

The MVNO Nation Live Times

2022 REPORT | 16 - 17 NOVEMBER



**BUILD BY MVNOS
POWERED BY MVNO NATION**



The event in numbers...

In our largest in-person gathering of MVNOs and Operators, MVNO Nation Live brought together 250-plus members from 48 countries across the world in Valencia for an incredible week of talks, meetings and more. **[page 2]**

Future focus: talking tech

Advice from the best of the best on everything from IoT and eSIM to 5G and even 6G. The experts also cover the Cloud, automation, data, hyper-personalisation and much more. **[page 4]**

Strategies for growth

Advice from the experts on how to grow and scale your MVNO, and crucially, how to provide your customers with what they are looking for from you. **[page 11]**

Meet the new MVNOs

Introduction to the most innovative MVNOs right now. Discover what they are bringing to the proverbial MVNO party, what makes them unique and how they work together. **[page 17]**

MVNO NATION LIVE 2022 IN NUMBERS



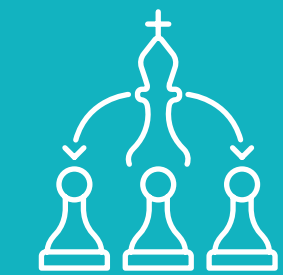
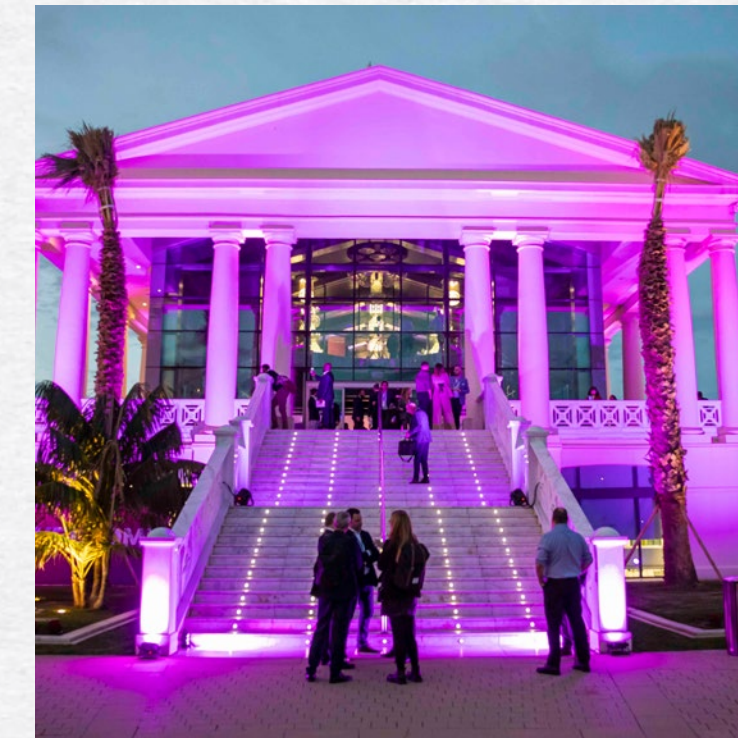
250+
Attendees



48
Countries



165+
MVNO and Operator
attendees



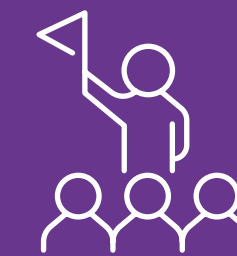
66%
MVNOs and Operator
in the audience



100+
MVNO and Operator
companies



22
Content sessions



89%
of attendees play a
role in the decision-
making process

8

Themes:

- Digital MVNO
- 5G
- IoT
- eSim
- New services
- Regional expansion
- Meet the new mvnos



