

Together with our members, we make connectivity work for all

- Engineering the future of connectivity
- Enhancing your profile across the ecosystem
- Advancing policy and regulatory priorities
- Supporting the global ecosystem
- Delivering industry services, intelligence and training

Learn about how GSMA Membership could benefit you and your business at gsma.com/membership

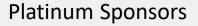
Find out more





MVNO Summit

Discover the latest insights and strategies from across the MVNO ecosystem as we explore the innovative business models and strategic partnerships driving commercial sustainability.







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MVC GSMA



Danielle Rios Royston Acting CEO Totogi



Riki Efraim-Lederman General Manager Amdocs ConnectX



Carlos Valero Alcantara СТО Finetwork



Justin Reilly CEO Wavelo

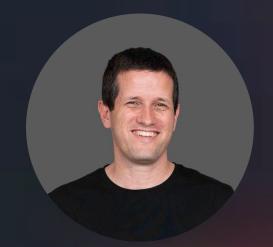


Rob Bennet SVP, Retail Wireless Technology, DISH

Our speakers



David Clyde **Group Brand Director** Lebara



Noam Lando Co-founder & CEO Webbing



Michelle Bugner Head of Wholesale Giesecke+Devrient



Sandeep Raithatha Head of Strategy, Innovation & 5G IoT Virgin Media O2 Business

Platinum Sponsors





Gold Sponsor



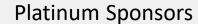
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MVNO Summit

Totogi







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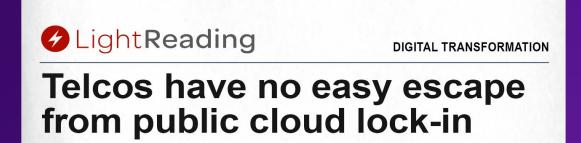
TelcoDR



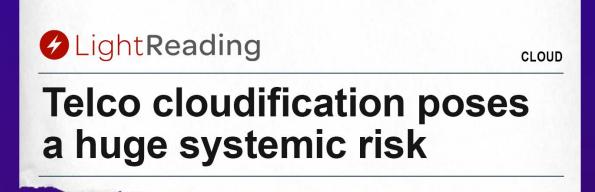


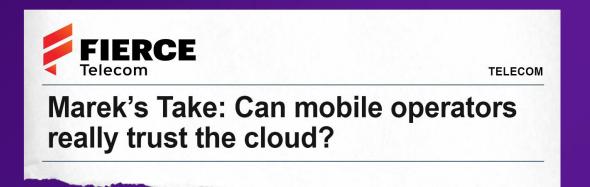




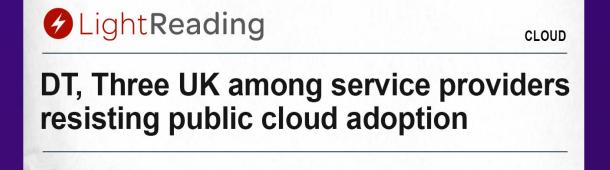










































































better tech

better + way tech + cheaper

better + way = no tech tech cheaper = brainer

GENERATIVE A

Totogi BSS Magic

Totogi reinvents BSS

♣ Create Case					_ B X
First Name:	Last Name:	Phone:	E	Email:	
T .	٥			Find Cal	ler
Account ID:	Account Name:	Site ID:	Site Name:		
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Address:	City:	Postal Code:	Contract ID:	Access	ID:
					<u>"</u> B
Part Serial Number/Service ID: Part Number/Revision: Model Number:					
			Site Parts		₩ 🚭 🔻
Previous Case Next Case FTS Stop Call Timer Attributes					
Details SLM					
Case Title:		Case ID:			
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Incident	Not Applicable		pplicable		hange Type
	Severity: State		-Child:	Parent-Case II	
	Medium Solvi	ing None			
Notes:					
		Save and Continue		 Save	Cancel
		Dave and condinge			Caricol

THIS IS A REAL BSS. GUESS WHO?

