ahead of enterprise cloud, mobile financial services (MFS), infotainment and enterprise mobility.

Which of the following digital services will result in incremental revenues for operators?

Indeed, Machina Research estimates that the total IoT revenue opportunity will grow to $3 trillion by 2025 (up from $750 million last year), with $1.3 trillion derived directly from end users in the form of devices, connectivity and application revenue.

OTT-like applications, such as Verizon's Go90 video platform, was also highlighted as a potential future revenue generator.

Biggest challenges

When it comes to operator challenges, 35 per cent of respondents are most concerned about future CAPEX and OPEX related issues, no doubt associated with new technology investments and network upgrades.

A recent report by PwC found that telecoms operators could be wasting up to 20 per cent (the equivalent of $65 billion) a year in capex, with the process internally deeply flawed.

The firm said nearly two thirds of capex is driven by technology, and not commercial business objectives, with operators often struggling with accountability, particularly when investments are straddled between networks, IT and marketing.

Customer retention (31 per cent) was cited as the second major concern by respondents in our survey, ahead of spectrum availability, issues related to backhaul and fronthaul networks, and network availability.

MOBILE PAYMENTS

From the launch of Safaricom's money transfer platform M-Pesa in 2007, seen as a pioneer for financial inclusion in emerging markets, all the way to having the ability to pay for goods and services from iPhones through Apple Pay, mobile technology has shown the tremendous potential to bring every section of society into the financial mainstream.

With new players now coming to the fore, and the incredible rise in smartphone penetration globally, the popularity of mobile payments is expected to surge even further.

Global consultancy firm McKinsey predicts payments revenue will rise from a value of $1.8 trillion in 2014, to hit $2.3 trillion in 2019, while Juniper Research recently said the global value of contactless point of sale payments will reach the $500 billion mark annually by next year.

And while operators once led the way, tech players like Google and Apple, social media platforms and the world's largest banking institutions are beginning to ramp up their interest in the sector.

It is perhaps because so many players now exist in the value chain, we are unlikely to see one segment completely dominate the field.

In keeping with consumer trends and technological advancements, large financial institutions like Visa and MasterCard have made sure they are not left behind in transforming their own models to tap into the e-commerce and m-commerce opportunity.
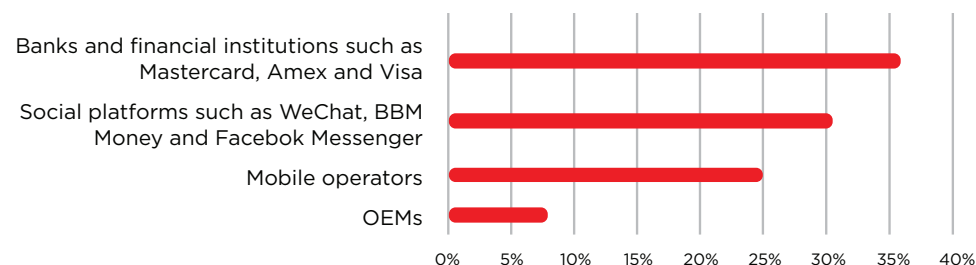
Indeed, the segment is being tipped to dominate tomorrow's financial services ecosystem by 36 per cent of our respondents, ranking top.

At the other end of the ecosystem, it is social platforms like WeChat, BBM Money and Facebook Messenger that are to follow, ranking just below the finance world with 31 per cent of our respondent results.

Facebook, the most high profile, recently said it was testing payments via its Messenger app by accelerating commerce on the platform using credit and debit cards, and is working with a number of payment firms.

With operators ranking third in the metric with 25 per cent of the vote, the gap between the three is notably minimal.

In developed markets, which sector of the mobile payment ecosystem will dominate tomorrow's value chain?

Banks and financial institutions such as Mastercard, Amex and Visa	
Social platforms such as WeChat, BBM Money and Facebok Messenger	
Mobile operators	
OEMs	

0% 5% 10% 15% 20% 25% 30% 35% 40%

Emerging market opportunities

In the emerging markets in particular, however, it is operators that continue to play a key role.

Across Africa and Asia, some of the largest mobile players are steaming ahead with developing mobile money solutions enabling financial inclusion for the masses.

At the heart of this is money transfer, as it has been for years.

More than half (51 per cent) of respondents identified international money transfer as the greatest opportunity to generate revenue from mobile financial services (MFS).