20
Partners



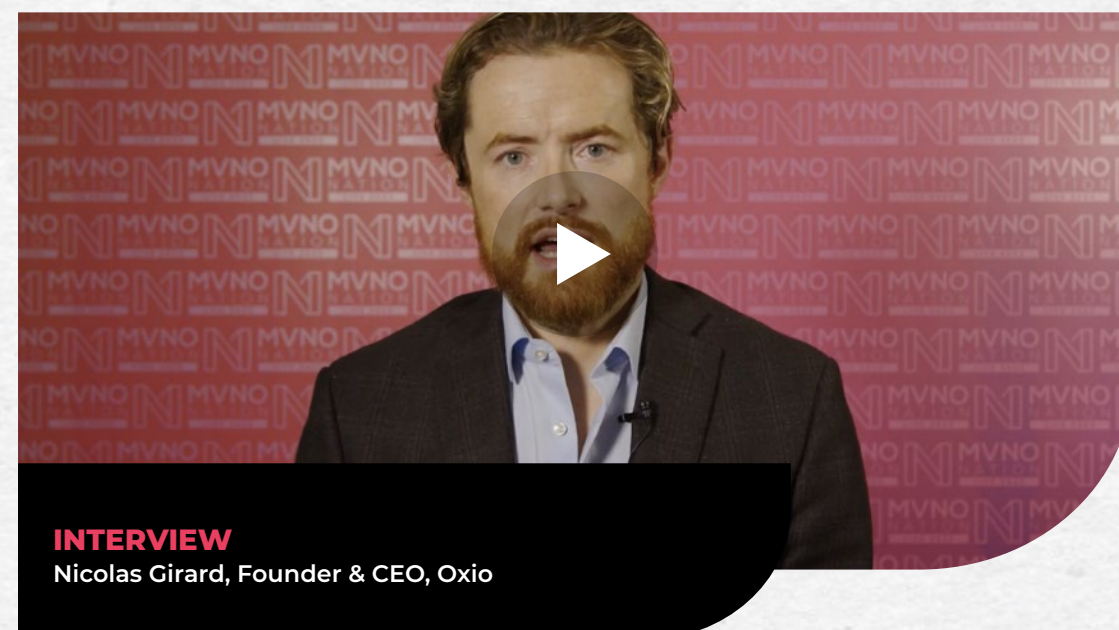
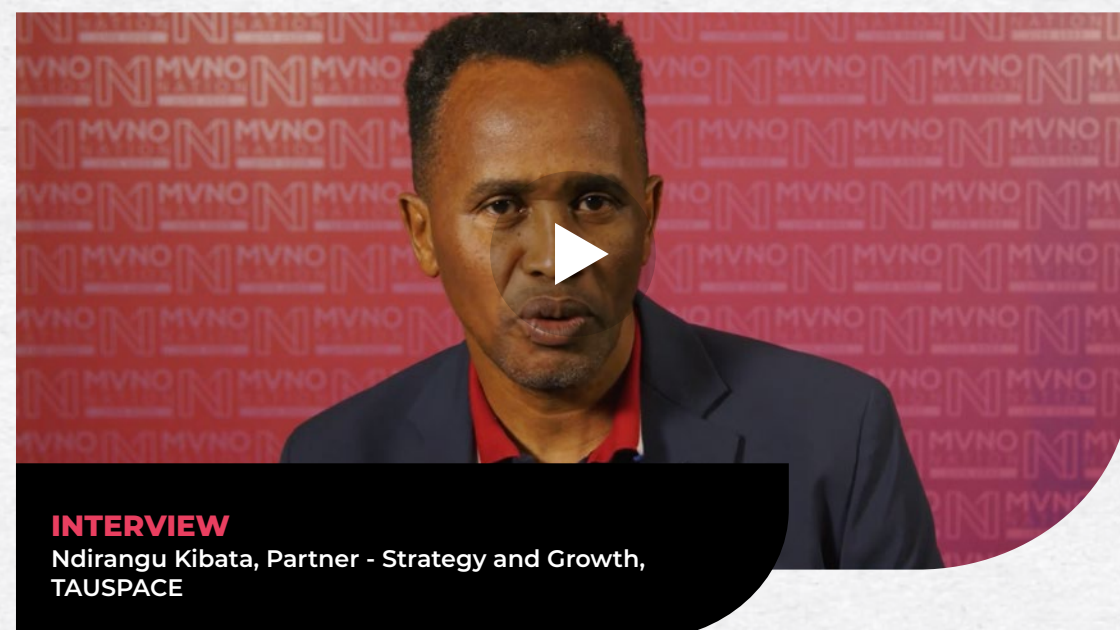
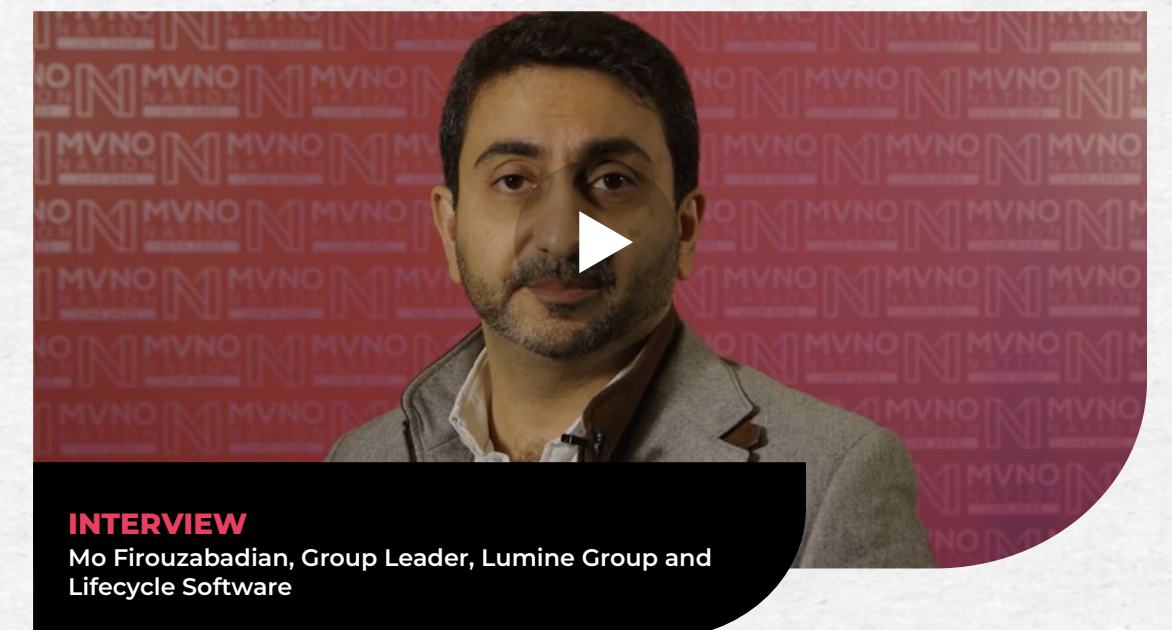
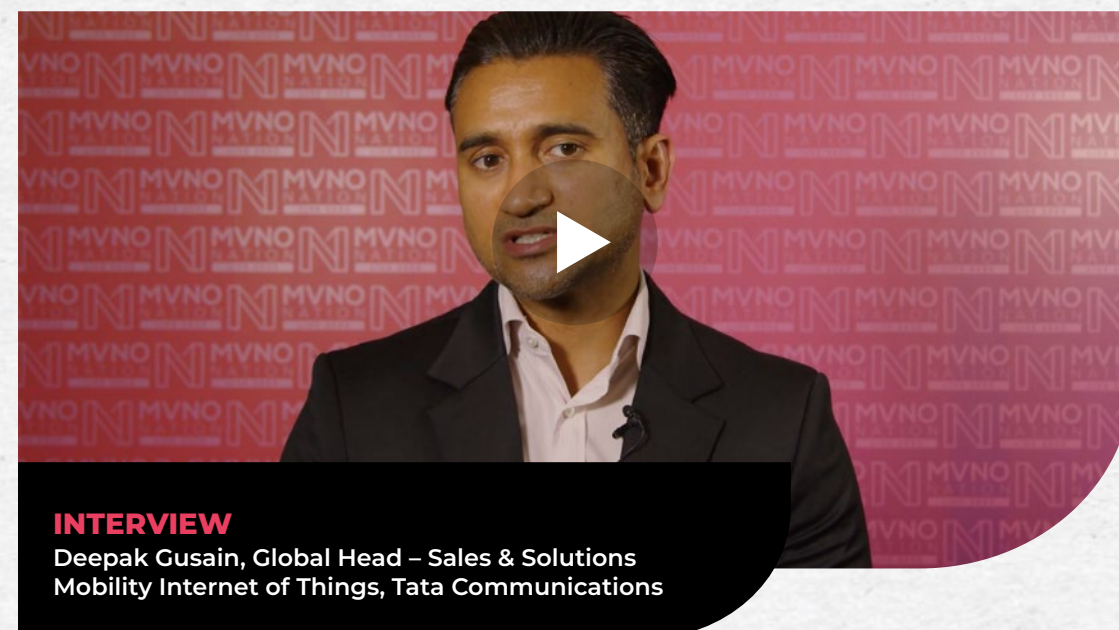
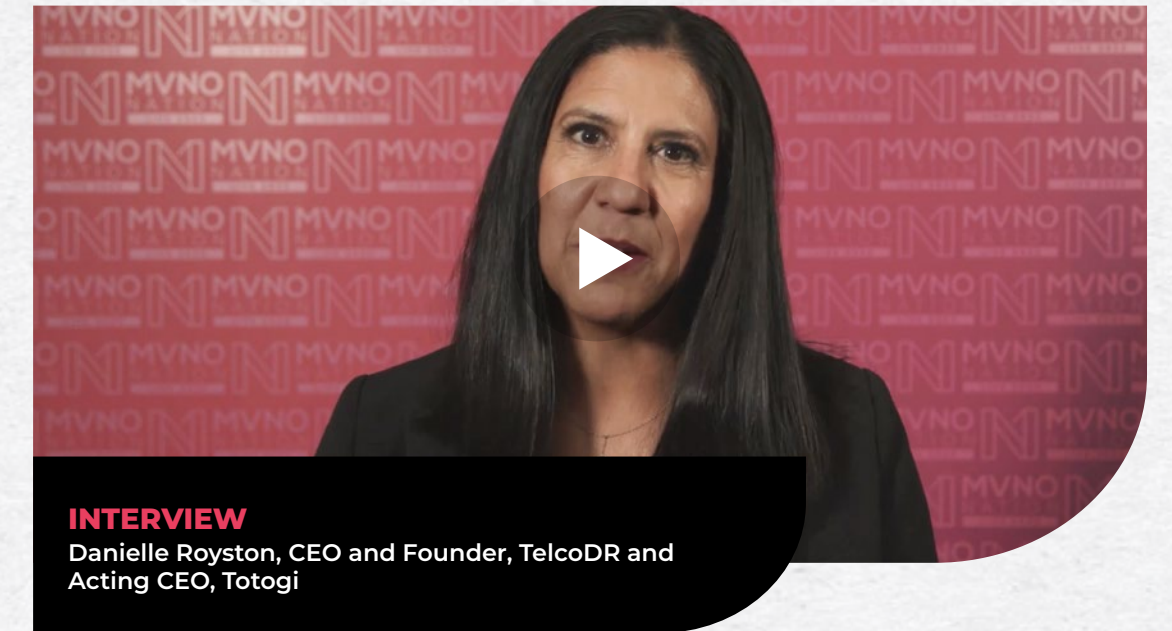
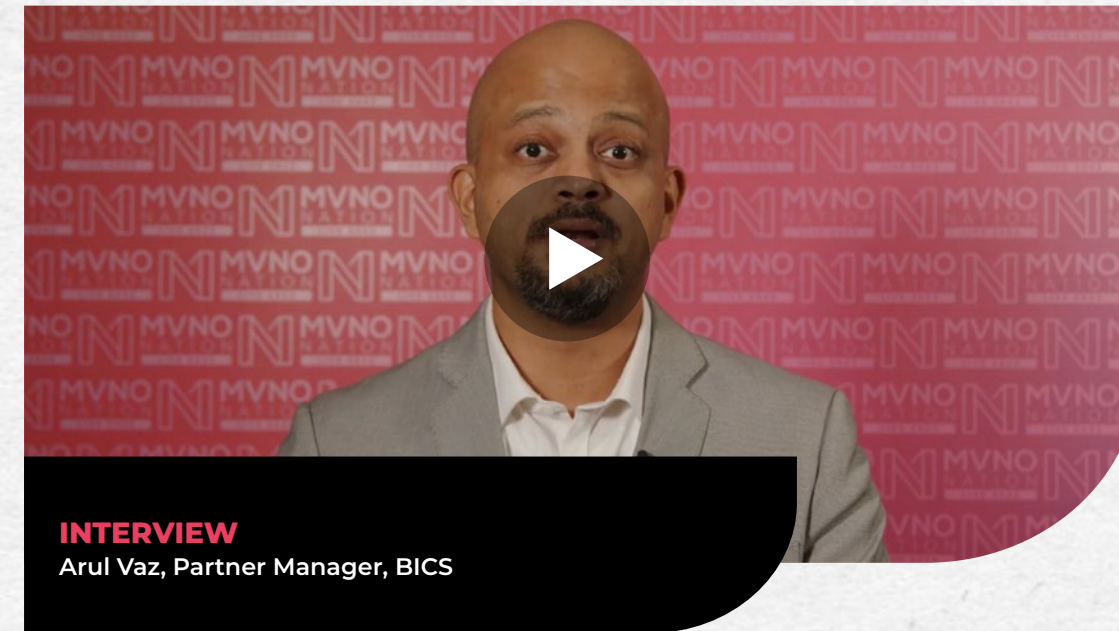
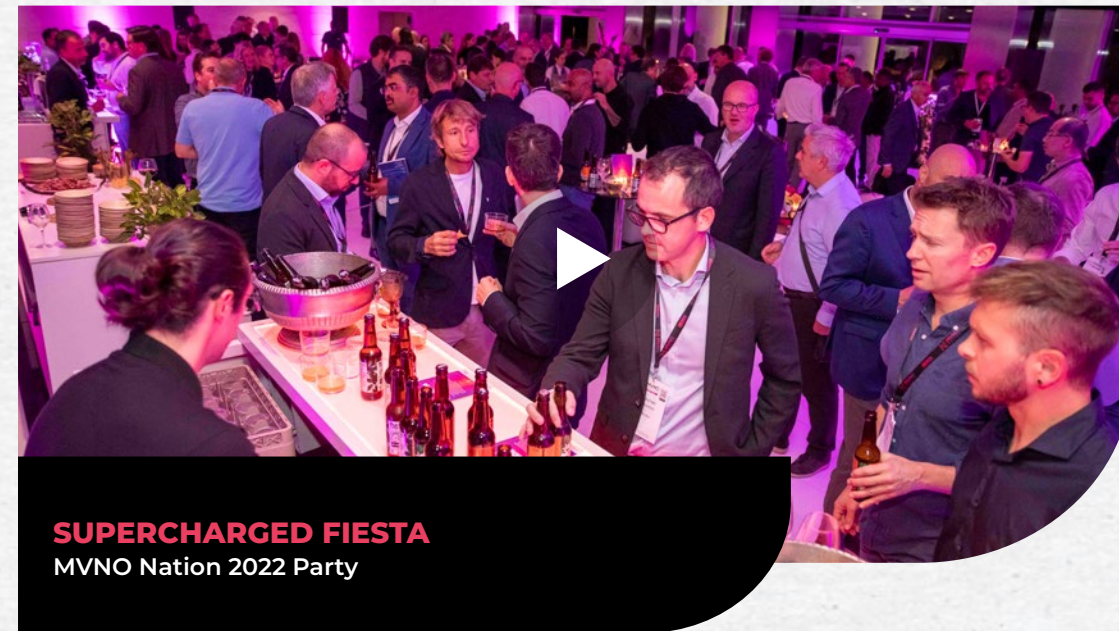
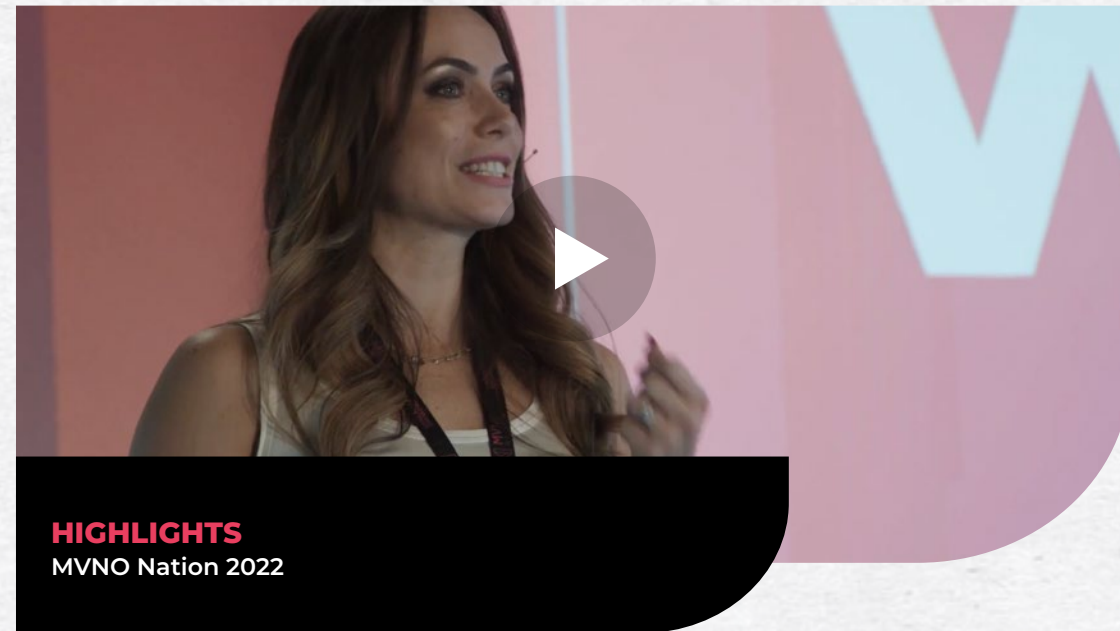
78%
attendees
representing
C-level & Director



7
Networking
sessions



MVNO NATION LIVE 2022 HIGHLIGHTS



Future focus: talking tech

Today, being an MVNO means cutting through the noise and discovering the spaces in which you can disrupt. It's also about future-gazing and having an eye on the next two, five or ten years to see what might be coming down the line and what it might mean for you.

It goes without saying that tech brings with it both opportunities and challenges. But when harnessed correctly, it offers up endless ways for you to stand head and shoulders above your peers. And this is more important than ever in a world where the number of MVNOs continue to boom.

We've sought advice from the MVNO Nation Live experts on everything from IoT and eSIM to 5G and even 6G. They also cover the Cloud, automation, data, hyper-personalisation and much more. Discover hints, tips and strategies on how to harness tech and combine it with out-of-the-box thinking in order to scale your business and stay ahead of your competition.



Danielle Royston

Why the public cloud is perfect for MVNOs

One size no longer fits all, says Danielle Royston, CEO and Founder, TelcoDR & Acting CEO, Totogi. Here's how the public cloud can help you rise above the competition.