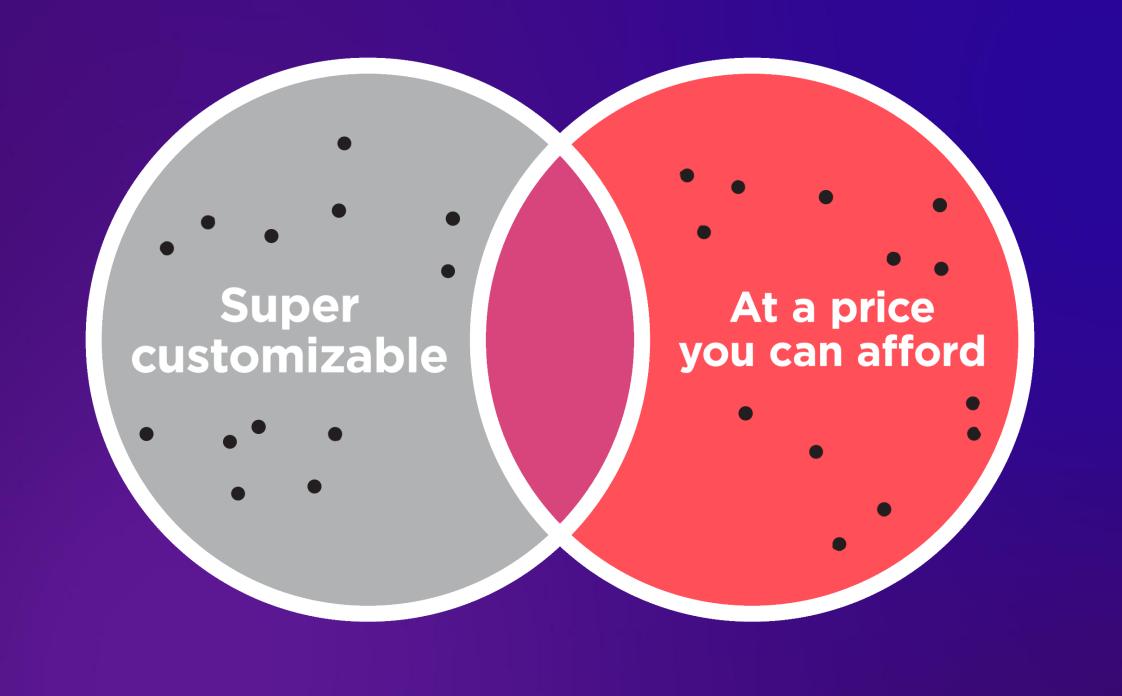
Totogi

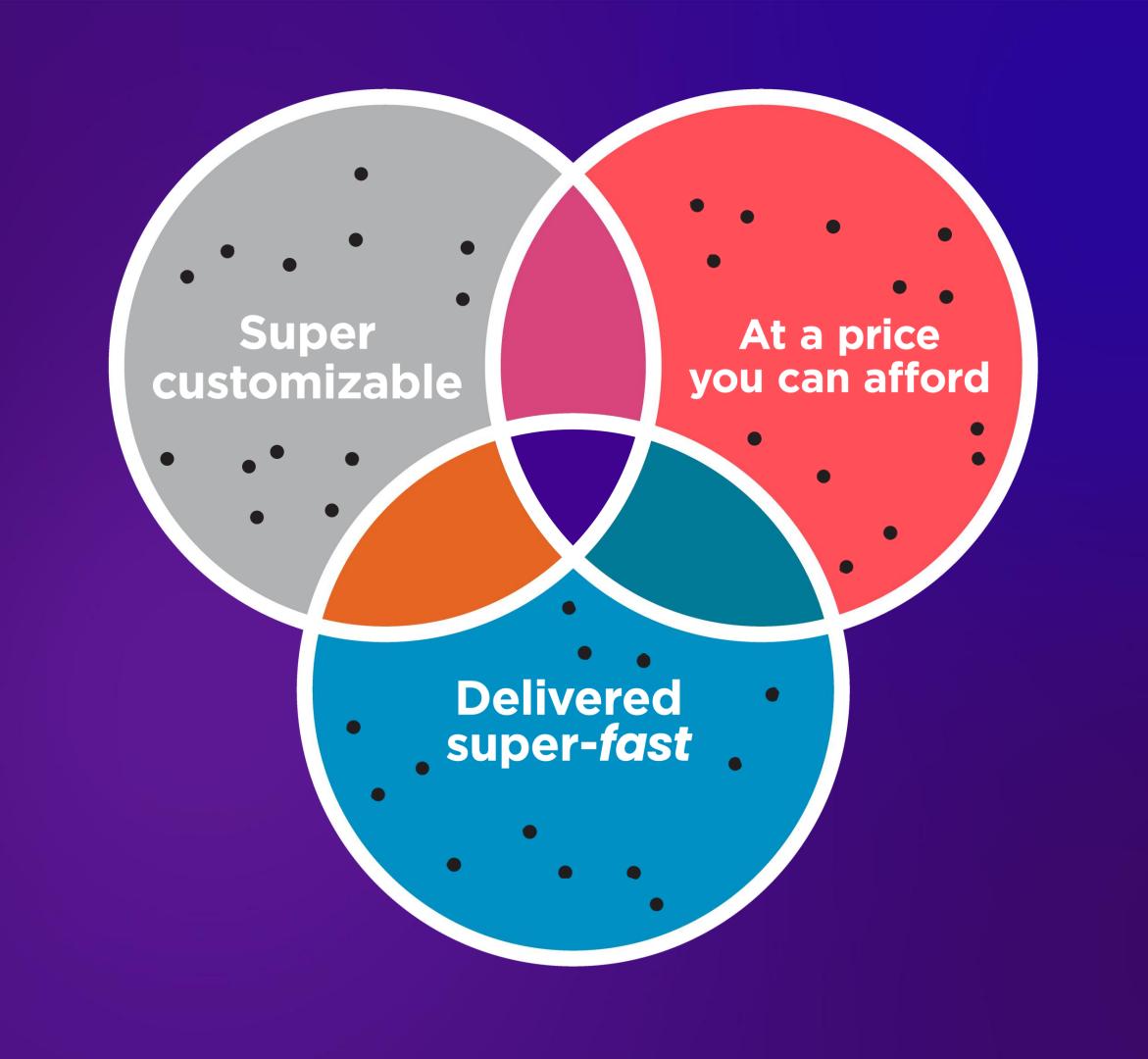
consulting-heavy ousiness mode

EXPENSIVE

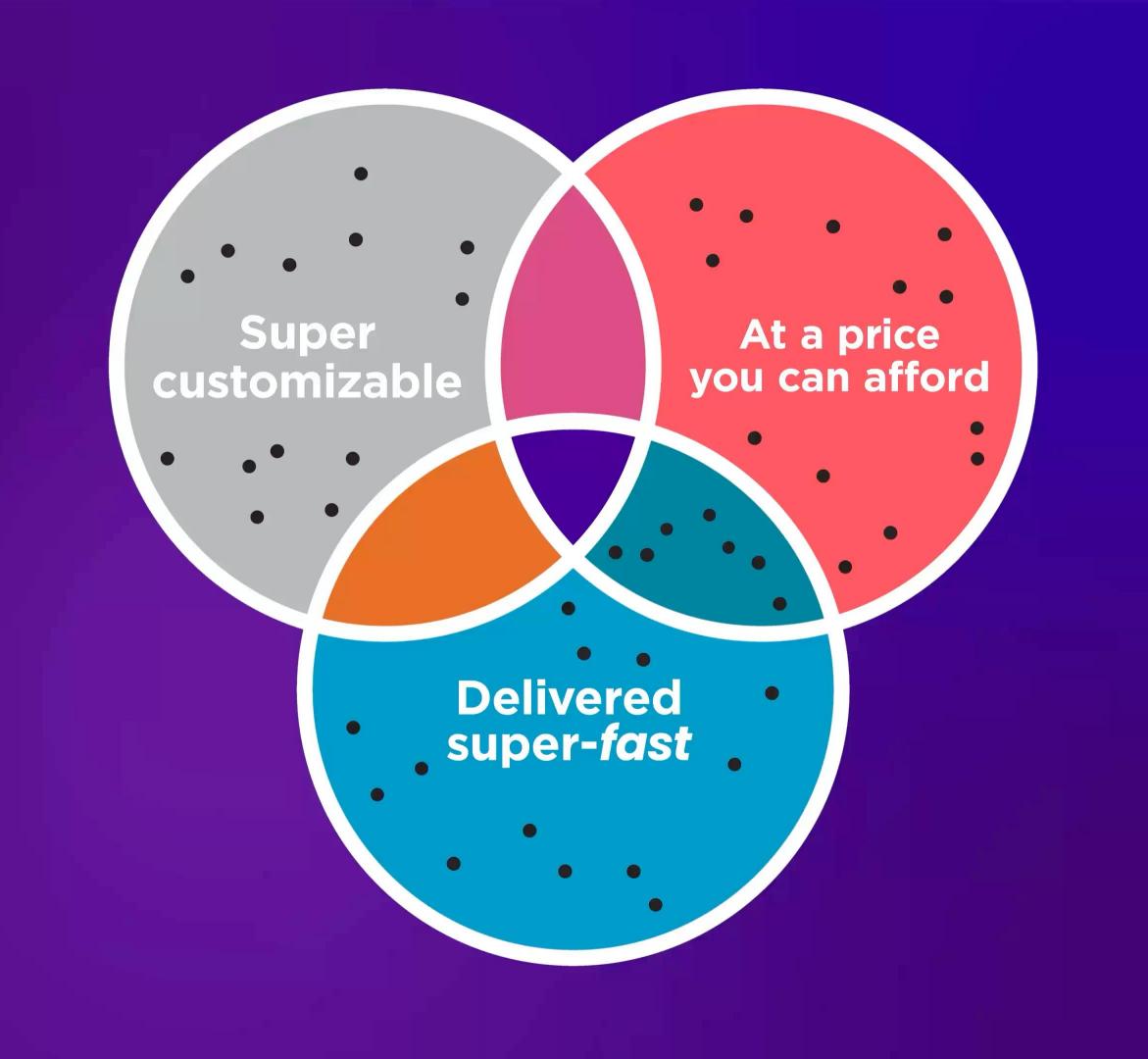
Sprinkling Al on this DOESN'T FIX IT











Totogi BSS Magic

Totogi reinvents BSS

better + way = no tech tech cheaper = brainer

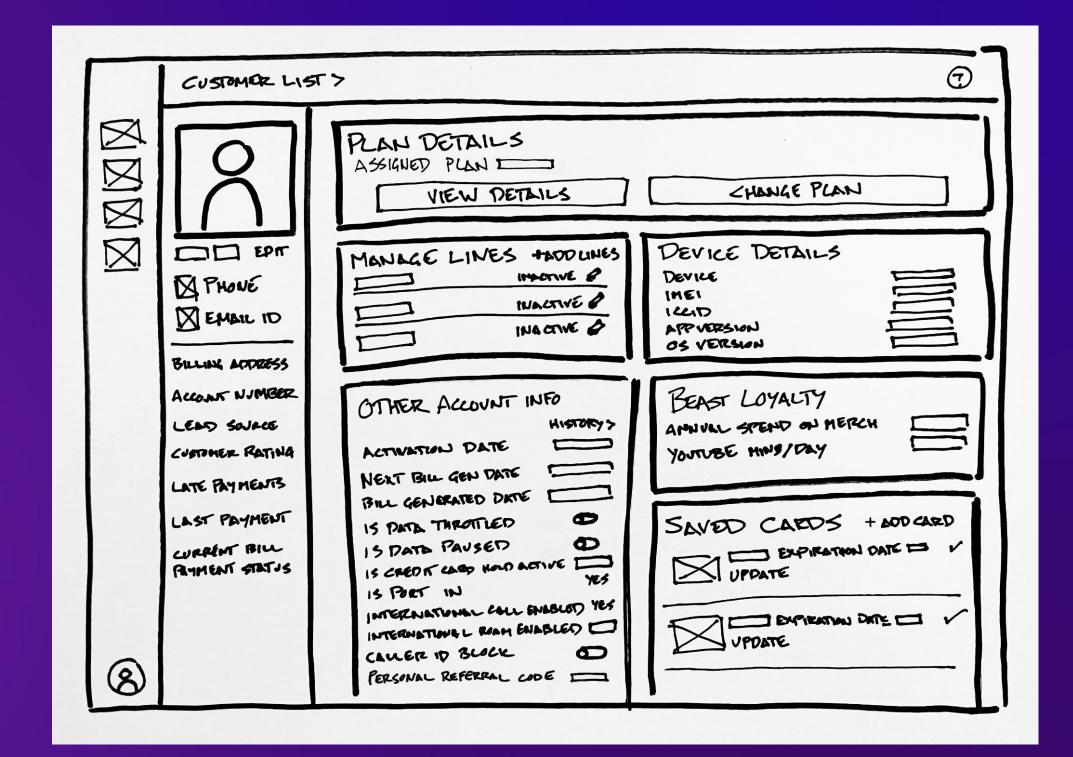


TotogiCustomerAPI.create_line(line) Code return CustomerSchema().dump(customer) @leangle.describe.tags(["Customer"]) @leangle.describe.response(200, description='Get all customers', schema='CustomerSchema') @customer_routes.route('/', methods=['GET'], cors=True) def get_all_customers(): # get multiple customers from Totogi # calls: GET https://bss.totogi.com/customerManagement/v4/customer customers = TotogiCustomerAPI.get_all_customers() return customers @leangle.describe.tags(["Customer"]) @leangle.describe.response(200, description='Get Customer', schema='CustomerSchema') @customer_routes.route('/{id}', methods=['GET'], cors=True) def get_customer(id): # get an existing customer from Totogi # calls: GET https://bss.totogi.com/customerManagement/v4/customer/:id customer = TotogiCustomerAPI.get_customer(id) # get all the active lines for the customer lines = TotogiCustomerAPI.get_active_lines(customer.id) # get all the active tickets for the customer zendesk_api = TotogiIntegrations.ZendeskAPI() active_tickets = zendesk_api.get_active_tickets(customer.zendesk_id) # get all the payment methods for the customer payment_methods = TotogiCustomerAPI.get_payment_methods(customer.id) # get MrBeast loyalty details mrbeast_loyalty = TotogiCustomerAPI.get_mrbeast_loyalty(customer.email) # get all the active plans for the customer plans = TotogiPlansAPI.get_active_plans(customer.id) customer_details = { "customer_profile": customer.__dict__(), "active_tickets": ZendeskTicketsSchema().dump(active_tickets, many=True),

"payment_methods": payment_methods,
"mrbeast lovalty": mrbeast lovalty.

Automatically generate flawless BSS software.

Create your own user interface.





Change the application whenever you want.

Integrate to anything and migrate data, instantly.



CUSTOMERSUPPORT

ORDER MANAGEMENT

> BILLING SYSTEMS

ANALYTICS

Totogi BSS Magic

Totogi reinvents BSS

MR BEAST



MR BEAST



Jimmy Donaldson is MrBeast, a philanthropist and YouTube sensation famed for his extravagant stunts and heartwarming charity work.

He creates videos with jaw-dropping challenges, lavish giveaways, and epic contests, setting a new benchmark for digital creators.

MrBeast is a pioneer of the YouTube era and has amassed a following of over 240 million subscribers.

Totogi BSS Magic

Totogi reinvents BSS



TotogiCustomerAPI.create_line(line) Code return CustomerSchema().dump(customer) @leangle.describe.tags(["Customer"]) @leangle.describe.response(200, description='Get all customers', schema='CustomerSchema') @customer_routes.route('/', methods=['GET'], cors=True) def get_all_customers(): # get multiple customers from Totogi # calls: GET https://bss.totogi.com/customerManagement/v4/customer customers = TotogiCustomerAPI.get_all_customers() return customers @leangle.describe.tags(["Customer"]) @leangle.describe.response(200, description='Get Customer', schema='CustomerSchema') @customer_routes.route('/{id}', methods=['GET'], cors=True) def get_customer(id): # get an existing customer from Totogi # calls: GET https://bss.totogi.com/customerManagement/v4/customer/:id customer = TotogiCustomerAPI.get_customer(id) # get all the active lines for the customer lines = TotogiCustomerAPI.get_active_lines(customer.id) # get all the active tickets for the customer zendesk_api = TotogiIntegrations.ZendeskAPI() active_tickets = zendesk_api.get_active_tickets(customer.zendesk_id) # get all the payment methods for the customer payment_methods = TotogiCustomerAPI.get_payment_methods(customer.id) # get MrBeast loyalty details mrbeast_loyalty = TotogiCustomerAPI.get_mrbeast_loyalty(customer.email) # get all the active plans for the customer plans = TotogiPlansAPI.get_active_plans(customer.id) customer_details = { "customer_profile": customer.__dict__(), "active_tickets": ZendeskTicketsSchema().dump(active_tickets, many=True),

"payment_methods": payment_methods,
"mrbeast lovalty": mrbeast lovalty.

Automatically generate flawless BSS software.



Change the application whenever you want.

Integrate to anything and migrate data, instantly.