The other two main areas are international air time transfer (19 per cent) and international bill payments (23 per cent).

Other services highlighted include: national cashless payments, social media and e-commerce and domestic bill payments.

It is therefore clear the future opportunity in MFS extends across a wide portfolio, and our survey showed a clear contrast in respondents opinions' on the main benefits of mass global adoption of mobile services.

Financial inclusion for the masses

Financial inclusion for the masses was identified as the main benefit of mass global adoption of MFS, with 29 per cent of the vote, but safety and security, banking the unbanked and the creation of a single mobile identity also saw high responses.

For mobile wallets to fully replace traditional wallets, it is clear that much work still needs to be done. 60 per cent of the survey base believe it will take between three and ten years for this move to happen. But it likely will happen; only 8 per cent believe it will never be achieved.

60%

of respondents believe mobile wallets will replace physical wallets within 3-10 years

When do you believe mobile wallets will replace physical wallets?
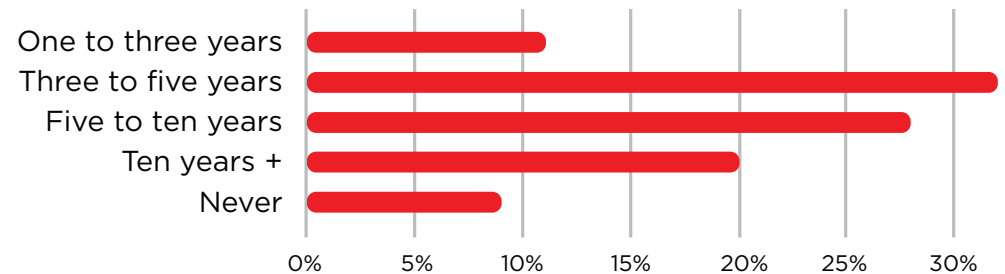
5G NETWORKS

While 5G standards are yet to be defined, there is a growing consensus around what the next-generation of mobile networks will bring to the industry.

Delivering faster mobile broadband speeds from today's 4G LTE technology will only be one element to 5G, with the network also expected to act as a catalyst for a wide range of services, both on the enterprise and consumer side.

In addition to improved spectral efficiency, lower energy consumption, better battery life and security, 5G is also expected to fuel the Internet of Things, drive possibilities in advanced virtual reality and connected cars, as well as

better enable data intensive applications.

The global effort around the technology is also in full swing, with operators, vendors and governments across Europe, Asia and the US talking up ambitions to be leaders in bringing 5G to market.

Juniper Research estimated last year that at least $25 billion will be invested into 5G technology research, trials and development by operators over the next five years, while service revenue from 5G could exceed $65 billion in 2025.

So, early hype around the technology is no surprise. And with so many elements to 5G, it could truly prove to be the underlying technology in fuelling the Business of Tomorrows.

For 25 per cent of respondents, the most important benefit of 5G will indeed be the capabilities it will potentially provide in connecting billions of devices to the network.

And a dominant 32 per cent put IoT adoption as the reason why 5G will emerge as a game changer for the Business of Tomorrows.

As the world becomes increasingly connected, it is widely expected that 5G will do for IoT, what 4G did for mobile broadband and the smartphone.

As highlighted, 5G capability is expected to support a number of emerging applications linked to IoT, such as autonomous driving and smart homes.

To that effect, 28 per cent said 5G will prove truly important for new technologies to emerge.

And while 4G LTE has provided the world with faster mobile broadband, it has come at a huge cost for operators, particularly when it comes to securing the relevant spectrum.

According to early technical developments of 5G, there is a bigger drive this time around to ensure spectral efficiency.

$25 BILLION

will be invested in 5G research by 2021

20 per cent put this as the second most important feature in the development of 5G, just ahead of security at 15 per cent, unlicenced spectrum (10 per cent) and Massive MIMO (9 per cent).