I love great stories about transformational leadership in the telco space. We're starting to hear more of them now that industry leaders are realising how valuable a move to the public cloud can be. But my favourites are about companies that took bold steps early on, like the UK MVNO giffgaff.

Way back in December 2020, giffgaff announced it was going all-in on the public cloud, handing all of its technology infrastructure and application development to Amazon Web Services (AWS). giffgaff isn't new to visionary thinking; it's been winning awards since 2010 – for innovation, for being the best MVNO, best telecom services provider, and even best network. Since the AWS announcement, it won Uswitch Network of the Year 2021. A few months later, it

was number one in the UK in mobile customer satisfaction according to Which?, a consumer advice organisation that has continued to recommend the MVNO ever since. It basically rocks all things telco in the UK.

When industry pundits heard about giffgaff's AWS plans, they said it was crazy to "sell its soul" to a third party. But was it? The move is a success story because public cloud technology is perfect for MVNOs. Let me tell you why.

When your product is based on someone else's product – in this case, the MNO's network – it's a tough spot to be in. MVNOs are not in control of the network, and it's not their job to improve it. That's why many MVNOs try to differentiate

on price, in what has become a race to the bottom. Competing on price turns the greatest product on earth – the network and all its glorious data – into a commodity. Everyone is offering the same basic service for a lower and lower price. It's the *opposite* of differentiation.

Instead, MVNOs should ditch the pricing games and stand out from the crowd by delivering excellent, personalised, subscriber experiences. It's easier than ever to do that because there are telco tools being built with public cloud technology.

The big MNOs may have huge subscriber bases – but they also have terrible NPS. They own networks, but use antiquated client/server software built on last century's technology. They are enterprises with a ton of talent – and filled with bureaucracy and processes that entrench the status quo. Why are you trying to be like them?

Instead, you need to be like an internet company. Internet companies have small teams that move fast and turn on a dime. They have virtually zero infrastructure. They use the latest and greatest technology to beat established players that lumber along with old, outdated systems.

What sets apart the most successful internet companies – and attracts customers in droves – is the highly personalised experience they offer. For example:

- Uber knows exactly where I am in any city in the world, and can summon the nearest available car to pick me up and take me where I need to go;
- Spotify finds new artists for me based on other people who enjoy the same music I like;
- Similarly, Amazon is constantly recommending products based on what I've browsed and bought in the past, and what other people with similar shopping histories buy; and
- When I walk into an Apple store, the app knows I'm there to pick up an

order and instantly notifies someone to fetch it for me.

Customers love it, and it brings them back again and again. These companies have customer loyalty numbers that are through the roof. *This* is the experience MVNOs should be emulating!

With all the data our industry has – about the network, and about how subscribers use their devices and how often – there's no reason telco can't do it, too. And we can do it better. We know if subscribers are streamers, gamers, texters, or TikTokers. We know if they're golfers, scuba-divers, or soccer moms. We know when they travel. We know where they go. This kind of data, when used right, can be used to deliver tailored, timely offers that increase satisfaction and drive up average revenue per user (ARPU).

So far, MNOs haven't been able to do this. They're too busy building and operating their networks. They're still trying to figure out how to bring their legacy IT technology into the 21st century, trapped under tons of customisations and loads of technical debt.

Luckily, MVNOs don't have these problems. It's time to ask yourself: Why are you trying to be like a telco? Instead, use your small size, wealth of subscriber data, and freedom from bureaucracy and outdated technology to create better, more personalised experiences for your subscribers.

Being able to personalise experiences for subscribers starts with charging and plan design. I'm the acting CEO of an exciting SaaS startup called Totogi, where we are building a public cloud-based business support system (BSS) enhancement platform to help MVNOs like you do everything I've been talking about, and especially to help deliver personalised experiences to your subscribers.

Totogi's Charging-as-a-Service is built on AWS, so every time AWS improves one of the services we sit on, we get a free upgrade. It's the same with our charging platform. It's also a service, so whenever we post an update or

roll out a new feature, all of our customers get it simultaneously and instantly.

Totogi, like a lot of cloud-based business tools, has a free tier, so you can try it with zero risk. We also have a super easy plan design system and an awesome engine. But what really sets us apart is the ability to personalise. We use machine learning (ML) and artificial intelligence (AI) to identify ARPU-lifting opportunities to tailor an individual's plan based on their individual habits – and automatically create a new plan using powerful APIs. The future of BSS has arrived. It's personalised, and it's a game-changer.

Until now, it's been prohibitively expensive for MVNOs to get anything like this from any BSS vendor. An installation costs millions to tens of millions to install and maintain. For MVNOs with thin margins, that high price tag, plus the months required for implementation, have historically added up to an unsolvable equation.

But the public cloud, along with cloud-based tools like Totogi, changes all that. It democratises technology, giving you world-class software at a price you can afford, with the ability to scale and pay-as-you-grow. It also lets you experiment and bring new ideas to market fast, and you don't need an IT team to manage it.

You don't have to settle for less anymore. You can plug into the public cloud and modernise your offering, personalise the subscriber experience, build loyalty, and drive up ARPU. That's how you become an internet company. That's how you get to number one in customer satisfaction and not only crush the competition, but actually reduce churn and grow ARPU.

Key takeaway

Hyper-personalisation is the secret sauce customers crave, and public cloud-based software like Totogi's can help MVNOs deliver it.



Danielle Royston

5G: what's on the horizon?

From network slicing to non-telco services, what are the 5G themes and trends to watch? And is 4G still a contender? Ndirangu Kibata, Director - Strategy and Growth, TAU SPACE, Alen Ng, Head, Corporate Development, MI and Mythri Hunukumbure, Chief Engineer, Samsung R&D Institute UK share their view.

Network slicing will open doors for MVNOs

For Ndirangu Kibata, while everyone knows about the super-fast speeds, for MVNOs what's of more interest is network slicing. "About 20 years ago, when I was still in my infancy in telecommunications, we were working with an MNO that was a start-up. The MNO needed to roam on an established network who also happened to be their competitor. One of the intractable problems that we were trying to solve was how to remove the name of a competitor from a SIM card. And the answer was that we couldn't. But what network slicing enables you in some countries is to have your own network ID. This means that if you can pretend to be an MNO and no-one will be none the wiser.

5G can improve the negotiating position with MNOs...

Ndirangu also noted that delivering data over 5G is much, much cheaper than 4G. "So in instances where the 5G network is already in existence and your use case can either go 5G or 4G, you've got a much better negotiating position when you go talk to your MNO because their OpEx is going to be much lower when they are running on 5G than on 4G."

... but data consumption could pose a cost challenge

Alen Ng expects higher data consumption to be an issue for some: "We saw this when we moved from 3G to 4G, too. We're still running trials around this, and it's too early

to get an entirely clear picture because the data hasn't yet stabilised. What we may see happening is that some MVNOs could struggle from a data consumption / cost exposure POV, meaning that they'll need to renegotiate or adjust their pricing model with their MNOs so that they can afford this."

Connectivity will not be the primary offering

Alen also foresees "5G MVNOs providing more non-telco services. Beyond selling data, with 5G, we'll sell more unique services, and therefore have more unique propositions. This might be, for instance, a manufacturing solution, or logistics management that we'll provide the connectivity for."

4G is still in the game – but it's not a safe bet

Some MVNOs may feel they have customers who are happy with 4G – they are either unwilling to pay for 5G, or don't need that high speed and latency, Alen notes. "This will probably remain the case for the next few years. But, sometime down the road there will be 5G solutions that their peers and competitors are offering. The MVNOs, therefore, who opted to stay away from 5G will be penalised because they built their business propositions around a low cost, substandard product. I think being ready for 5G right now is just futureproofing whatever you're going to develop."

Future-proofing your investment means finding the right time to make the switch

The 4G-5G transition is a dynamic process, as Mythri Hunukumbure, explains – and a bit of a balancing act: "Standards don't stay still, they evolve, and 4G will evolve as well. There will be new releases coming. The networks today are mostly software upgradable – MNOs will upgrade and there'll one or two operators who are

trying to push 4G to the very limit. They'll offer some of the capabilities that 5G can with their 4G networks, but maybe at a lower price.

"But futureproofing your investment comes into play because, at some point, as happened with 3G and 4G, everyone will want the next evolution. So, in two or three years, all customers will want a 5G phone and 5G capabilities. But – when it comes to capabilities – it's an evolution and a flow. This means that you have to define the

point where you want to switch from 4G to 5G, keeping front of mind that this process will be a dynamic one and that there's no fixed point."

Key takeaway

Know that the 4G-5G transition is a dynamic process, and a bit of a balancing act. Some MVNOs may feel that their customers are happy with 4G, but opting to stay away from it entirely could be damaging.

6G is coming: why MVNOs should make their voices heard

Evolution is constant – and it's never too early to get involved in the Next Big Thing. In this Q&A, Mythri Hunukumbure, Chief Engineer, Samsung R&D Institute UK, highlights a window of opportunity to help shape the future of 6G.

Is 6G coming soon?

First of all, don't be scared – 6G won't come fully into play for about seven or eight years. And as ever, it will be an evolution – it's not going to happen all of a sudden. That said, the R&D labs are already looking into this – and we should all have an eye on it.

What will 6G mean for MVNOs?

Fundamentally, slicing will be optimised. 5G has already helped us with slicing and it will continue to do so. It will open up a lot of new applications whereby MNOs could potentially sell MVNOs a slice that also offers radio control.

Today, MVNOs don't like access control; they don't prioritise uses. Instead, they access the capability and resell it. Take, for example, these new machine environments such as industrial IoT or a manufacturing site. Here, by taking a slice, you can operate and manage these entirely. You can control when devices connect, how devices connect and how long they have to wait.

What role will AI play?

These capabilities can be optimised with the help of AI and Machine Learning (ML) as well. This is because having access to this data will enable you to



From left: Guy Redmill, Ndirangu Kibata, Alen Ng, Mythri Hunukumbure

enhance them in a niche market – you can become experts in your chosen space. Take a car manufacturer – you can provide a connectivity service for them in their factory. You'll receive all of the data, develop and revolutionise your solutions – opening up a niche market.

With AI, ML and machine-to-machine communication, there's a wealth of opportunities. And one of the up sides is that you won't experience the ethical issues that we do if we track human users. Here, we come up against privacy issues, but with machines in a controlled environment you don't have that constraint, which means you can fully seize the power of these AI/ML solutions.

Is it time for MVNOs to get involved?

It is vital, in my opinion, that MVNOs start looking ahead to the emergence of 6G in order to shape it. What traditionally happens is that the big entities – the Samsungs and other big players – come up with their vision but using a limited

number of people. What there should be is multiple inputs – other entities who see the need for 6G and what it will allow us to do differently.

The more ideas we have on the table, the better it will be. Standards can be discussed and formed this way.

Will MVNO voices be heard?

I don't know practically whether this will happen, but what I have seen from 4G is that a limited number of companies and entities put their thoughts forward. Governments tend to listen to these big companies, which in turn helps them form their national agendas – so it would be really interesting if more voices were heard.

Key takeaway

It may not be easy to make MVNO voices heard in the shaping of 6G – but it certainly won't happen if MVNOs don't speak up. Actively inserting yourself into the conversation could be extremely valuable.



Mythri Hunukumbure



From left: Gary Bhomer, Jacques Bonifay, Kim Juchem

Tapping in to the IoT opportunity

The IoT numbers speak for themselves. But what are the key challenges and opportunities in this rapidly evolving market? We asked the experts.