CUSTOMER SUPPORT

ORDER MANAGEMENT

> BILLING SYSTEMS

ANALYTICS

Totogi





sales@totogi.com



www.totogi.com

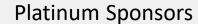


@Totogi



MVNO Summit

Amdocs Finetwork







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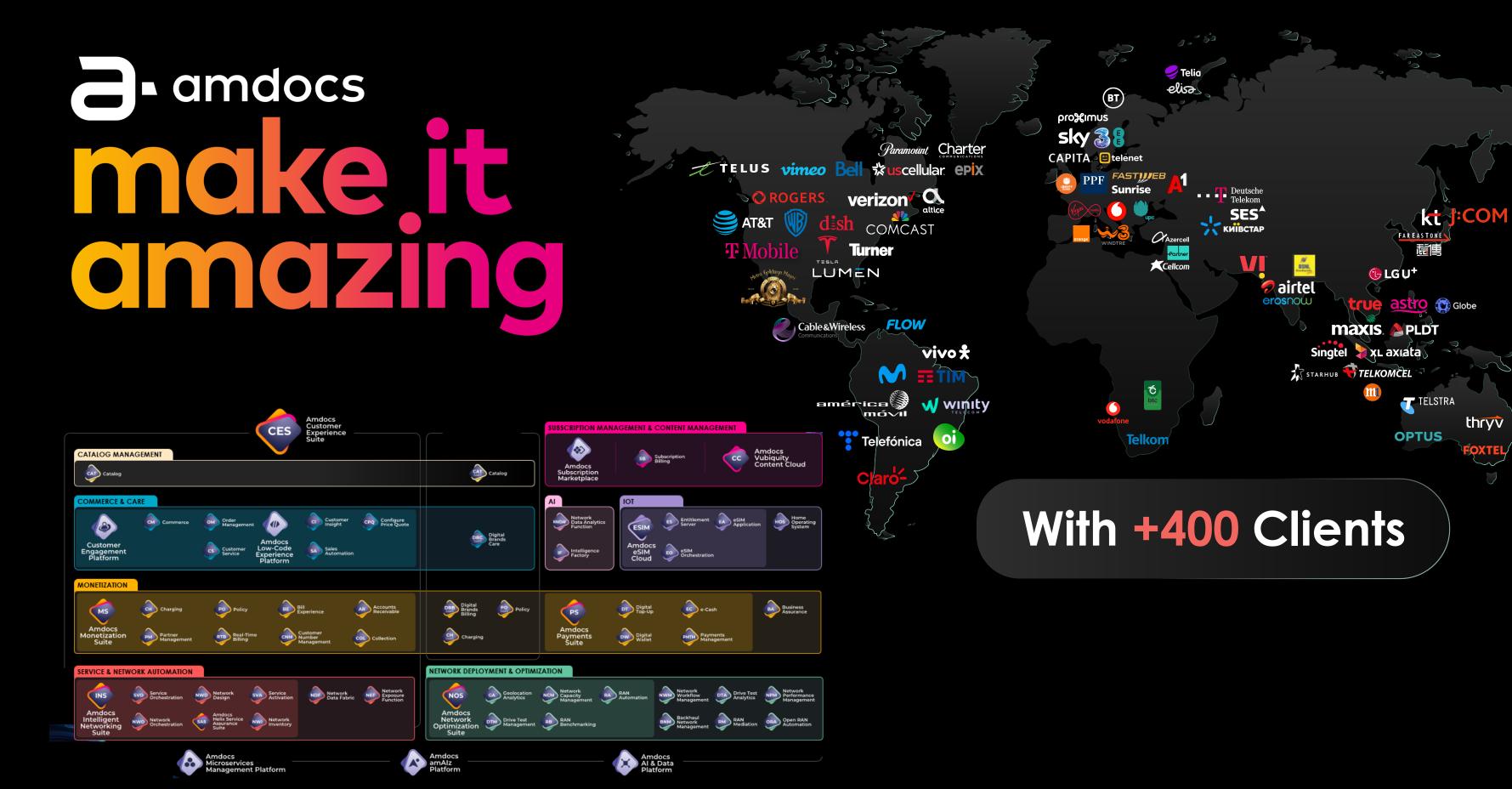
Membership

INNOVATINGWITHTHE And I have **Carlos Valero** Riki Efraim-Lederman Amdocs Finetwork



make it amazing

finetwork





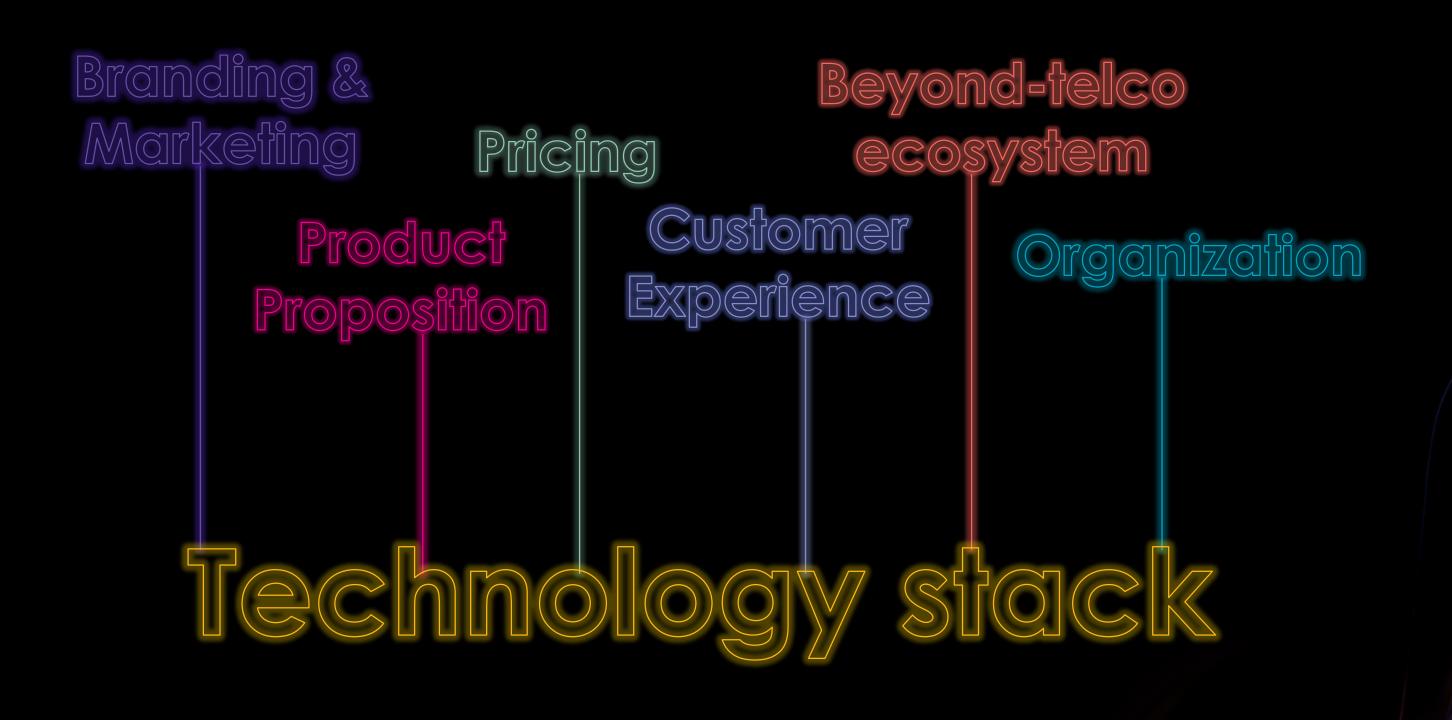
CAN A BIG

HANDLE THE UNIQUE NEEDS OF



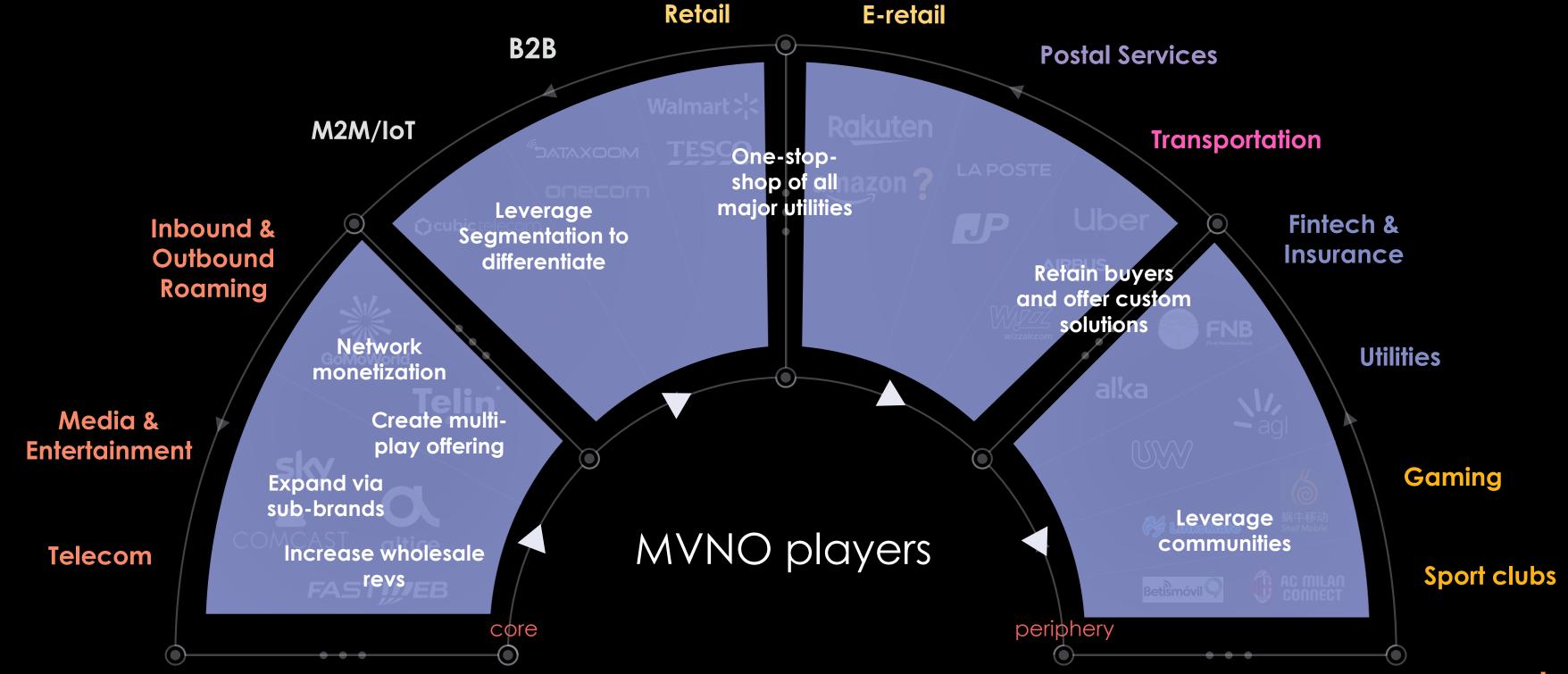


MVNO Success Factors





Connectivity is becoming a play all industries are looking to connect to



DIGITAL BRAND SUITE TO

GenAl native BSS SaaS

We are the invisible bridge, the digital handshake that connect any device and any brand.