The primary benefits of 5G are important to identify, particularly for operators investing in the technology, but equally important is the future opportunity that lies in emerging applications and services.
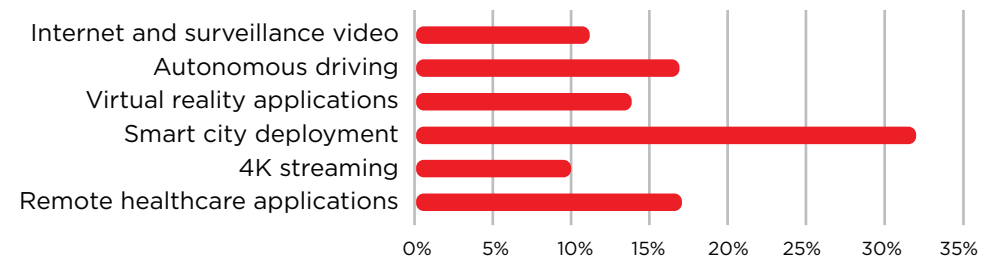
5G services

For 32 per cent of the survey base, 5G could hold the greatest potential for smart city deployment, with higher data capacity, improved coverage and lower latency enabling cities around the world to connect infrastructure and various kinds of public amenities.

Remote healthcare applications will also see the benefits of 5G, according to 17 per cent of respondents, with the network expected to be better equipped to deal with mission critical situations, as well as autonomous driving, which ranked joint second.

SMART CITIES
Biggest 5G potential

Which of these touted 5G services do you think has the greatest potential?

	0%	5%	10%	15%	20%	25%	30%	35%
Internet and surveillance video								
Autonomous driving								
Virtual reality applications								
Smart city deployment								
4K streaming								
Remote healthcare applications								

CONTENT

Looking at the businesses of today, the demand for mobile video on operator networks has been one of the stand-out developments of the 4G LTE era.

Fuelled by streaming applications like Netflix, bigger smartphone screens, and a drive by social media to integrate video, accompanied by the sheer speed of 4G, consumers clearly can't get enough of mobile video content.
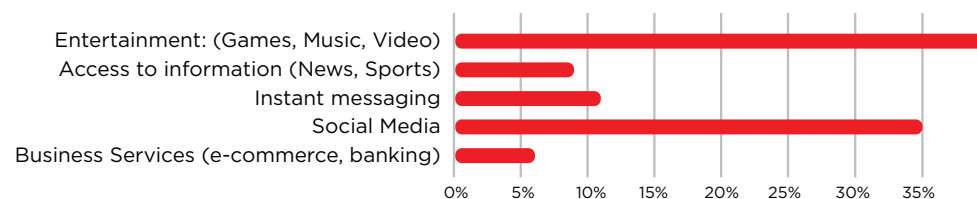
Global vendor Ericsson said in its most recent Mobility Report that video will account for two thirds of all mobile data traffic and will grow by around 55 per cent annually through to 2021, with social networking forecast to grow 41 per cent.

Our Business of Tomorrows survey suggests similar, with 39 per cent of respondents stating "Entertainment" (including games and music, along with video) as the most popular segment of content consumed on their networks today.

The use of social media was second with 35 per cent of the vote, while instant messaging use, such as WhatsApp or WeChat, was third at 11 per cent.

Access to information, such as news and sports, ranked just above business services (e-commerce and banking) with only 8 per cent and 6 per cent, respectively, attributing these sectors as large network content consumers.

What is the most popular segment of content being consumed on your networks?

Content segment	Percentage
Entertainment: (Games, Music, Video)	~39%
Access to information (News, Sports)	~8%
Instant messaging	~11%
Social Media	~35%
Business Services (e-commerce, banking)	~6%

Local content availability

As a global study, we also sought to gauge opinions on local content availability, and how operators can step up these initiatives for the Business of Tomorrows.

Partnership is clearly at the heart of a localised content strategy, and more than half (55 per cent) of respondents agreed, saying collaborative deals with local publishers is the best way for operators to develop local content availability in markets where they operate.

55%
believe partnerships is key for LOCAL CONTENT

Of course, partnerships between operators and content providers are not a new phenomena.

One of the most recent examples is a collaboration between nine major operators, including Deutsche Telekom, Reliance Jio and BT, and 30 "innovative business partners" including Spotify and AirBNB, to bring services and products to customers globally.

Meanwhile 19 per cent of respondents said zero-rated data offerings to promote higher internet penetration could be the way to go, while the same percentage believe the task of providing localised content should fall to internet companies.

In the US, for example, operator T-Mobile US drove video usage by offering subscribers video content that did not eat into data allowances through Binge On, while Facebook's controversial internet.org provides free internet for selected content in a number of developing markets.