In this innovative space there are lessons to be learned from history

"In terms of technology adoption, look at narrowband MV IoT and LTM and how they were rolled out and made available in the roaming world. Everybody was hyped in 2017 about the fact that MV IoT was coming. We thought it would be awesome, but at the same time nobody was investing into LTM because we also had Sigfox at the gates scaring the crap out of the operator community. But when that pressure went away, all of a sudden, we

saw that the MV IoT interconnect between the carriers and the carrier community wasn't there anymore. Today, MV IoT is a fairly niche product, and anybody who wants to do something that is cross market or cross territories will definitely default to LTM because it's more available. The operator community is in a way killing that very innovative service because they simply want to protect their home market and don't enable it in a way that allows global companies to deploy IoT."

Kim Juchem, Global Director Wholesale & Software, Truphone

Things are going to get complicated – MNOs will play a crucial role in untangling that complexity

"In the IoT space, customers are going to have a huge variety of requests in terms of guarantee on latency, guarantee on service availability per metre square, minimum bandwidth etc. The mobile operators are going to have to manage the complexity of these multiple requests – but I'm not sure that they have any idea of how to price them, and I don't blame them! There's going to have to be huge conversations between MVNOs and MNOs about which slice we can have – can we have control of a slice or can't we, and how do we price the service levels? There are so many dimensions to this. Personally, I think we're at the beginning of the complexity and I would leave it for the MNOs to figure out. Meanwhile, us MVNOs can focus on differentiation."

Jacques Bonifay, CEO, Transatel, France

An open dialogue on roaming costs is needed

"When it comes to engaging MNOs in terms of IoT and deployment, roaming is used widely. Most MNOs today are looking at charging for M2M and that breaks the whole chain in terms of what we can offer MVNOs tomorrow, or what they can offer their customers. If an MNO starts charging you on an M2M basis, which is happening across roaming, then the end product for the final consumer in terms of cost goes up. So, from a dialogue perspective, we need to come together with the MNOs and say that the charge you're putting today works right now, but it breaks the overall revenue potential that IoT can offer. We need to work together to challenge MNOs on those aspects from a roaming perspective."

Arul Vaz, Partner Manager, BICS

IoT at a glance

There are **13.1 billion IoT connections worldwide** right now

Threefold growth in connections is forecasted by 2030

IoT has a **market value of \$213 billion...** which will rise to **\$621 billion by 2030**

Consumer accounts for 58% of all connections and 29% of the total market value

The largest consumer use case is connected consumer internet and media devices – for example wearables, smartphones and smart home devices

Enterprise use cases such as track and trace, office equipment, fleet vehicles, tracking and utility smart meters account for 30%

Retail and wholesale – think payment processing devices – make up the remaining 12%.

MVNOs have the agility to change the market

“MVNOs like ours have almost no infrastructure. We are light, ready to innovate, ready to learn and ready to change the market. This is why we have the support of an MNO and we hope to eventually get more and grow further. MNOs, on the other hand, aren't ready to cater for the 50 or 100 SIM cards enterprises because they are too small for them. They just group them altogether and call it a day. But what MVNOs can do is meet the customer where they are, learn about them and try to do as much as possible to meet their expectations. If you do this, then you're going to grow. MNOs can't do this, so MVNOs have to take their place and fill the gaps.”

Daniel Salpak, Director, Keepgo

It's all about the data

“Ultimately, connectivity is table stakes, isn't it? Everybody has connectivity and you'll always find someone that can do it a little bit cheaper per megabyte or per gigabyte or, as I'm sure we'll get to

eventually, per terabyte. But what adds value is the data. Within marketing, there's a big trend at the moment around having your own core network, which is really a bad way of saying 'we have access to the data, and we can share it with you'. Everybody wants to monetise data, but the difference is going to be between those MVNOs that have access because they own their own core network, and those that don't because they effectively just resell somebody else's. Then there's the question of what you do with that data. Do you connect it into a public Cloud? Do you examine it to see what's changing, growing or shrinking over time? That's how we can each individually innovate – because we'll all come up with different ways of manipulating that data and deriving different benefits from it.”

Phill Scott, Vice President of Sales for Europe, Aeris Communications

Key takeaway

Unlike MNOs, MVNOs have the agility to change the market. They are light, ready to learn and innovate in order to change the market.



From left: Jacques Bonifay, Kim Juchem, Phil Scott, Daniel Salpak

Is eSIM adoption about to accelerate?

Following the launch of the eSIM-only iPhone 14, Mea Thompson, CCO, theunconnected.org, talks to Robin Major, Chief Revenue Officer, Moflix about eSIMs' journey to the mainstream – and why market domination may be a way off yet.

Mea Thompson (MT): Tell me about the launch of eSIM

Robin Major (RM): eSIM was launched as a set of specs in, I think, 2016. The first devices came out in 2017 to great fanfare about how this was going to revolutionise the industry. But I think if we're all honest with ourselves, penetration of eSIM has been a lot slower than any of us would have expected.

MT: Where has it been successful?

RM: We've seen more interest when eSIM is being used as a way of acquiring customers, disrupting markets and rapidly increasing market share. The same could be said for when it's used as an enabler to give that WhatsApp ease of onboarding and management of the experience. It's a really powerful tool in the toolkit that operators have, but we really haven't seen it reach its full potential.

MT: Why might an MVNO want to launch eSIM?

RM: There's a whole host of reasons that people are looking at eSIM. I personally

like to think that eSIM will become the mainstream vehicle for customers onboarding with mobile subscriptions.

MT: Are we there yet?

RM: Frankly no. We're a long way away. In terms of the mass mobile market, we're seeing edge cases like travel. Here, eSIM is being used as a vehicle to give people easy access to a local mobile number and data when they go abroad and travel to a part of the world that's outside of an inclusive roaming agreement. eSIM is replacing the SIM store at the airport model.

MT: How else is eSIM being used?

RM: We're also seeing eSIM being evaluated as a potential vehicle for mass deployment for the likes of IoT and M2M use cases.

MT: Where is it being overlooked?

RM: For me, the big one that's yet to be cracked properly is having eSIM as a universal vehicle for enabling customers to onboard quickly with disruptive operators like MVNOs. This would eliminate the need to be dependent on large scale logistics and have to distribute plastic and subsequently manage the disposal of those legacy SIMs.

MT: Apple are leading the charge when it comes to pushing eSIM, with the eSIM-only iPhone 14. Other OEMs will follow, right?

14bn e-sim capable devices will be shipped by 2030

RM: I think there's an inevitability that when Apple says that their phones aren't going to have physical SIMs in them anymore, that will introduce a move in the market that will force others to follow quickly – even if they didn't already have it in their plans. At the moment we're only seeing it happening in the US and there are probably some sound business reasons for that, but again I think there is an inevitability that this will start to become a mainstream practice in other parts of the world.

MT: So my thinking is that if you really want to have services like click to install eSIM, you need to be pretty chummy with Apple to get that approval, and you need to sell a fair few iPhones to be able to get that perfect user journey. And this is a hurdle for MVNOs. MNOs not so much but MVNOs – you've got a problem. What's your take on this?

RM: I think this is a much more important thought with respect to the question about whether Apple's going to take over the world any time soon and offer its own connectivity. That's always an option and it's not something that we should lose sight

of. But – I think the much more pressing and immediate risk is that this transition to eSIM only is going to strengthen the hold of the legacy MNO. This is especially true in the US where it's a fairly focused market with three or four main providers. This is going to strengthen the power of those MNOs that are buying, or enabling Apple to sell, millions of iPhones. Those are the people that are going to be given priority access to the Apple capabilities. And those capabilities are ones that we see as a core part of our onboarding journey. At the moment, Apple is only offering that service to mobile network operators who can prove that they are a mobile network operator and then there's some kind of arbitrary measure that one person in Cupertino applies to determine whether or not she or he thinks you're important enough to have access to those APIs.

MT: Do you think that making iPhones eSIM only is going to exacerbate that problem?

RM: I think that we've got enough obstacles in our way in terms of our MNOs not really wanting us to disrupt their local markets

too much. Often, they only offer fairly limited packages that we can resell if we're going to be a thin MVNO. If Apple helps them to block us from really providing a nice, seamless, digital, easy to use onboarding experience for the customers who want to use eSIMs, that's just putting more fuel on the fire of the problems that the MVNOs have to face. I think that's the more pressing concern that we as an MVNO community should be thinking about addressing.

Key takeaway

Apple's eSIM-only move will inevitably nudge others in the same direction – but mass adoption is a way off yet. There are opportunities to explore: for MVNOs, eSIMs could be a universal vehicle for enabling customers to onboard quickly.

89.8%
of MNOs plan to
offer eSIMs by 2025

Automation and the growth of MVNOs: the why, the where and the how

Can automation steer MVNOs down a path to accelerated growth? Mo Firouzabadian, Group Leader, Lumine Group and Lifecycle Software, believes so.

The why

As an MVNO, your biggest cost is almost certainly that of your host MNO. Next will be your starting costs, because running an MVNO can be incredibly complex.

Automation is the only tool that can truly drive down your costs and enable you to focus your talent on what's really important, which is exploiting the niche of the customer segment that you're going after. If you have to focus all of your energy and all of your talent on dealing with all of the telecommunications complexity, you're not going to have the resources to be able to address your niche and be able to create that competitive edge that will allow you to win.

Automation allows you to futureproof your business because, frankly speaking, if you have an enormous amount of fixed costs in managing a large IT organisation, then you're not going to be able to be as agile as you could be. Additionally, your margins will be higher.

But – automation without a human touch doesn't work. So you need to be able to personalise. 84% of consumers say that being treated as an individual and not like a number is critical to preventing attrition.

And 24% of consumers in the UK market changed one of their telecommunications services last year. That's a huge market opportunity but it's also a huge revenue loss for some operators. All of this means that creating that human interface that customers feel is personal to them is key. And if you don't do that with automation you'll end up with unbearable costs.

The where

A very big success story in this space is Smarty. Smarty is the value sub-brand of Three UK and it has been very effective at adapting to market conditions at speed. It has managed to do this because it's very light footed and is able to react using data. It tests and learns and manages acquisition effectively using promotions and automation in the affiliate network in order to ensure that they're always competitive and they can differentiate on price on a number of different channels. They can quickly react to competitors' price points without affecting their margins. That automation is key and the data and analytics that are automatically driven out of that enables them to make those decisions and implement those changes in real time.



From left: Mea Thompson, Robin Major

More than 99.95% of the transactions on Smarty are automated. This means that they have no call centre agents. This has enabled Smarty to have a ratio of subscribers to employees of 13,750:1. For comparison, Netflix's is 15,000:1. So Smarty is playing at the same ratios as the global content market leader and as such is the envy of the telecommunications industry. We often hear telecoms talking about becoming a 'tech co' and the reason is that they want to drive that level of efficiency so that they can have that high margin and effective growth without the need to create huge organisation. They stay agile and are able to react to competitors in real time.

Smarty is the number one operator in the Which.co.uk customer satisfaction scores and they have a Trustpilot score of 4.1. That is purely thanks to the quality of service that they provide, and that quality of service is driven by automation.

The how

We work in an industry that loves to create complexity, but the key is to crush it. And to do this, you need a partner. This means that you can focus on your niche customer segment and create differentiation.

Automation needs to flow through the entire business operation of your MVNO. This could be in your order management and billing, in your digital retail, or within onboarding, fulfilment and shipping. Customer care with conversational chatbots means that you can minimise the cost of customer care. Real time charging and service control allows you to avoid revenue leakage.