tmforum

Certified TM Forum Open APIs, segregated data

GenAl Native

SaaS PAYG

Seamless Digital CX

Telco Know How

7 customers

3 months
On-board, go live

Powered By

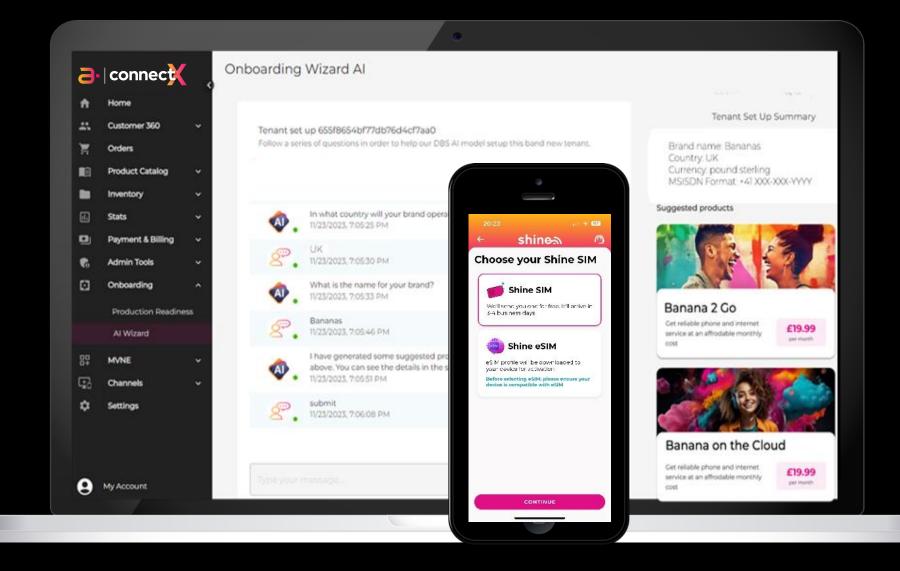
aws

Digital Care & Commerce

Catalog

Monetization

Ordering & Fulfilment





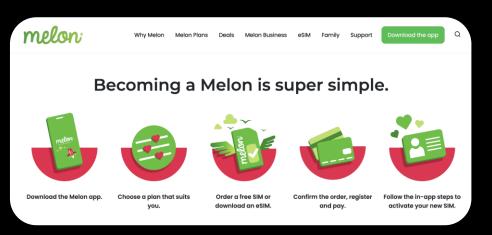


Thanks to our design partner





Calvin Collett

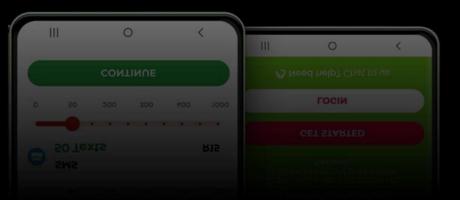














finetwork

Carlos Valero





MVNO Summit

Wavelo DISH







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The telecom stack of the future

Justin Reilly, CEO, Wavelo

Rob Bennett, SVP, Retail Wireless Technology at DISH Wireless

MWC Barcelona, February 28, 2024



Looking back at 2020

mergers and acquisitions



Boost Mobile



Contact Us

DISH to Become National Facilities-based Wireless Carrier

Media Contacts

Images and Videos

Will Deploy Nation's First Standalone 5G Broadband Network



Email Alerts

IT Wireless Architecture Guiding Principles



Less == More

- Fewer "moving parts" improves functionality and Stability
- Less to change as we evolve the business
 - a. Faster time to market
 - b. Lower Cost



Enhance the Core

- Focus enhancement efforts in places where it will benefit the entire business
 - I.e. More Robust Account/Family model



YAGNI

- Start with the essentials for the business
- Day 1 functionality vs Day 365



Contract Driven Design

- Well defined interfaces between system
- If we can encapsulate properly, we can refactor later



Multi Tenant Design

 Architecture and applications should be designed to support multiple brands



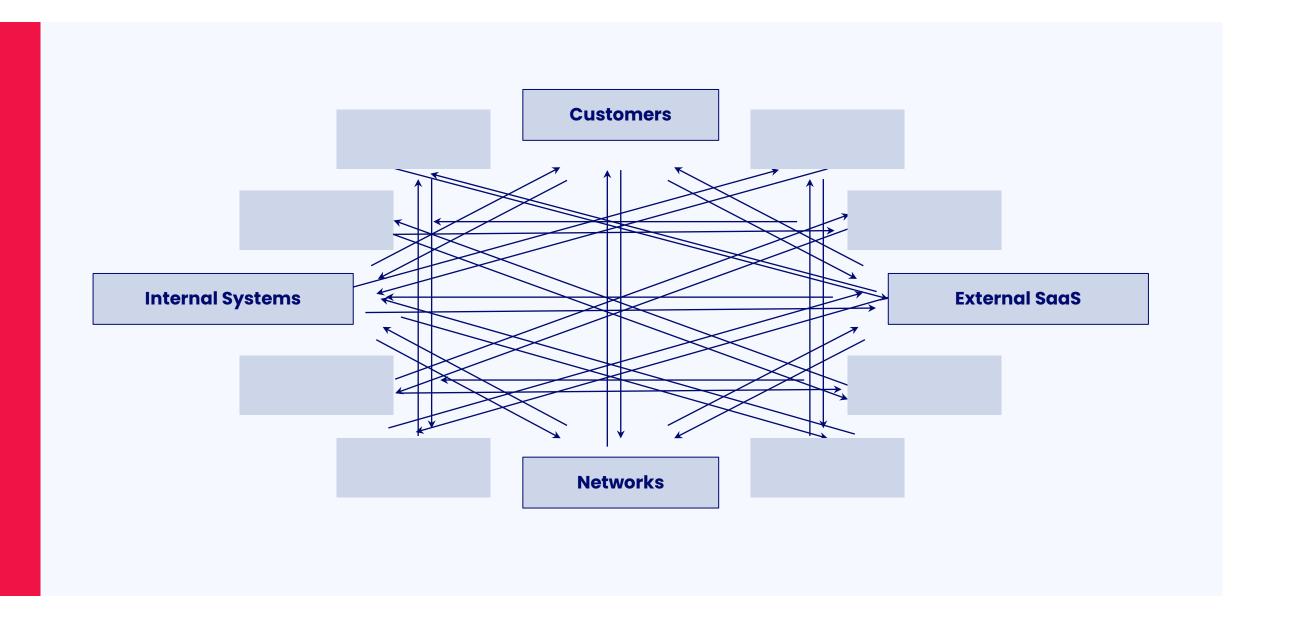
No Corner Cases

- Corner cases lead to poor experiences
- Can resolve from the experience or technology side
- Only gets harder to resolve as we move on

Typical Telco Platform

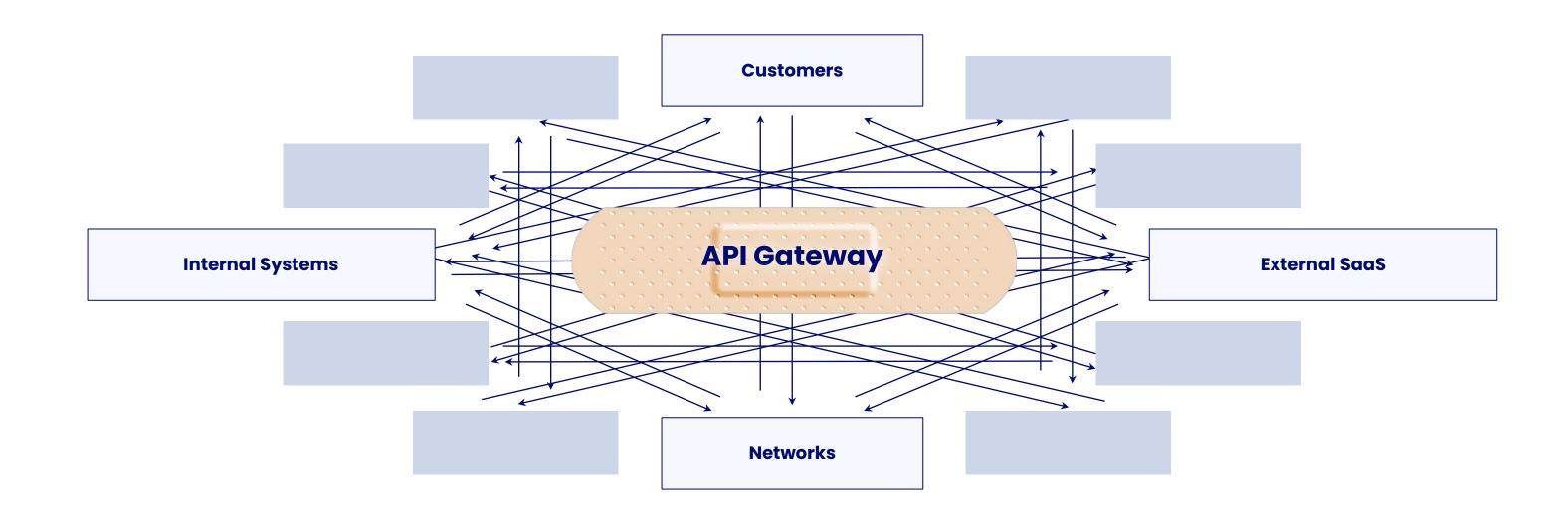
What we're solving

- Slow
- Unreliable
- Manual
- Inflexible

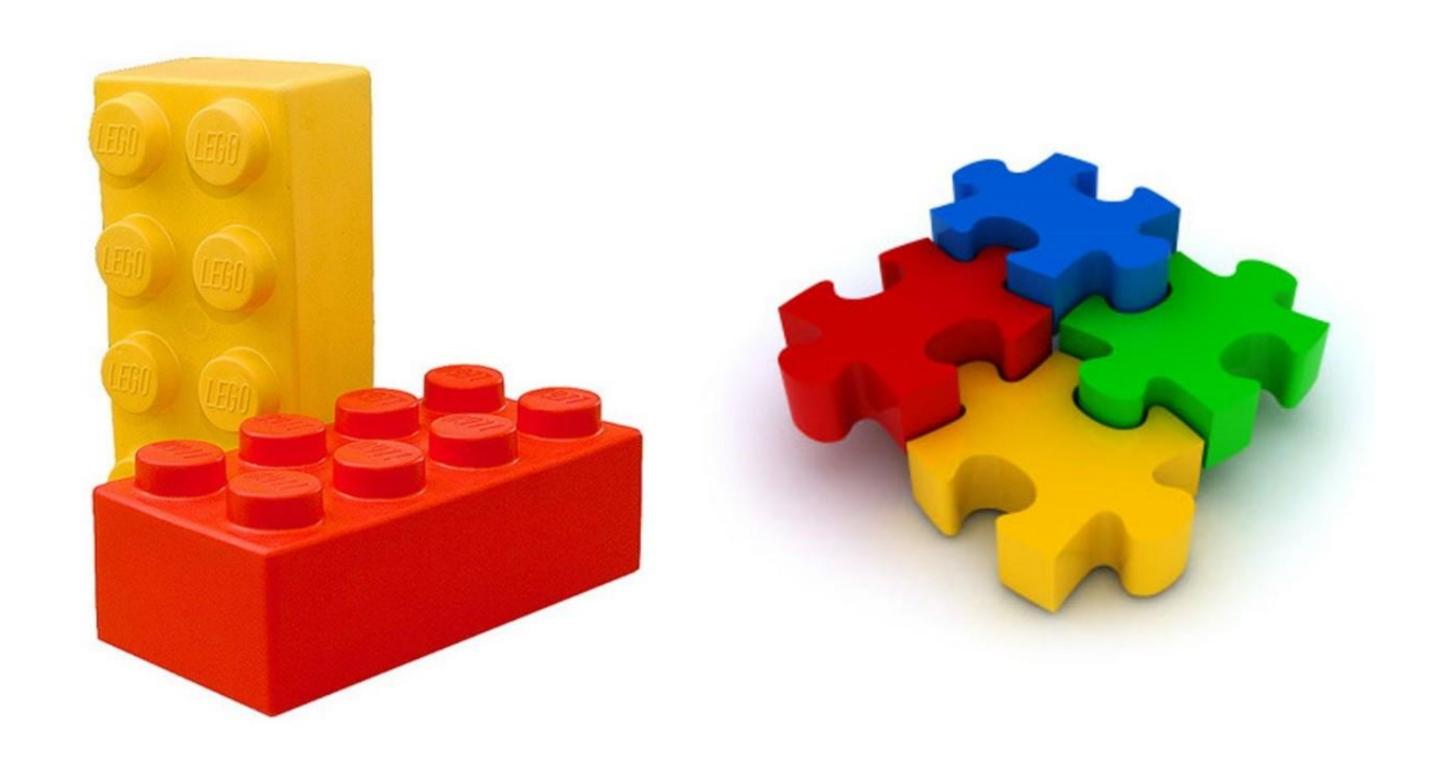




Digital Transformation









What unique challenges did you build for?