CUSTOMER ANALYTICS

As the Business of Tomorrows continuously evolves with innovation, leaders are looking at how to improve customer experiences within the ongoing transformation.

Research firm Gartner describes Customer Experience Management (CEM) as "the practice of designing and reacting to customer interactions to meet or exceed customer expectations, and thus, increase customer loyalty and advocacy", while noting that the effort requires process changes and many technologies to accomplish.

63%

of companies surveyed will invest in proactive CEM by 2021

And while the initiative is a top priority, the research firm stresses that many enterprises are struggling with delivering a sustained experience.

In fact, both customer experiences and actual innovation initiatives share a lot of common challenges, in that they are appreciated as important but rarely urgent, and the fact that people running the initiatives are never in a position to influence all the changes required, said Gartner.

It is our view that while data is widely considered the future for mobile technology, and operators are now adopting a data centric approach, the challenge of managing customer experience is just as prevalent as the threat of an OTT, for example, to this data model.

Indeed, the Business of Tomorrows study found that 63 per cent of respondents are likely to invest in proactive customer experience management in the next five years, due to the rise of predictive, descriptive and prescriptive analytics.

33 per cent remain undecided, and only 3 per cent said it was unlikely, reaffirming its growing importance.

Of course, there are a number of essential features that form a company's broader CEM strategy.

Essential features of a company's CEM strategy

A Customer Centre Experience approach was identified as most important by 37 per cent of respondents, just ahead of customer behaviour monitoring through data analytics, at 33 per cent.

Network performance management, perhaps surprisingly, ranked third with 23 per cent, while application stability was only highlighted by 7 per cent as an essential feature to CEM.

What do you view as the most essential feature of your company's CEM strategy?
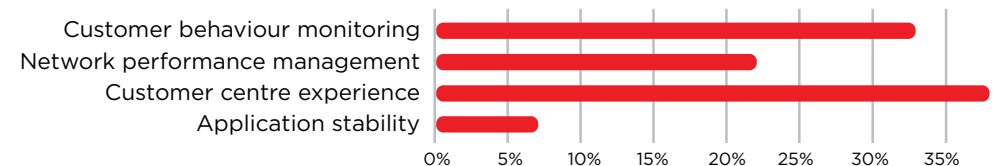
Reasons behind customer churn

While customer experience now forms an essential part of operator strategy, there are of course numerous other reasons why enterprises may experience churn in their organisations.
40 per cent of respondents put this down to tariffs, ahead of poor customer care experience (30 per cent).
Reiterating the importance mobile data has for today's and tomorrow's consumer, poor mobile data service was third as a reason for churn, at 21 per cent, while both billing issues and network uptime is of least concern, both ranking at under 5 per cent of the vote.
The greatest barriers to a CEM approach, as expected, is security and privacy of data, which remains a sensitive subject for customers.
According to a study this year commissioned by Syniverse, more than 50 per cent of people trust operators and brands less than they did three years ago, while 70 per cent do not trust them to safeguard private data.
The deployment of a customer analytics solution faces privacy and security obstacles to 44 per cent of respondents, while 33 per cent said there was a lack of internal understanding of the benefits it can reap.
23 per cent said the biggest obstacle was simply the cost of implementation.

MOBILE BROADBAND

When it comes to mobile broadband, there is a clear consensus regarding barriers to wider adoption – affordability.

Recent indications from the ITU suggest that mobile broadband has become up to 30 per cent more affordable globally, with the largest decreases in price coming from least developed countries.

However, a digital divide still persists.

It is thought that a mammoth 3.9 billion people, half the world's population, is still offline as of 2016, and only 15.2 per cent of people in least developed countries have internet access, compared to 81 per cent in the developed world.

To that end, affordability was highlighted by 53 per cent of respondents globally, firmly ahead of other potential obstacles to mobile broadband, such as a lack of awareness, lack of relevant content and a lack of access to digital mediums.

3.9 BILLION

people are still offline globally

How can we boost uptake?