Customer lifecycle management is absolutely key, too. If your customers are trying to do things on their phones that are blocked because they don't have the right plan or they don't have the right amount of credit, you need to be able to react to that and enable them to purchase the right proposition at that moment in time.

None of this is possible without data. You need insights, you need to know what's going on. You need automated dashboards and drill down capability to be able to see what's going on in your base at all times.

You can also automate the onboarding with eSIM. eSIM has had a lot of resistance from operators but it is an opportunity to provide a much faster experience in terms of onboarding. It also provides cost savings for you as an MVNO and let's not forget, it's a much greener method than the traditional way. You have instant service, no stock management costs, no distribution costs and it enables you to launch new propositions and address new market niches.

Key takeaway

From order management and billing to onboarding, fulfilment and shipping, automation needs to flow through the entire business operation of your MVNO.

Summing up

The world continues to evolve at a pace never before experienced, and from here on in, these shifts will never slow down. It can be overwhelming, especially for our customers, which is why our role is to stay ahead of the curve so that we can do the hard work and heavy lifting for them.

We know, more than anything else, that customers today want nothing short of a simple, hassle-free user journey. Complexity, for them, needs to be crushed and we must focus on delivering services and offerings that have been designed specifically around their own attitudes, wants and needs.

All this being said, MVNOs themselves can never afford to fall behind when it comes to tech. The very nature of your business dictates that your energy and attention should be spent identifying the opportunities and challenges that

the likes of 5G, automation and eSIM provides. Time should then be spent addressing how these advancements can be used to your business's advantage. Can the Cloud, for example, help you with hyper personalisation? Are you using automation as effectively as you could be? And do you already have an eye what on what 6G could mean for you?

The chances are, however, that these moves won't be possible without the right analytics, support and partners. But once you have these in place, the possibilities are endless.



Strategies for growth

It's no understatement to say that there's never been a more exciting time for MVNOs. The market was valued at US\$70.3 bn in 2022 and is predicted to reach a remarkable US\$147.7 Bn in 2032. Competition, therefore, is rife, with 90% of operators identifying this as their biggest risk.

Today, consumers are willing and able to switch brands that don't meet their expectations and there's a growing demand for operationally efficient mobile network services that are flexible and provide full control to the consumer.

We've sought advice from the best of the best on how to grow and scale your MVNO, and crucially, how to provide your customers with what they are looking for from you. Discover hints, tips and strategies on how to stand out from the crowd, expand, innovate and even eventually exit your business.

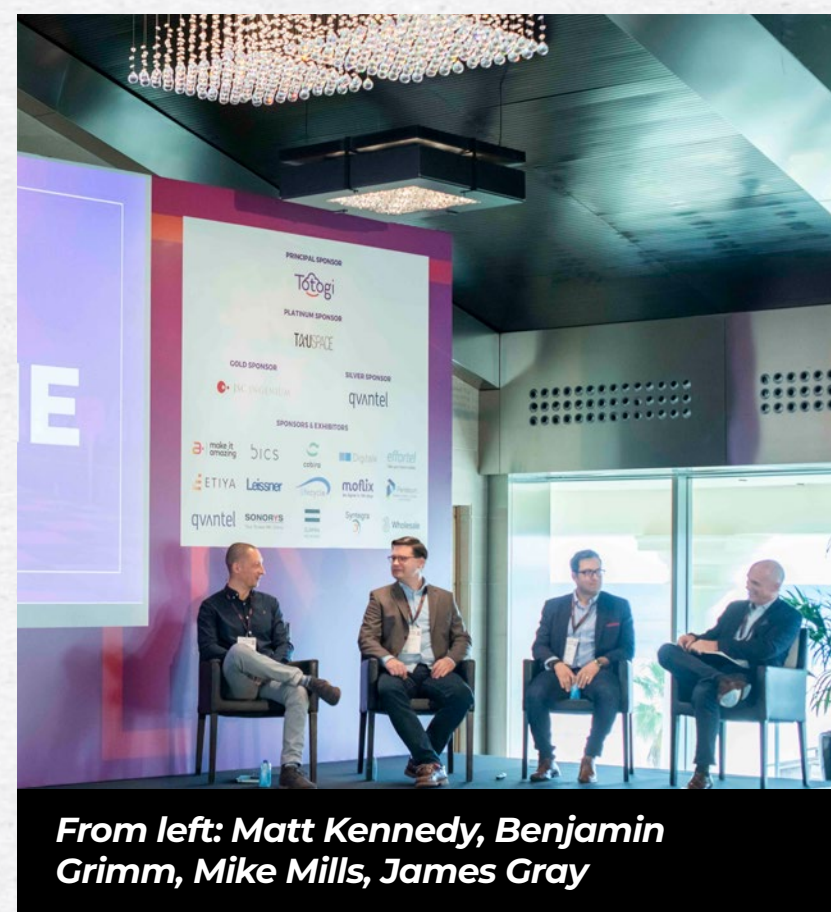


Looking down the MVNO line: three ways to find growth – and stand out from the crowd

Our panel of experts share their top tips for finding a growth path in a competitive market.

Look beyond demographics

Home in on behaviour, attitudes and what customers are looking for. Whether your target audience is in their 20s or their 70s, the chances are that, ultimately, they're looking for the same thing: simple, easy-to-use solutions from companies that help them to manage their daily lives hassle-free.



From left: Matt Kennedy, Benjamin Grimm, Mike Mills, James Gray

It's simply not true that it's just Gen Z or Millennials looking for fully digital app-based solutions. Today, the majority of people want to avoid calling hotlines and waiting to talk to someone. Instead, what they want are straightforward services at their fingertips.

Benjamin Grimm, Head of Carrier Relations, freenet

Don't rely on stable, go-to niches

The pandemic accelerated the drive into online research and purchase behaviour – and this included digitally native customers and those who are less so. Then came the cost of living crisis, which has opened up the market to all providers as long as they can offer enough value. As such, we believe that specific niches won't necessarily continue to be stable go-tos. And even if you could identify a niche today, the same one probably won't be there in two years' time.

This in my opinion means that we need proper market segmentation. If you start with that, you can conduct some really great proposition placement targeting work off the back of it. The behavioural and attitudinal profiles of the discrete segments need to be your absolute number one priority. This will lead to understanding the customer needs that you want to try and help with, and you

can base your proposition design on that.

When you're part of a portfolio of brands, which is sometimes known as being a light MVNO, this can also help define which brand does what for each group; what problems you can solve and how to avoid as much overlap as possible in order to get to the greatest aggregate value.

This approach means that you only really start talking about demographics once you've found the customer need that you want to help with and once you've found the size of the audience. Then and only then should you find and create lookalike audiences, as well as your digital and other targeting touchpoints.

Matt Kennedy, Chief Commerce Officer, giffgaff

Explore new business spaces for opportunities to disrupt

We've certainly seen a couple of interesting growth areas recently. In the UK, we're on the procurement frameworks in the public sector, an area historically held for the MNOs. We've been incredibly successful as a disrupter brand within that specific sector because, ultimately, they want choice and they're becoming more cost conscious. We were fortunate because our host operator in the UK, Three, wasn't on those frameworks. But because we provide other business services to them, it was quite an obvious place for them to look. This is a business space worth exploring in my view.

Mike Mills, Director of Cloud & Infrastructure Partners, Gamma

Key takeaway

Forget traditional target audiences and demographics. Instead, focus on behaviours, attitudes and what it is that customers – regardless of age, gender and job title – are looking for.

From B2C to B2B – how Circles Asia made the leap

Mehul Vora, VP of Sales, Pareteum MVNE, talks us through the evolution of Circles Asia and offers top tips for digital differentiation.

Phase one: launching Singapore's first B2C MVNO

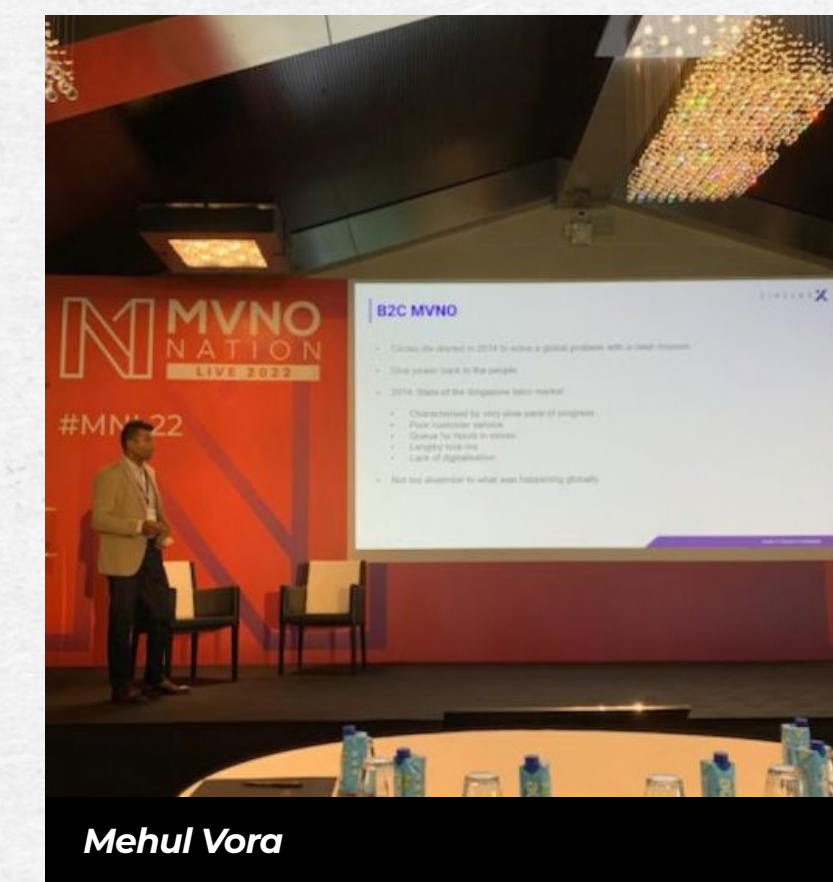
Circles.Life, as it is commonly known, was founded in Singapore in 2014. In this point in time in Singapore, there was very little innovation and very slow progress in the telco market.

Customer service didn't come first or even second. In fact, it probably came fifth or sixth on the list of priorities. There were lock-ins, lengthy queues and lack of digitalisation.

The founders of Circles.Life set off to reinvigorate the Singaporean telco market. They had long thought about how to go about doing that, and concluded that best thing to do was to deliver an experience that also gave flexibility and control back to the users.

We've all heard Steve Jobs' keynote speeches and know that he always used to say that whenever he was designing a new product, he didn't start with what was the art of the possible at the time. Instead, he looked at the service or the experience that he wanted the users to have and he worked backwards.

This isn't dissimilar to what Circles.Life founders did. They started with what would be an ideal service experience and then worked backwards from there to



Mehul Vora

assess what a telco stack should look like to be able to deliver those experiences.

That approach resulted in them developing a digital telco SaaS platform called Circles X. With that platform, in 2016, they launched the first B2C MVNO in Singapore.

Phase two: developing an ecosystem of digital offerings

This MVNO was very, very successful. So hot on the heels of that they launched two more MVNOs in Taiwan and Australia. And over a period of time what Circles X has evolved into is a very successful ecosystem of digital offerings that comprises financial services, entertainment and many other non-mobile services.

How to acquire subscribers and build a net promoter score

Targeting

Different groups of people may be aware of a new MVNO and genuinely interested in it. They are considering moving from an MNO or another MVNO. There is intent, but depending on the stage of interest of the different individuals, it's important to make sure that you're targeting them through different channels.