- Customer experience at a brand level is the same
- Network experience is fungible, dynamic optimization
- Multi-network
- Prepaid and postpaid
- Flying the plane while adding passengers

What's next?

- Innovating in our digital experience
- Driving increased speed to change
- . **Building** on the foundation
- Intelligent base-driven optimization

Thank you.





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Delivering a challenger brand experience

David Clyde, Group Brand Director, Lebara Mobile



What do we mean by 'challenger brand'?

"...has business ambitions bigger than its conventional resources, and is prepared to do something bold, usually against the existing conventions or codes of the category, to break through."

(Adam Morgan, Eating The Big Fish)

https://thechallengerproject.com





What defines a 'challenger brand'?

1. State of the market



Vs.



2. State of mind



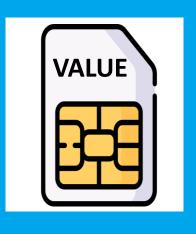
Vs.



3. Growth



Vs.



+3-8%

Why focus on challenger brands?

'Difference is the #1 brand factor impacting on share outperformance'

(Said Business School, Kantar BrandZ)

'...what [investors] like more is an unbeatable proposition – they actually don't care much about the tech, and nor do consumers. They want to know it works and that it affords true brand differentiation.

(James Grey, Greystone Strategy)





1. Take a stand

'Lebara champions a smarter way to connect'

- a reliable <u>network</u>
- and exceptional <u>service</u>
- at an affordable <u>price</u>













2. Know your enemy

'Getting ripped off sucks. We wanted to do the exact opposite of the competition. We wanted to do 'less' but 'better'

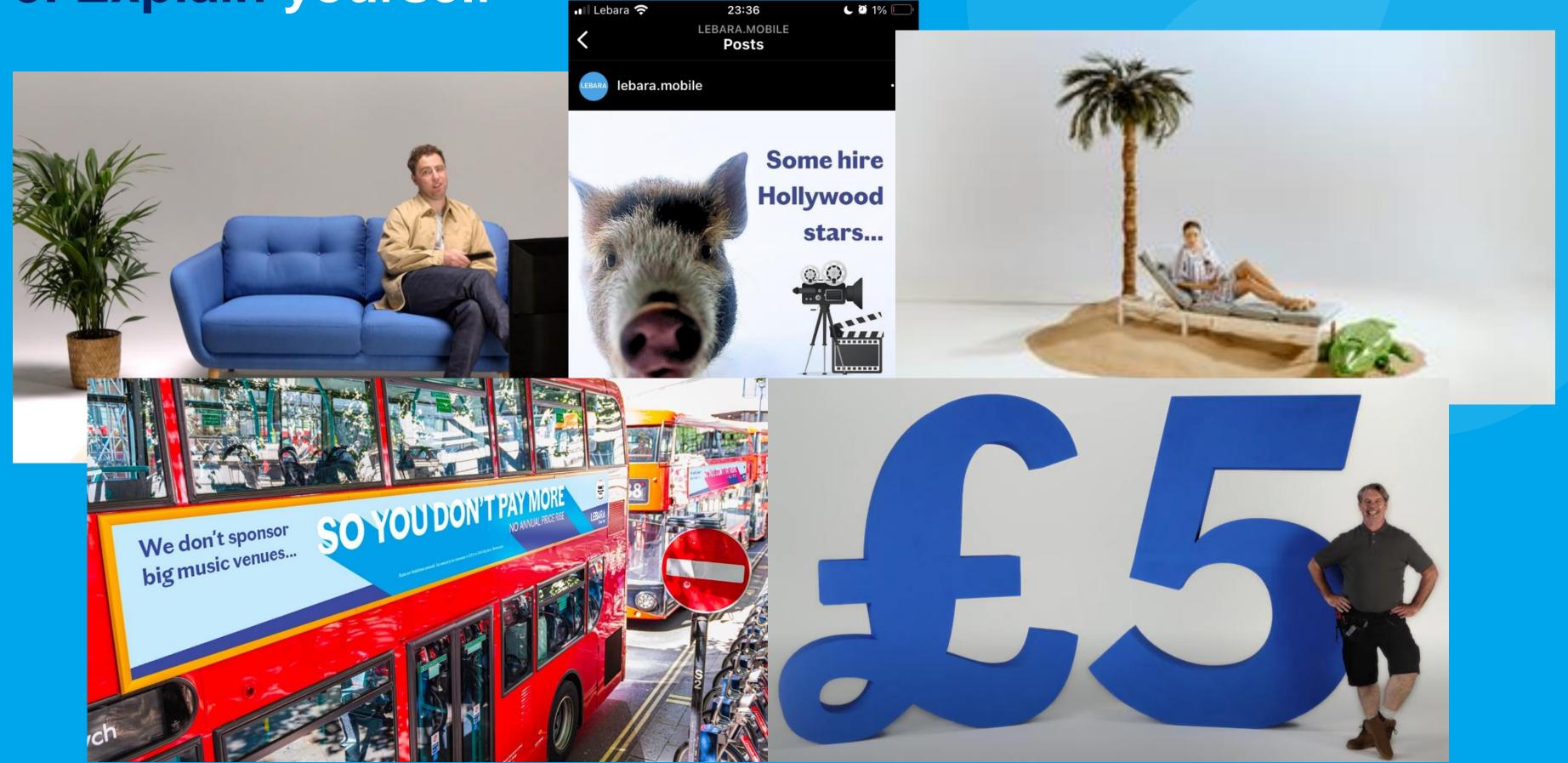
(Jeff Raider & Andy Katz-Mayfield, Founders of Harry's)







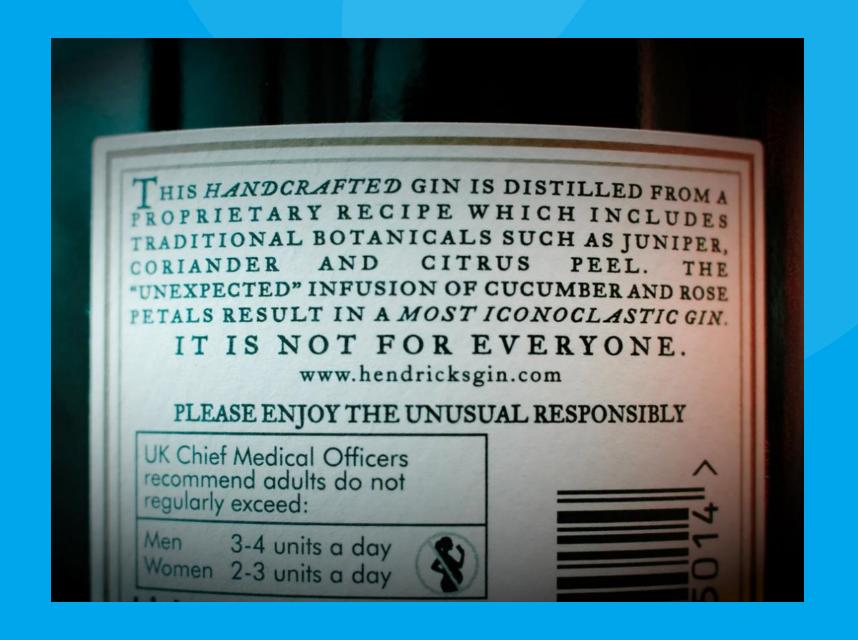
3. Explain yourself





4. Find your tribe







5. Don't be afraid of funny

91% prefer brands to be funny

48% don't believe they have a relationship with a brand unless it makes them smile or laugh

89% of business leaders see the opportunity to use humour to enhance the customer experience

95% of business leaders fear using humour in

customer interactions





Source: Oracle Happiness Report 2022







In summary

- MVNOs are in the perfect position to become true challenger brands
- The customer experience is full of opportunities to be more 'challenger'
- Encourage ALL your teams to look outside the category for inspiration
- If you're launching an MVNO, and you'd like to benefit from our challenger brand experience, please get in touch.
- Thanks for listening

LEBARA BRAND LICENCE PARTNER PROGRAM

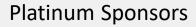






MVNO Summit

Webbing







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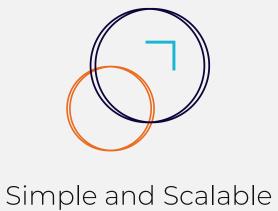


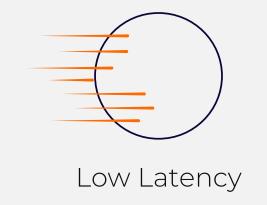
UNLOCKING THE VALUE OF MISSION CRITICAL IOT