To fuel uptake, the message was again clear, with 64 per cent stating that internet access needs to be more affordable, while 19 per cent said ICT should be brought into schools and 17 per cent said existing retail networks need to be leveraged to ensure service use.
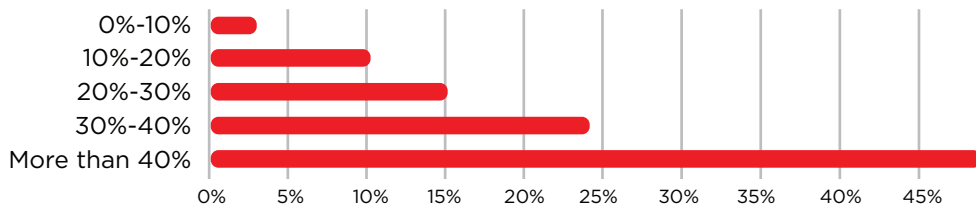
Arguably, to do this, it will be left up to the operators to reduce prices, and ensure cheaper access for all.

But, it must also be sustainable, keeping in mind the huge CAPEX required to upgrade networks, buy necessary spectrum, and deal with some developing countries which impose heavy taxation on the industry.

Data will be a key driver for operators going forward, which is increasingly more important as operators rely less on traditional services like voice and messaging to generate revenue.

49 per cent of the report's respondents believe data services will account for more than 40 per cent of operators' total revenue in a matter of just two years, by 2018, while 23 per cent believe it will account for between 30 per cent and 40 per cent over the same timeframe.

64%

**of respondents believe the internet should be more affordable**

It is worth noting that telecoms companies have struggled with ways to monetise data successfully, particularly without a way to add value to their offerings beyond a simple commodity play.

Data monetisation in the future will come hand in hand with the potential future growth of IoT.

With 5G, low power solutions, and billions more devices coming into the mainstream for consumers, IoT is most likely to drive growth for the internet sector according to a dominant 75 per cent of respondents.

This is way ahead of AR/VR solutions (12 per cent) and IPV6 (9 per cent).

What application is most likely to drive growth of the internet sector in the future?
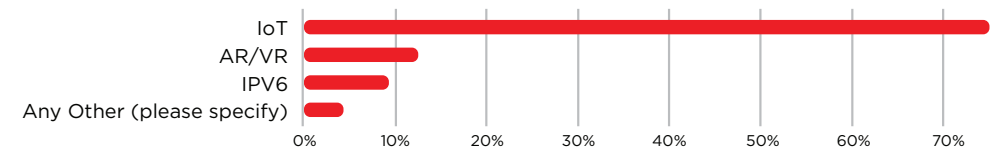
It is clear that operators need to capitalise on the IoT opportunity now, so they are ready to fully benefit when demand reaches unprecedented levels around the 2020 timeframe.

What proportion of total revenue will data services account for by 2018?

SUMMARY

Fuelled by booming demand for mobile data, the opportunities in digital content and mobile financial services, and underpinned by the promise of 5G, operators clearly have a major role in shaping the Business of Tomorrows.

75%

believe IoT will drive growth in the internet sector

IoT is no doubt considered a huge opportunity, with respondents hailing it as the prevailing digital service to generate incremental revenue rises, and the reason why 5G will be a game changer for future business opportunities.

For a mammoth 75 per cent of our survey audience, IoT will drive growth for the internet sector in the future, way ahead of other potential catalysts, such as AR and VR.

Customer Experience Management will form an integral part of this strategy too, as identified in the survey, and there is a strong likelihood that operators will start to invest, or step up their interests in solutions that monitor how people are dealing with an ongoing transformation.

In mobile payments, there will be no clear winner. A number of segments have emerged in the field, and while the technology continues to evolve, financial inclusion for the masses must remain the key benefit and priority.

Underlining the huge scale, and additional benefits, mobile services can provide, the message was also clear when it comes to mobile broadband. It needs to be made more affordable to truly achieve global scale and mass adoption.

Challenges, however, will be just as present as the opportunities.

Affordability, CAPEX and OPEX related issues, customer retention, and a comprehensive strategy to cash in on the data opportunity will be some key focus areas for operators going forward.

Through the themes identified, operators can truly ready themselves for what tomorrow may bring.

MOBILE WORLD LIVE

Mahindra COMVIVA

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We also publish five regular eNewsletters to keep the mobile industry up-to-speed: The Mobile World Live Daily, plus weekly newsletters on Mobile Apps, Asia, Mobile Devices and Mobile Money. What's more, Mobile World Live produces webinars, the Show Daily publications for all GSMA events and Mobile World Live TV – the award-winning broadcast service of Mobile World Congress and exclusive home to all GSMA event keynote presentations.

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For more information, please visit www.mahindracomviva.com