Retargeting

How many times have you received a text or email that is very interesting and that you have every intent of doing something with, but it gets forgotten? It's for this reason that the retargeting of prospects at the right time and via the right channel is crucial. This is a make or break matter – conversion rates jump up 25% on the second retargeting.

Promotion = rapid time to market

Promotions change services from being an acceptable one to something much more desirable. We all spend insane amounts of money on the latest Apple and Samsung phones. And why is that? Because they are desirable. What does desirability mean? It means paying for something that delivers value or pleasure. Value is delivered by offering promotions that are super specific to the users, and by being able to do this and to be able to do that in seamless fashion.

It's simply no longer enough to just do telco very well – that's very much what is expected. If you are going to innovate in the telco space, most users are going to want you to do more, and better.

What truly differentiates you from everyone else who is doing the same thing in the market is not just the what, but also the how, and that how translates into increased RPU, better customer retention or even better lifecycle value of the subscriber.

The Circles X platform is full of bells and whistles. It's a data platform, with analytics, delivery and operation all bundled together and integrated in a very nice end-to-end fashion.

A strong platform should allow users to do basic things better, for example – bundle different services and offerings together. And not just basic telco service layers but also addons, rewards and non telco services.

Once you've done that you also have to look at acquiring additional subscribers. The number of subscribers acquired is how most MVNOs measure success – for example, how big they've become over a period of time. The other metric used is the net promoter score, which is a reflection of the satisfaction that the MVNO is able to deliver to the customers.

Phase three: making the leap to B2B

Having run a B2C MVNO business, and having got to the bottom of what the challenges and interests are, we could deliver all those learnings to our B2B MVNO partners. We launched the first B2B MVNO in Japan in 2020 and a second one in Indonesia in 2021. The idea here was simply to disrupt telco markets by continuing to provide the best-in-class digital user experience:

Hyper personalisation

These promotions can be market specific and segment specific, but they can also be super personalised. To give a simple example, you might know through cookie-based behaviour that the customer has visited an app or a website of a competitor. You know that they may be thinking of churning away and, therefore, you can deliver a targeted promotion for, for example, a digital streaming subscription in order to try to retain them.

Loyalty via reward features

Everybody likes to be rewarded and to be acknowledged, and it's no different in the telecom space. This is where having a platform that allows you to integrate rewards in an end-to-end way pays dividends.

High value digital service segments

If you're an MVNO and you if you want to drive your RPUs forward, you need to identify your specific segments and niches and earmark them. This means running campaigns and creating promotions that directly targets those sets.

Key takeaway

It's simply no longer enough to just do telco very well – this is very much expected of you. If you truly want to innovate and stand out, you have to do much more in a better and more distinct way than your competitors.



Where next? How to scale from start-up to multinational MVNO

Jignesh Dave, Founder & CEO of Next360, outlines his company's journey to multinational cellular operator, with a footprint in 31 countries.

"All changes are hard at first, messy in the middle, but beautiful at the end."

Hard at first...

This summer, in the northern hemisphere, we decided that Covid was something that we were all starting to live with and that it was time to get back to business.

We started selling SIM cards in our distribution market and we saw two extremes. One was WBT – way before technology – which is another way of saying that people wanted physical SIMs.

But in the forums that we were running, people were asking for eSIM.

Continuing on the theme of extremes – we had grandparents travelling from markets like India to Europe who had no idea what eSIM is. They aren't, understandably, clued up about technology or connectivity. At the other end of the scale are the millennials who sit on the same table, connecting but not actually talking to each other!

We also learnt a very solid lesson about the importance of focusing on the need of the consumer rather than thinking from the producer perspective. With this in mind, we had a challenge in that we needed both the millennials and the older generations to adjust their own respective journeys.

Messy in the middle...

Next360 was founded in 2017, so we were only active for a few years before the pandemic, when travel of course stopped meaning that our business came to a standstill. Our vision is to make life simple for a global traveller, and there were virtually no global travellers during Covid.

Like an aircraft, business has to go up, right? Business has to take off. When we were trying to scale, we were trying to balance a number of factors – being valuable as well as unique and difficult

to imitate – as well as running a business. This involved focusing on who our key partners were, the key resources that we needed and the key activities that we had to undertake in order to achieve that multi-country MVNO level where we could create an integrated solution for a traveller. And then there was desirability, too. So, for example, how did we want to build our customer relationships? What channels and segments did we want to focus on? Should we go digital, or down the unorganised retail route. Should we use travel ecosystem or go online with

the Booking.com and Experians of the world? Finally, we had viability. Was cost effectiveness something that we needed to focus on, or should we be looking at a high RPU?

In terms of further scaling strategies, we were of course targeting global travel and adding new networks. The countries that people travel a lot to were crucial to us, so we conducted market mapping into our distribution. We also analysed and figured out which networks we needed to add in in the future.

... beautiful at the end

We expanded our distribution presence in various markets. We have Asia covered, we're in Africa and we're getting into the UK market for distribution in terms of travellers. We also started allowing the travel ecosystem to use our infrastructure and provide those connectivity products to their customers, thus enabling an aggregation for exponential growth.

Because of Covid, we launched our domestic market in South Africa, which became a very solid proof of concept

for us and now we are taking that same model to other markets that we've identified. This means we will be launching domestic markets in a number of other geographies.

Key takeaway

When you're trying to scale, you'll have to balance being valuable, unique, desirable and difficult to imitate with the actual day-to-day running of your business. In order to do all of this effectively, ensure you have trusted partners in place that you can lean on for support.

Top innovation tips

Five world-renowned experts provide insight into how to revolutionise your offering to offer your customers the service they are craving.

Make it 100% hassle free

Today, we have customers who want to do things for themselves, which means that their journeys have to be not just fully digital but also exceptional. They need to be hassle free the whole way because if it's not, then they will want to talk to someone, which means forcing a switch in their behaviour.

When we started, we designed something like 240 customer journeys. We looked at all of the different interactions within these, what the different needs would be and how to make them digital end-to-end – because if they weren't, there was no value in them and the whole purpose from the end user perspective would just get ruined. Digitalising the backend to support has also been key for us.

Martina Klingvall, CEO, Telness

Learn lessons around legacy

I want to focus on the big advantage that we have over MNOs and that is that we don't have their legacy. If you talk to IT people in MNOs, they'll tell you it's crazy how much legacy they have to deal with. This means that if we want to move into digitisation, we can do so a lot faster than MNOs. But what I've learnt is that there's nothing more difficult than making things simple, and the whole digitisation process is quite hard. This is why it's crucial to get insights from people who really understand simplicity in this space. Simplicity is, in my opinion, the most important part of this process.

Frank Bekkers, CEO, Mobile Vikings

Perfect the art of personalisation

"What is key for me is focusing on what really differentiates your experience. This includes the plans you put out, your journey and how simple you're making it, how well you manage your infrastructure and the ideas that you have. It's about how you

make the most of your data insights, and by this I mean personalisation. With these, you have the opportunity to say, "Hey Danielle, I've noticed you've been looking at Netflix more often. Did you know that we have a deal with Netflix and we can change your plan to bundle that in?" Or, "I noticed you just went to Spain and that you're travelling a lot right now – here's some data." You can access all this information about where people are going, how they are using the network etc – and these can provide personalised insights that make customers go in and get better deals."

Danielle Royston, CEO and Founder, TelcoDR & Acting CEO, Totogi

If it's not simple, shelve it

"When we built our native digital experience, we didn't try to reinvent the wheel, but we did take inspirations. We looked at Spotify, Away and Lemonade Insurance – then sought to create experiences for the end user. We had very strict design KPIs and at times stayed non-competitive to others because we couldn't simplify something.

"For example, we had this vision of building Roam Like Home from the US when you travel abroad. So, if you have a \$30 plan and you go to Europe or you go to Asia, you just use your \$30 plan. The way to do that was

to use the local eSIM in the local country so that you're on a local tariff. We tested it and built the backend for it. We spent maybe 10, 11 months building the whole solution out and it was working great. But we realised that it wasn't that simple. Things were certainly taking more than just three clicks. So we shelved it. It's there, it's built, we made the investment – but we never launched because we couldn't simplify it. And if it's not simple but is in fact clunky we're just not going to put it out."

Harjot Singh, CEO, Reach Mobile

Identify and innovate

"Nubank led the charge with banking in LATAM because they reinvented the entire experience – that's why the bank became so popular. We need to bring telco to that level. Let's look at balances – people should be able to see what theirs is in real time. You should be able to open an app, push a button and get this information. But it was actually taking 48 hours. That's like something from 25 years ago that's not been replaced. These are the opportunities where MNVOs can innovate and really raise the bar."

Nicolas Girard, Founder & CEO, Oxio

Key takeaway

Simplify, simplify, simplify!



From left: Danielle Royston, Nicolas Girard, Frank Bekkers, Gary Bhomer

Business expansion and new services: what to keep front of mind

Now that you're firmly established, it's time to start branching out beyond your bread and butter in order to achieve growth. We ask five experts for their advance.

The data dilemma

"Privacy is one of our top values. One of the difficulties of telco today is that the data exists, but exposing it potentially exposes the users, and some users don't want to be tracked. This means that we have to be able to do everything from super personalisation to looking after building systems for companies that don't want to be tracked at all. The way to do this at the end of the day is to just ask the user for an opt-in. You have to very simply explain the value-add and that if they don't want to sign up, they don't have to."

Nicolas Girard, Founder & CEO, Oxio

KISS (keep it super simple)

"We have been working for the last 12 months or so on this project that we have yet to name. We still call it Rinse and Repeat – but we have to find a better name at some point. The thinking behind the project is that within 72 hours, you should be able to launch a brand-new service – let's just say a mobile service for now. The idea is that if you are moving into any new vertical where

you have distribution and have to have a relationship with the consumer, you just go into the CMS system and you push a few buttons. Instead of tweaking 2,000 parameters you can tweak, say, 20 – ones that we think are worth tweaking. What this ultimately means for companies is that they can decide that they want to create a mobile service, go into the system, configure their service and have an up-and-running, fully-fledged MVNO in no time at all. This means that companies can start off doing something else but opt to add in mobile."

Harjot Singh, CEO, Reach Mobile

The danger of getting it wrong

"I use Verizon in the United States and they were clearly experimenting with personalisation a few years ago. I know this because during the back half of 2021, I was getting tons of offers that weren't really personalised but kind of close to it. It wasn't hitting the mark, and you can really erode your brand by getting it wrong. My tips are starting out slow and telling people what you're doing so that they can opt in or opt out. You've got to respect their decisions but at the same time you can't afford to not experiment."

Danielle Royston, CEO and Founder, TelcoDR & Acting CEO, Totogi

Globally local

"When you're an MVNO, you're in the same position as the end user in that data and calls cost you something. In our case, it's

the biggest cost in the company and I think it's the same level as the end user. That's quite an interesting situation and it's one where you can take advantage of in terms of how you can use technology and digitalisation to disrupt. There are a lot of technologies out there and everything is moving to the cloud. Take our PBX for example, we're routing calls on a local basis in 62 countries and we haven't set up any local servers or any local agreements because we are using cloud providers. The world is going global – so consider how you can use the opportunity of not being local to launch a different kind of global service."

Martina Klingvall, CEO, Telness

Back to front

"I think too often, we're busy selling our packages but we could be busy with what's at the front of our offerings. There are MVNOs putting entertainment first, and at least one putting the environment first. If we put these offerings at the front and our telco service more towards the back, then people might need to use the MVNO's services and offerings more."