Mission Critical IoT Connectivity Requirements









Automatic Failover





Robust Management

Future Proof

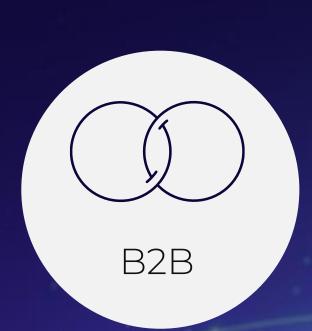


% NEBING

Redefining global data connectivity



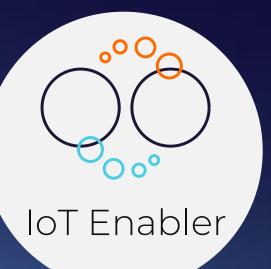


















Webbing Portfolio





WebbingCNCT

WebbingCTRL

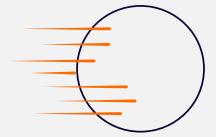


Mission Critical Connectivity Stack





Enhanced global coverage with multinetwork support in 190+ countries



High Performance and Low Latency



eSIM RSP Support (SGP02 / SGP22 / SGP32). Switch cellular providers remotely



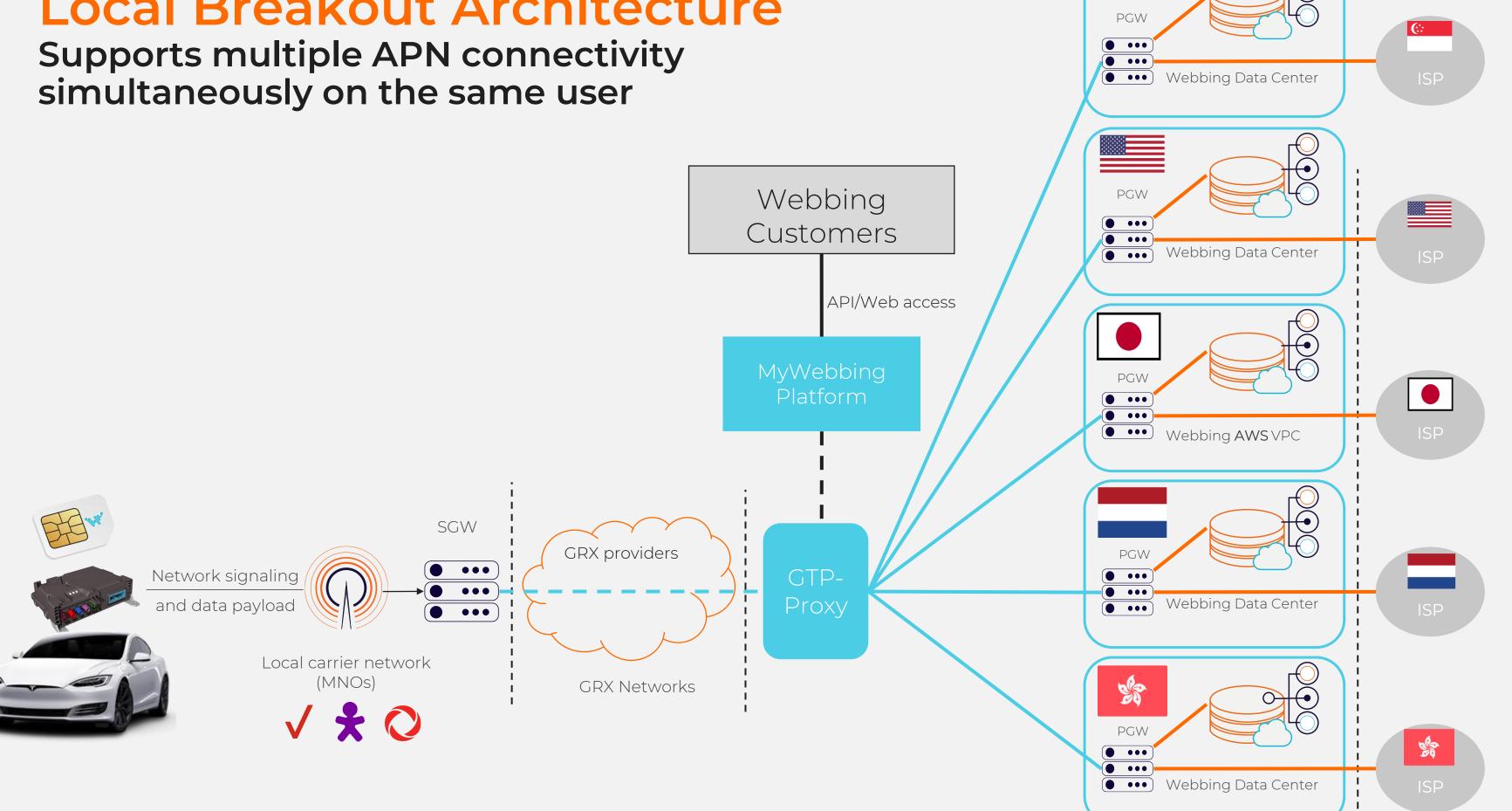
Management Platform for full connectivity lifecycle control



Compliance with connectivity regulations



Local Breakout Architecture





Types of Connectivity Regulations







Soft Localization



Full Localization



eCall (automotive)

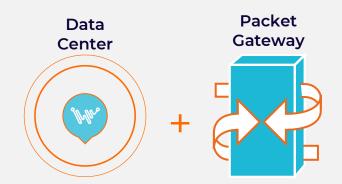


Full Compliance in Regulated Markets with Webbing

Global connectivity with the most advanced global network

IP Localization:

Local Data Center and Packet Gateway



Soft Localization:

Change between IMSIs



Full Localization:

Local Profile downloaded on eUICC SIM



eCall:

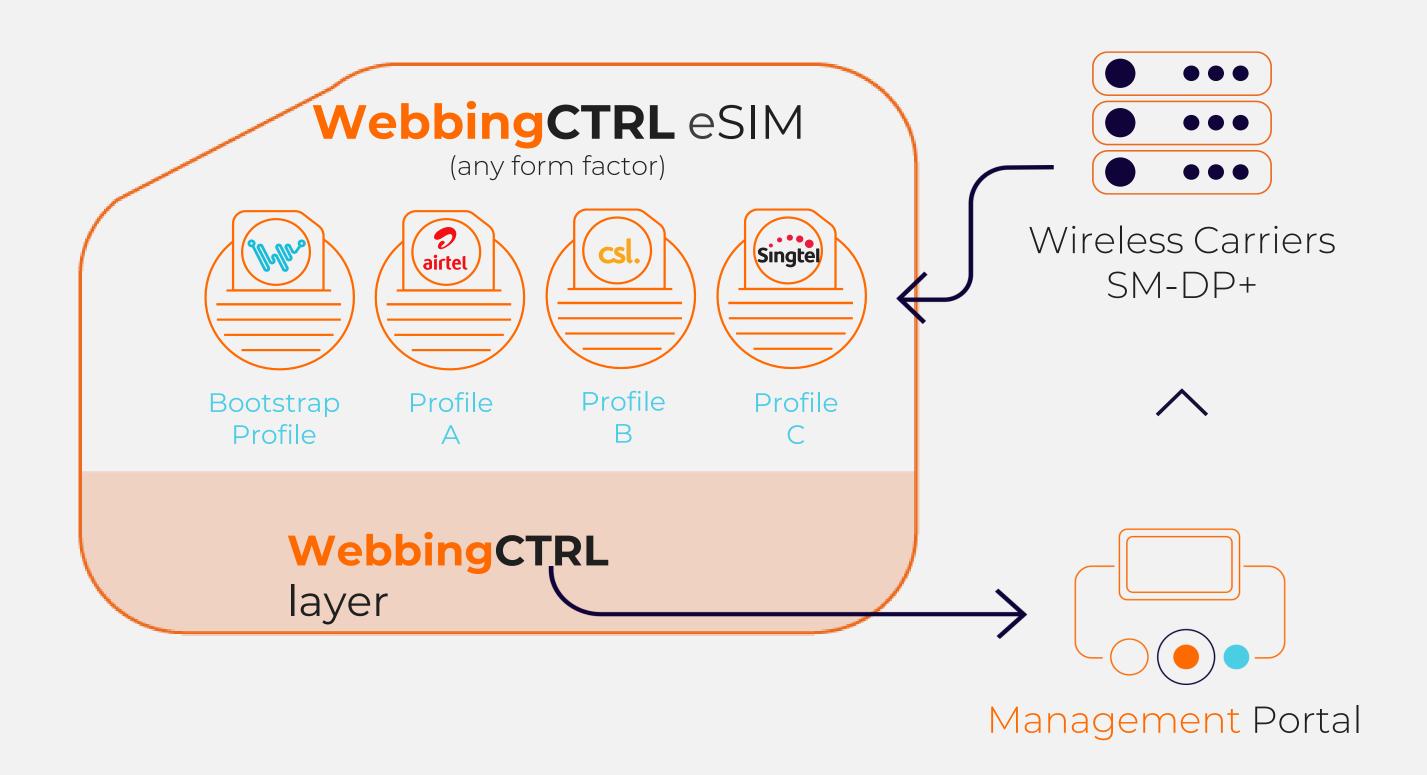
Designated profile for emergency calls





WebbingCTRL

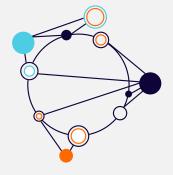
Game-Changing eSIM Technology fully aligned with SGP.32 IoT eSIM Standard





WebbingCTRL

Smart Connectivity for Enterprises



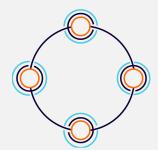
Control & Flexibility

- Remote profile management
- Backup & local profiles
- Secure by design



Single SKU

- Simple and efficient logistics
- o Easily scalable
- Cost effective



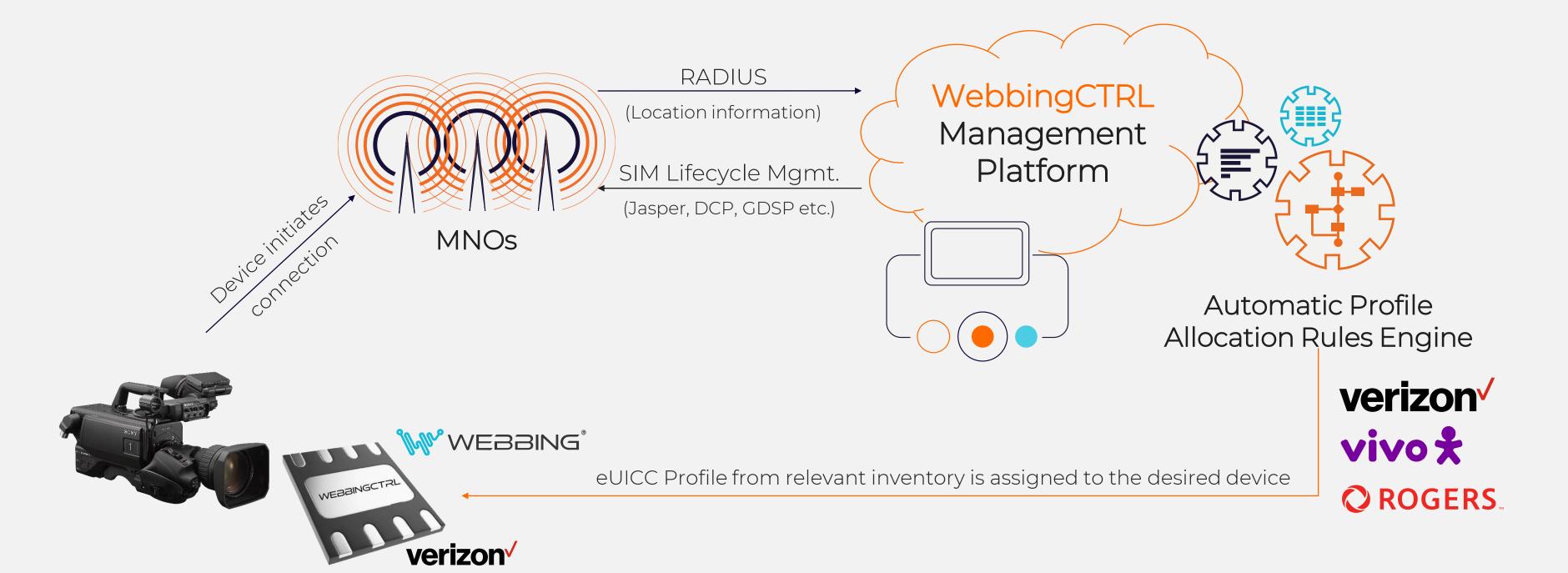
Business Continuity

- Quality and cost optimization
- True global
- Future ready



Automatic eSIM Profile Provisioning

Based on SGP 22/32





Continuous Data Connectivity with Webbing Solutions Layers of Redundancy and Automatic Failover

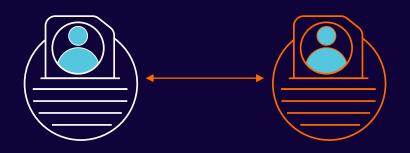
Layer 1: WebbingCNCT

Change between host networks (i.e. problem with antenna)



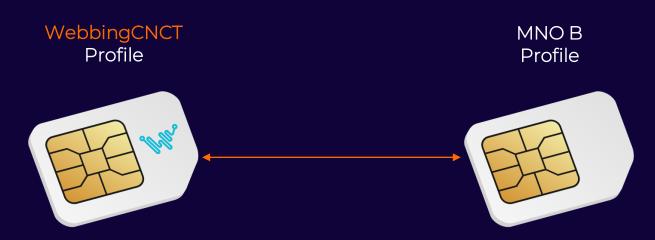
Layer 2: WebbingCNCT

Change between IMSIs (i.e. problem with the roaming agreement)



Layer 3: WebbingCTRL

Change between profiles (i.e. problem with the carrier technology)

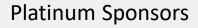






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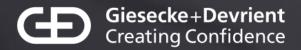
Membership

Technology & strategies to meet growing consumer expectations

MWC MVNO Summit Barcelona, 28th February 2024



Why are we all here?



It is all about *digitalisation* of our business

Physical to
Digital



1 billion

eSIM enabled
devices in field

overrideMimeType

readyState)

xTransport(function(b

alue:a.replac

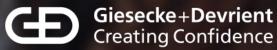


Meet your customers where *they* are



>80% of carriers see eSIM as an opportunity to deploy a customer friendly and digital user journey





That First Experience with your Brand





Customer will talk about it with their friends and family

Customer will likely forgive you if there's an issue down the line

Sets the scene for a long-term customer

You've lost them as a customer

You're likely to have lost them forever

(There's no manager in a retail outlet that can smooth things over)



Are you ready for eSIM?

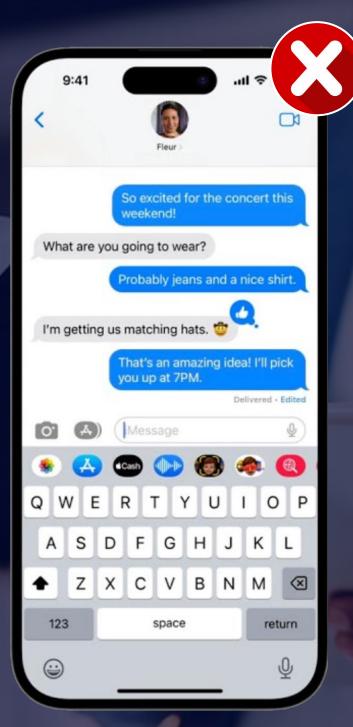




VolTE



Wi-Fi Calling



iMessage



Facetime







Facetime

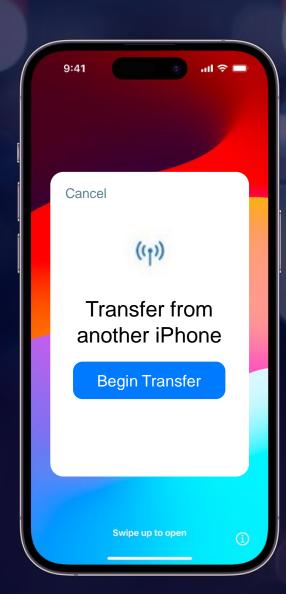
Entitlement Server



eSIM Quick Transfer (iOS)



Current iPhone



Latest iPhone

Different Scenarios:















eSIM Quick Transfer (iOS)



Current iPhone



Latest iPhone



Optimum transfer experience



Enhances carrier reputation



Retains customers



Important for 2024





AirOn360® ES



- The fastest and most affordable way to deploy entitlements today
- Now available to every MNO and MVNO no matter what size
- One solution for both iOS and Android
- Commercial model that removes all the risk and fits any budget

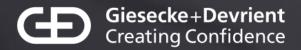
Come and chat with our G+D representatives over in Hall 7 to find out more



Digital connectivity onboarding of several devices



What are the key-take-aways?



Creating Confidence







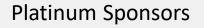






MVNO Summit

Virgin Media O2 Business







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A Private Network Revolution: Unleashing 5G for Smart Factories and beyond

Sandeep Raithatha Head of Strategy, Innovation & 5G IoT Virgin Media O2 Business

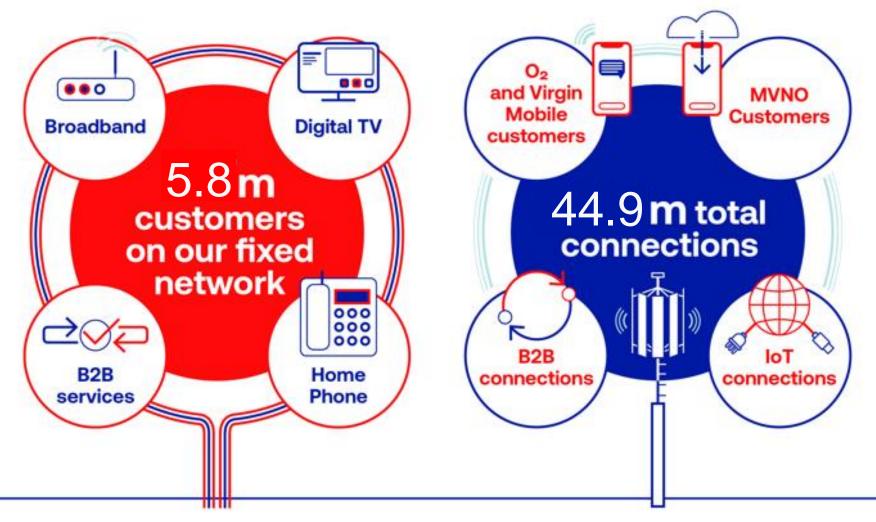


Virgin Media O2

Leaders in connectivity. Supercharging the UK.

We've combined the UK's favourite mobile network operator with a fixed line network that offers the nation's fastest widely-available speeds. All to bring you a truly supercharged network.

Powered by HFC (Hybrid Fibre Coaxial) using DOCSIS 2.0, 3.0 & 3.1 Fibre to the Premises uses XGS-PON technology.



Our Fixed Line Network:

- Carried just over a fifth of the UK's internet traffic in 2021
- Moves approx. 40% of the UK's mobile traffic via the backhaul network (this is how we move mobile traffic between cell sites and the core network)

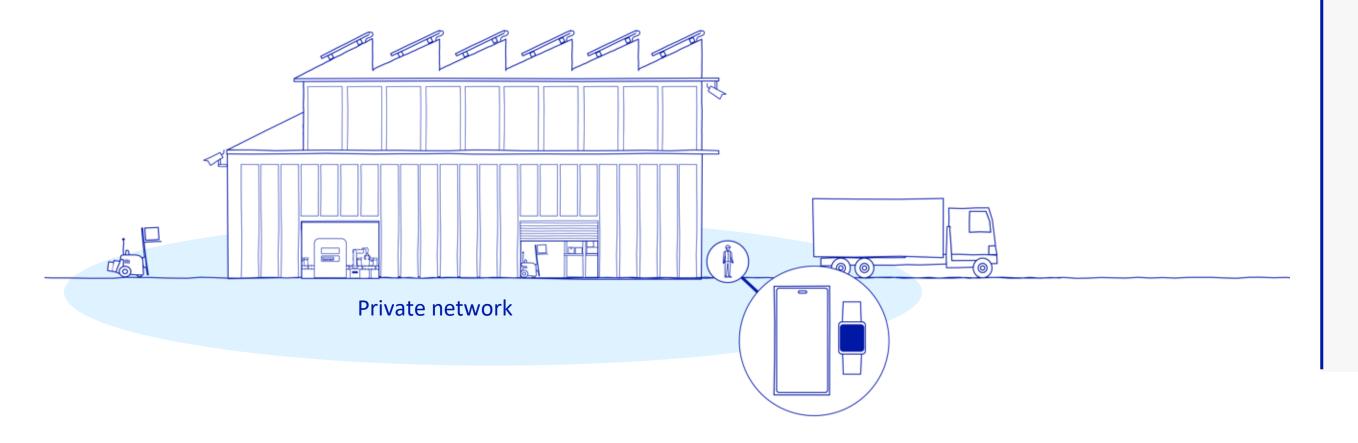
Our Mobile Network:

- Enables **116 billion** minutes of mobile calls each year, with demand for data growing by more than around **45%** annually
- 5G: 50% UK population coverage



5G private networks for digital transformation

The game-changing capabilities of 5G make digital transformation possible for industrial sites where it had been unfeasible before



Dedicated

Local network, dedicated resources, independently managed

Secure

Cellular grade security, sensitive data stays on-premise

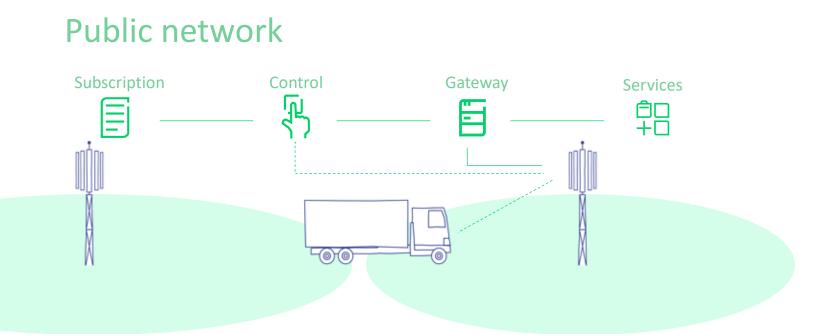
Optimised

Tailored performance for local applications, e.g. low latency, QoS

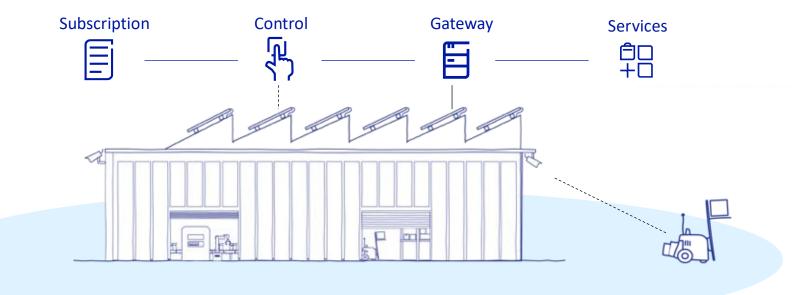


Private networks and public networks

Private networks are entirely self-contained and operated independently from public networks