Frank Bekkers, CEO, Mobile Vikings

Key takeaway

Experimentation is key, but getting things sorely wrong can do more damage than good and could even erode your brand.



From left: Harjot Singh, Martina Klingvall

How to prepare for an orderly exit



Nicholas Constantinopoulos, Advisory, Parlem outlines four exit options – with some quick tips on how to prepare.

Acquisition

"The most natural exit for an MVNO is to be acquired by their hosting MNO. This can be tricky. The ownership changes. You need an excellent lawyer and an exceptionally strong agreement in place. But if this works, then the money is very good."

IPO

"Financing plus exit, or an IPO, is where you use money from investors to keep your company running, but after a few years you and your shareholders sell everything. Mobile Vikings in Belgium started like this. Simio in Germany is another example – they expanded internationally this way."

M&A transactions

"A merge could see an MVNO with fantastic ideas come together with an MNO to help meet their needs. Because MNOs are of course always looking for more and more customers. We've seen two of these take place in the last few months alone. The first was Mobile X. Mobile X is essentially owned by the founder of Boost Mobile Australia. He is in the States and had launched Mobile X over there in a beta mode. But because he was so eager to expand internationally, he merged with a company on the Nasdaq. We also had Boost Mobile. Boost was bought by Dish, with a view to putting it on the stock market."

Placing your company on the stock exchange

"I worked on the preparation of the exit of Parlem – a regional operator in Spain.

They, over the course of six years, did a really good job. They undertook some crowd funding and secured some family funds and slowly started to attract private equity. Eveready, who also invested in Mass Mobile, was one of the main investors. This means Eveready had two 'children', and they sold one to KKR and put the other on the stock exchange. They brought in me and the whole exercise was to prepare the company one year in advance for the exit. This meant cleaning the company inside and out and starting to consider all of the questions that the investors and the stock exchange committee might have."

Preparation is key

"When I started working with Parlem I found that they had this pizza menu-like offering. They had 75 different plans mixed with fibre, with fibre only, with television, with fixed telephony – I could go on! And the pricing was very similar. It was very close and confusing. What we needed was a clear picture of what was selling best, what was delivering the most profit; what they should push and what they should cut. They had all these legacy plans, but cleaning, which I was brought in to do, means killing legacy. We had to transfer the customer base from these old products to new and/or existing ones, and cancel the ones that weren't profitable. It was a vital part of the process."

Key takeaway

Spend time investigating and assessing the right exit strategy for you and your business, and then enlist the help of experts to effectively prepare.

Summing up

While there's never been more opportunities for MVNOs, there's never been more competition, either. Standing head and shoulders above your peers is a necessity today, but, as we've seen, there's a wealth of ways that you can do so.

We heard about why we should start looking beyond demographics, and that it might be time to stop relying on stable, go-to niches. We were told about the need to explore spaces where you can disrupt, and the importance of hyper personalisation, high value digital

service segments, timely promotions and the right partners. We also heard time and time again about how simplicity is absolutely vital, as is creating hassle-free user journeys that are aligned with consumers' preferred behaviours.

Our customers may be getting more demanding, and we may be facing more challenges than ever before – but these are exciting predicaments and ones that, when addressed correctly, can lead to growth that you might previously have only ever dreamed of.



Meet the new MVNOs

This section offers a combination of case studies and introductions to new MVNOs.

Learn about what other companies are doing, how they are solving particular problems and why they were founded in the first place. Read about what they are bringing to the proverbial MVNO party, what makes them unique and how they work together. Find out how they innovate, scale, ensure customer centricity and much more.



Meet the new MVNOs: Prune

Prune is a recently launched MVNO, based in India. What's unique about them, and how do they plan to make a mark? Vivek Malhotra, CEO, gives us the headlines.

Who is Prune?

We are an online reseller for domestic connectivity for all brands in India. We work in international eSIM, foreign exchange as well as travel insurance and payments. For payments, we partner with a government organisation called the National Payments Corporation of India. They are the agent institution. This allows consumers to come and make payments on our network, but they can also reach out to users who are not online and help them complete necessary payments.

What do they offer?

First and foremost, we are a single platform that handles infrastructure – enabling users to buy connectivity from all brands in one place. We also activate eSIMs through our unique portal. The first point of entry is a physical SIM and from there, they transition to an eSIM. We also look after international connectivity and solve related problems using our contact centre.

What makes Prune different?

Traditionally, in telcos in India, engagement with women is significantly lower than of men. But our numbers are 60:40, which is strong. I think this is because our platform enables convenience and comfort. Nearly 75% of our users are under 24 years of age, too.

We want to be seen as a tech-led logistic partner. More and more telcos are moving into a space whereby they can enable connectivity as well as the delivery of SIM cards. We want to participate in this by enabling deliveries through our platform. So, as leads get generated at a call centre or online, they get transferred to us and we provide deep insights to the telco partner in terms of where the delivery partner is located, when the delivery is happening etc.

We have a few other telecom offerings, too. One of these is travel experiences, and another is travel insurance. We also look after foreign exchange and bill payment. We see these as new age value added services for our consumers. This means that if a customer comes to us purely for connectivity, there are many reasons for them to come back to our platform to do much more.

Where are the big opportunities for Prune right now?

In addition to all of this, we're on the side lines of some other big opportunities.

One is SIM replacement, especially with the continued emergence of 5G. We've estimated that about 60% of SIM cards will need replacement upgrades, and we want to help users with that process.

The Indian government has a WiFi aggregation plan for a license called PM1 – PM is for prime minister, and 1 is wireless access network interface – and we are a licensor. Essentially what we do is help users discover networks wherever they are. We bring hotspot operators on our platform and let them choose a plan that they want to sell. Once a consumer chooses one, they make the payment. Our role is to enable the payment for these aggregators – these could be restaurants or other places where people have been given WiFi free of cost. Our aim is to make that whole process seamless for them.

What else is on the horizon?

We want to play a role in providing more insights to the user to help them make the right choices for their devices. And because we have a delivery network in place, our goal is to provide users with mobile consumables like chargers, wires and headphones – items that they need immediately. We believe that we can reach them in about 25, 30 minutes to deliver what they need. This is very much on the horizon.

Meet the new MVNOs: Skylo

Eric DaVersa, VP, Business Development, introduces Skylo – the brainchild of a group of engineers and scientists from MIT and Stanford in the US, and an experienced deployment team in Finland and India.

The satellite world has reached an inflection point

Many people don't know that today, with an iPhone 14, you can text anywhere in the world. This marks an inflection point within the satellite world. With the same device that we've always had, we can achieve much greater reach and coverage. This technology is called NTN, non-terrestrial networks.

Everything around cellular chips is driven by a company called 3GPP, and their 17th release is going to allow for satellite communications. There are elements in the design that let you effectively use the exact same SIM, the same piece of hardware, the same tracker and the same module – but with the ability to talk to the terrestrial antenna, just like your IoT services do today. But, there's also a way for that device to talk to satellites. And that's what we at Skylo are focused on.

A business built from the ground up

In order to provide this service, there are some new elements needed. naturally, you need satellites, but you've got to have spectrum, too. There's a lot of companies that people might be familiar with that are delivering satellite IoT services and again, you have to have spectrum to do that.

The companies that are getting into this, like ourselves, have a lot of work to do to catch up. We have to build all of the mobile core and all of the billing. We have to have PLMN ID. We have to have enough customer support, and we have to build everything on the mobile side.

But by having these NTN capabilities, we can unlock a lot of new revenue options for the MVNO.

An instant boost to coverage

Over the last four and a half years, we at Skylo have built our own core mobile infrastructure. We do everything in the same way as any of your MNO partners – in fact, we're effectively just another roaming option for your customers. We look after billing, HSS, authentication, UDP, non-IP data and IP data. Everything is designed to be simple on the integration side. But, crucially, everything your customer sees is in your name, not ours.

What does this mean for the MVNO or MNO partners that we work with? Well, for one, we can help you instantly grow your coverage and satisfy use cases. And these are additional revenue streams that you couldn't address before, or you couldn't compete with in the satellite world.

Ready to launch?

With our help, you can take on new narrowband services but without new operator investment. You don't have to build an infrastructure, you don't have to launch satellites – we do all of that for you. We also cost a lot less than your traditional satellite. In fact, our prices are much closer to standard terrestrial IoT services. We're not quite as

cheap as them, but you have to remember that what you're getting is a premium service for customers that want that coverage. And everything we're doing is 3GPP, GSMA compliant. We can and will replicate everything you do with a mobile operator. The technology is out there, and it works.



Mario Colabufo

Meet the new MVNOs: elimobile

With elimobile, Mario Colabufo, CEO & Founder, has created an ecosystem for content, entertainment, educational videos and movies. Here's how.

Give the people what they want

Our customers go to elimobile, choose their mobile plan and download the app. In the app, they can find movies, entertainment and educational video. This is a focus for us because in, Italy after Covid, people have collectively been spending half a million Euros a year on educational videos.

On elimobile, we have videos on learning English, playing poker, investing in crypto, playing the drums and much, much more. All of this is available to our customers and is included in their plan, as is 24/7 assistance.

elisium is elimobile's app, and it features masterclasses, movies and

TV series. The TV series are all created by us, but for the films we have a partnership with Eagle Pictures. Once an Eagle Pictures film has been at the cinema for 50 days, we can make it available on elisium as well as on elivision, which is an app for smart TVs.

Offer a unique experience

We also place a lot of emphasis on experience. We work and partner with a lot of talent and influencers, such as the football legend Alessandro Del Pierom. If you're an elimobile customer, you have the opportunity to play a game of football with the man himself, and you can also cook a dish with the chef Carlo Cracco. What's more – from next year, all of these offerings will be free.

Run with Me, meanwhile, is a fitness app. If you're jogging or playing sport, Run with Me takes care of your health. It counts your steps, calculates how many kilometres you've covered and converts those kilometres in elicoin.

Keep innovating

elicoin is our own cryptocurrency. It only launched six months or so ago but now you can pay your bill this way. And – going back to the fitness app – if you as a customer covers a certain distance every day, then you get some elicoin back every month.

What we're doing is revolutionary in Italy, and we're taking this approach and our learnings around the world to show everyone our ideas and what we've done.

A look under the hood: how Tata Communications empowers a new breed of MVNOs

Deepak Gusain, Global Head – Sales and Solutions, Mobility and Internet of Things, Tata Communications, shares his take on the secret of success.

Quality, flexibility and support lie at the heart of Tata Communications' MOVE platform.

Quality: We are a Tier 1 IP service

provider, and the only service provider in the world in the top five in all of the world's continents. This means that we provide best in breed IP capacity and performance to our customers from our distributed packet gateways, wherever in the world they are.

Flexibility: Our flexibility comes into play in terms of onboarding new MVNOs. We onboard new customers with different plans and packages that they want to launch. We understand their needs when it comes to prepaid, post-paid, hybrid and IoT MVNOs. This is central to our platform, and we enable it through the APIs.

Support: From a support standpoint, we have 24/7 online support for our customers today. This isn't just about service assurance, it's also about business

continuity and new business acquisition.

All of this is possible because of the core network capability that we have distributed all around the world. This goes much deeper than a fancy platform that is visible on a web portal or on a mobile app. It's also about looking under the hood and seeing what is really being deployed and how. We also own and operate all of these global capacities ourselves.

Peak data performance

Say a subscriber travels from the UK – their home country – to Singapore, the data traffic doesn't really traverse back to home. It exits from the nearest packet gateway in Singapore, or in Australia for that matter. If the same subscriber travels to the US, it then traverses from our New York or Dallas packet gateway ensuring that there are

minimal latencies. This gives it the best performance from a data POV.