Private network





Private Networks has the potential to transform entire sectors

Sectors such as Manufacturing, Transport, Logistics & Utilities have emerged as early adopter verticals despite macro-economic headwinds



Manufacturing



Utilities



Airports and Seaports



Major infrastructure projects



Oil, Gas and Energy companies



Defence



Logistics and Warehousing

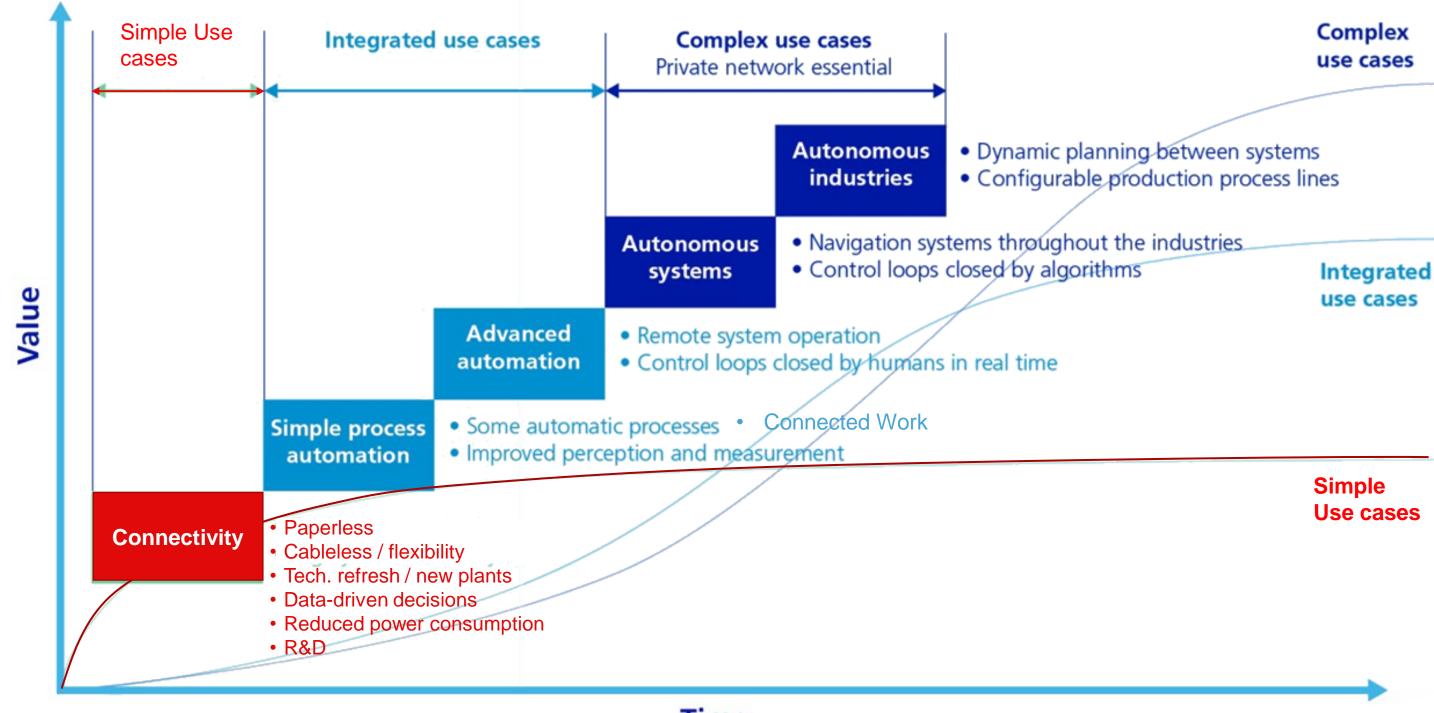


Healthcare



Digital Transformation Journey

Thinking beyond the tech to drive key outcomes and value





British Sugar



The UK's first multi-site private network

The problem

A lack of fast, site-wide connectivity was impacting productivity at British Sugar's main UK factories

The solution

Close cooperation between Virgin Media O₂ Business and British Sugar teams led to the design of a dedicated private network

The outcome

Improved health and safety and security, increased productivity and efficiency with a secure private network



"Previously we needed someone in the control room and someone who could walk around the site. Now we have one person who can walk around the site with the control room in their hands."

Paul Hitchcock, Head of Factory Organisation at British Sugar



British Sugar case study: Providing a dedicated 4G private network



South London and Maudsley NHS Foundation Trust



The UK's first 5G-connected hospital

The problem

The need to investigate efficiency, safety and security benefits of using smart, 5G-connected technologies in NHS hospitals

The solution

Use of smart, 5G-connected technologies in NHS hospitals – including IoT (Internet of Things), AR (Augmented Reality) and AI (Artificial Intelligence).

The outcome

Our Private 5G network reporting benefits of improved productivity & patient care with reliable connectivity



"We are proud to be partnering with Virgin Media O₂ Business to create the UK's first 5G-connected hospital, which enables us to use digital innovations to improve patient outcomes. This is a very exciting step forward."

Stuart MacLellan, Acting Chief Information Officer at SLAM





A slice of the action: the potential of 5G network slicing at Comic Con



Augmented reality e-sport, Hado, run on a dedicated slice on Virgin Media O2's 5G standalone network, which enabled remote play and live broadcasting.

The problem

The need to connect eSport competitors reliably in a congested venue with spectators also using the network whilst also broadcasting the game in high-quality

The solution

The dedicated network slice also provided a stable, secure and reliable communications platform that enabled the live broadcast of the games worldwide.

The outcome

Competitors taking part in the game at Comic Con were able to compete remotely and in real time against teams located in both the United States and South Korea



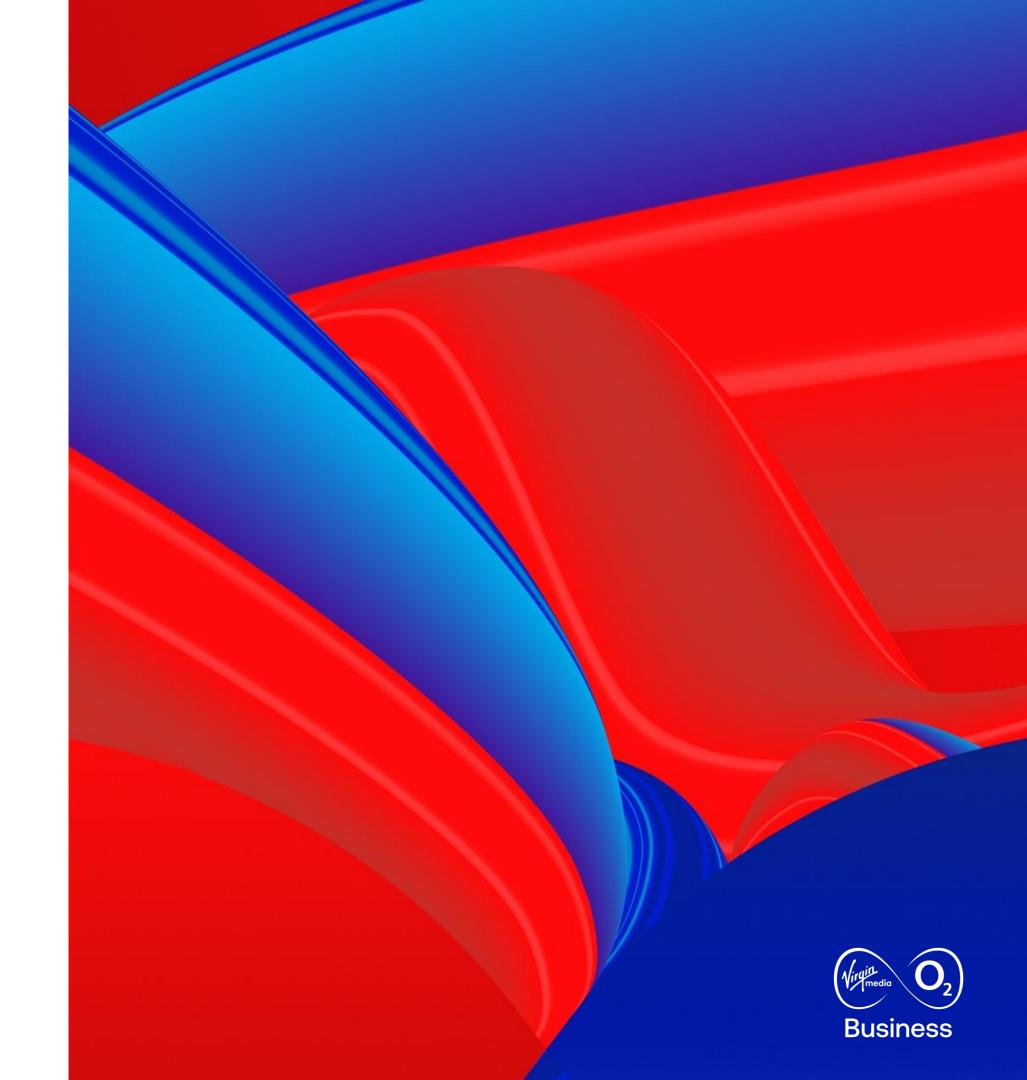
"5G standalone and network slicing will be game changers for the gaming industry. The ability to compete with people from all around the world and break down previous geographical limitations will have a real positive impact for Hado and other esports like it. It was particularly impressive that all of this was possible at a location as busy as Comic Con.."

Jim Sephton, Managing Director of Hado UK



Key Takeaways

- Private 5G has a key role to play in digital transformation for critical industries as seen in Manufacturing or Healthcare
- Think beyond the technology to get the most value, don't lose sight of the business objectives
- Need to demonstrate ROI for the technology and solution. It's important to measure before, during and after





Panel Session

The key ingredients required to successfully meet customer expectations



Danielle Rios Royston Acting CEO Totogi



David Clyde
Group Brand Director
Lebara



Galit Dan
VP Business
Amdocs ConnectX



Noam Lando Co-founder & CEO Webbing



Justin Reilly
Chief Executive Officer
Wavelo



Michelle Bugner Head of Wholesale Giesecke+Devrient



Rob Bennet
Senior Vice President, Retail Wireless
Technology
DISH



Sandeep Raithatha
Head of Strategy, Innovation & 5G IoT
Virgin Media O2 Business

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