Since we are also the world number one voice operator from a wholesale standpoint, we can also, from a telephony POV, deliver HD quality to the same MVNO customers. It's all about providing a secure, zero touch environment to our customers, seamlessly and across the board.

From a cross selling and renewal standpoint, the key is to create a user lifecycle and a journey in a way that it continues to provide user satisfaction. This will lead to growth in the same markets, acquiring a new subscriber base and even going into newer markets for that matter. Whether we're talking about consumer or IoT, in terms of platform capabilities we should be delivering the same user experience across the board.

The same applies to a low bandwidth use case or high bandwidth use case.

A focus on retention...

Our goal is to deliver what consumers want today, therefore increasing brand loyalty. This means providing customised plans, and implementing those quickly, giving complete control back to the MVNO. We do this in a way so that they can launch data, voice, SMS and combo plans at their will.

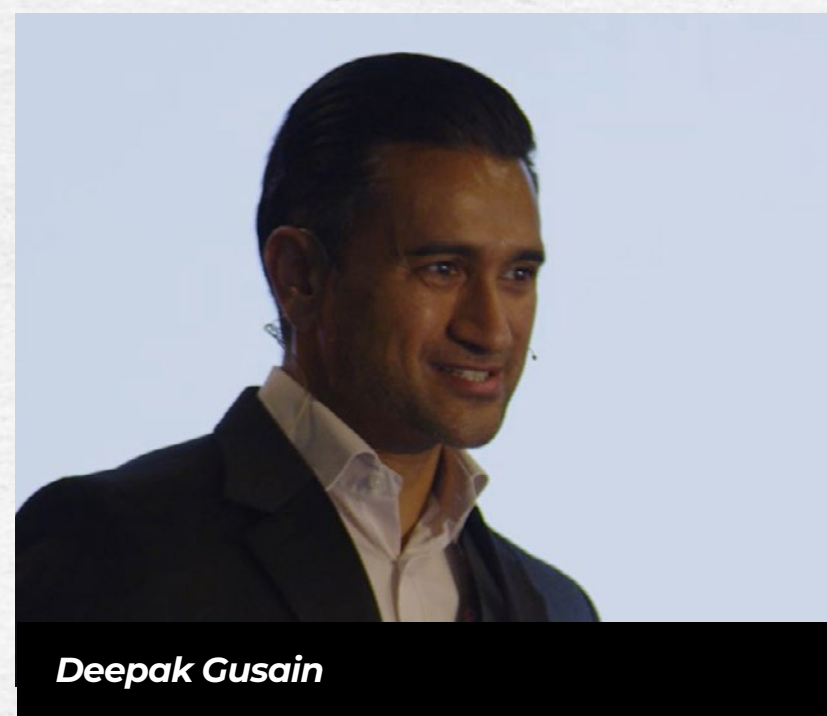
Today, user experience it is not just about acquiring a subscriber, but continuing with that subscriber and growing with them.

... and an eye on new opportunities

We're also using our existing capabilities to deliver and disrupt new industries – whether that's fintech, data MVNOs or sports MVNOs or IoT use cases – all of which we're seeing more and more of. We're looking at alternative ways of acquiring new business, and diversifying into newer markets, which is something that our platform enables the MVNO customers to do.

Tata Communications at a glance

- Digital ecosystem enabler
- Part of \$110 billion Tata Group
- Operations in more than 190 countries.



Deepak Gusain

Meet the new MVNOs: Digital Republic

Digital Republic offers unlimited mobile internet without obligation. Chief Sales Officer, Raphael Oerer, provides an insight into the company's journey.

McKinsey once said there is nothing simple about most telcos' product portfolios. But what does that mean? We spent some time investigating what some of these portfolios looked like and we found complex structures and contracts as well as a lot of products.

What's wrong with this approach? Well, it leads to long and painful customer journeys. It's vital to remember that customers have individual needs, and ultimately, they find it difficult to navigate the landscape of myriad products by myriad providers. This is what led us at Digital Republic to decide that we needed a new approach, and our approach ended up being an award-winning one.

So, how did we get there?

We understood the need to differentiate

Based on current research, IoT is growing everywhere. Just look at B2C clients – they have second devices, wearables, mobile routers, smart homes and smart cars. Suddenly, they need data everywhere. B2B applications have a rising need, too – especially SMEs. Think solar panels, eCharging stations, surveillance systems, digital signage and payment solutions.

But both segments, B2C and B2B, are telling us that they need easy, understandable and scalable solutions for their connectivity needs. This is how we created our claim, which is mobile internet for everyone and everything.

Meet the new MVNOs: Beneko Mobile

Tomasz Aniszczyk, Commercial Manager, Beneko Mobile, explains how the company's mantra – Save, use, return, repeat – is embedded in its ethos and how it offers an all-in-one sustainable shopping experience.

Beneko is an all-in-one, eco-friendly app and circular marketplace. We're a classic mobile operator that provides minutes, SMSs and data, but customers can also shop with us for new smartphones, then return them for resale or recycling.

The name Beneko comes from a combination of the Latin word "Bene" – which means good, and "Eko" – which represents our economic and ecologic philosophy.

Beneko was created as a solution that benefits customers and also tackles global issues – such as excessive waste and pollution. We are setting a new

standard in modern business with a model that values positive impact and takes responsibility for leaving the world better than we found it.

With Beneko, customers can find the best deals on their favourite technology but will never pay full price; they save money, and also waste less products and electronics. Our service fees are very low, and customers only ever pay for real usage. We also have an intuitive, friendly and easy-to-use app, and of course, the longer customers stay with us, the more benefits they receive.

What's more, we don't track, collect, analyse or use any unnecessary data. Instead, we focus on voice, SMS and the right data. We don't use any artificial intelligence. Our aim is simply to collect data as needed but to never disrupt our customers with unnecessary information.



Raphael Oerer

Alestra and JSC Ingenium: a case study

Santiago Gómez, Global MVNO Sales Director, JSC Ingenium and Christian Jeftee Galán Torres, Mobile Services Director, Alestra Móvil, offer insight on achieving the highest service availability and the widest coverage.

Christian Galán: Alestra manages network solutions, collaborations, security, cloud system integration, digital transformation and much more. We are in fact one of the leading technology manufacturers in the world. We're a multicarrier with three Hosts (MNOs) offering best coverage and flexibility in Mexico.

We manage to achieve simultaneous operation of the three networks and offer tailor-made packages to each of our clients with professional apps, security and critical operation. We handle management of the mobile lines, device warranty, SIM replacement and reports. Because we are a multi-carrier, we can offer continuity of connection in the event of a network failure.

Santiago Gómez: The situation in Mexico was a complex one – it is a very extensive country where achieving full coverage is very expensive. Our aim was to develop a network connected to 3 different MNOs that, with our multi-host capabilities, offered all customers the best coverage that they could achieve all across Mexico.

The solution deployed is end-to-end and covered not only technical but also managed network issues. We started providing cover for the Mobile services as well as the BSS to continue with managed services for all of the business and customer service provisions. We deployed all necessary OSS tools as well, to operate their own networks. With these broad solutions, we really futureproofed the company.

In terms of improvements from here, we continuously work with Alestra to improve their services. Today, our main aim is to expand the VoLTE service. Alestra's VoLTE network was deployed for one single MNO originally, we are expanding the service to their three different operators, and in parallel we're working on upgrading the VoLTE along with the 5G capabilities of Alestra's network.

We are at a key moment in time with technological shifts and are continuing to support Alestra's network to evolve with these new services based on 5G – this is mainly with regards to cloudification and containerization and converting legacy networks.

In the MVNO space, we see many different needs. But I think that nowadays, technological shifts are becoming a big challenge for MVNOs. This will lead to lots of opportunities because once these new technologies will be in place, a big focus will be needed on how MVNOs can monetise them. For instance, we're seeing a lot of movement in the IoT market, particularly in very specific areas. We see that all over Europe, many energy companies want to become MVNOs to provide not only capacity for their remote meeting needs, but also new services for their existing customers.

We're also talking with some new potential customers in North Africa and some areas where the regulations are becoming more open than the capability to not give only new services that are low priced but also with many other new opportunities I think that will become an opportunity for all of us.



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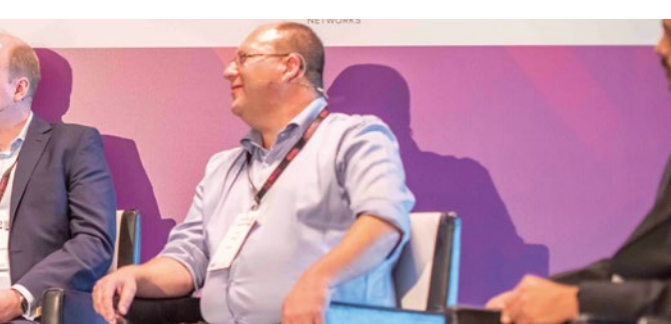
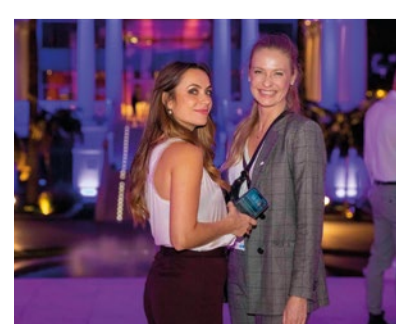
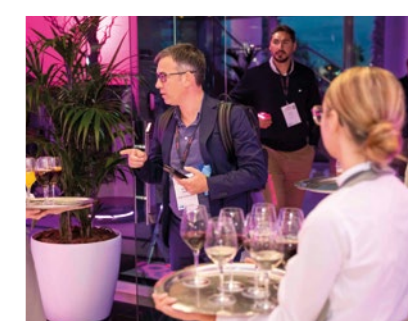
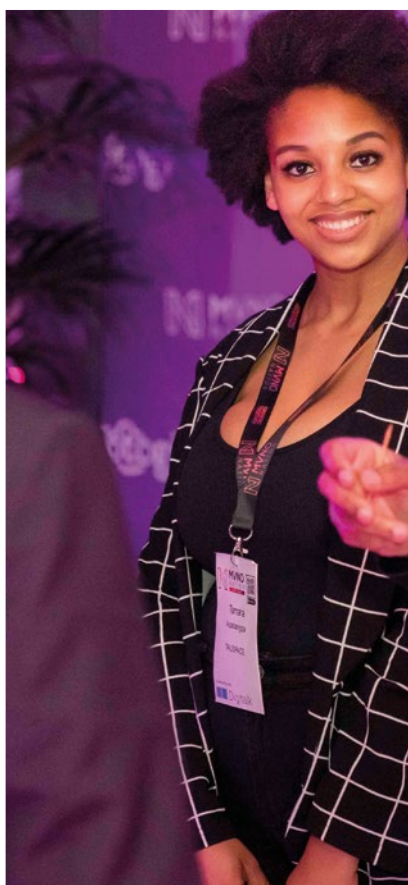
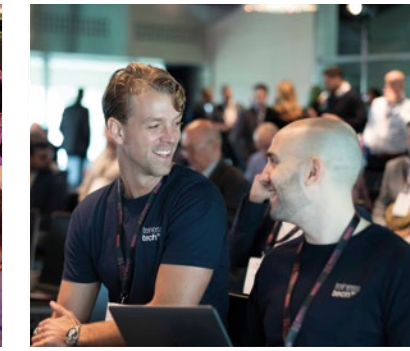


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