

GSMA IoT Marketing Group Quarterly Update

23 September 2021

GSMA Antitrust Policy

- Anti-trust law prohibits (i) agreements (written or implicit) between competitors which may negatively impact consumers or competitors and (ii) sharing of confidential information
- All GSMA participants **must** abide by the following rules:
 - ✓ **DO** clearly identify the positive purpose of each project and follow it
 - ✓ **DO** consult with legal in areas where you are unsure
 - ✗ **DON'T** enter into agreements that restrict other parties' actions or creates barriers to market entry
 - ✗ **DON'T** discuss or exchange information on pricing, business plans, or any other confidential or commercially sensitive data



IoT Marketing Group

GSMA INTERNET OF THINGS 3



AT&T



中国移动
China Mobile



COMPRION



Dialog



EMnify



ERICSSON

Fibocom



Giesecke+Devrient
Creating Confidence



HUAWEI



NOKIA



Qualcomm



smartfren.

SONY



TRUSTONIC



verizon



AGENDA



Networks Marketing Group

An Overview



Andrew Milne, Senior Marketing Manager, GS

Networks Marketing Group

- **Operator Platform Group (OPG)**

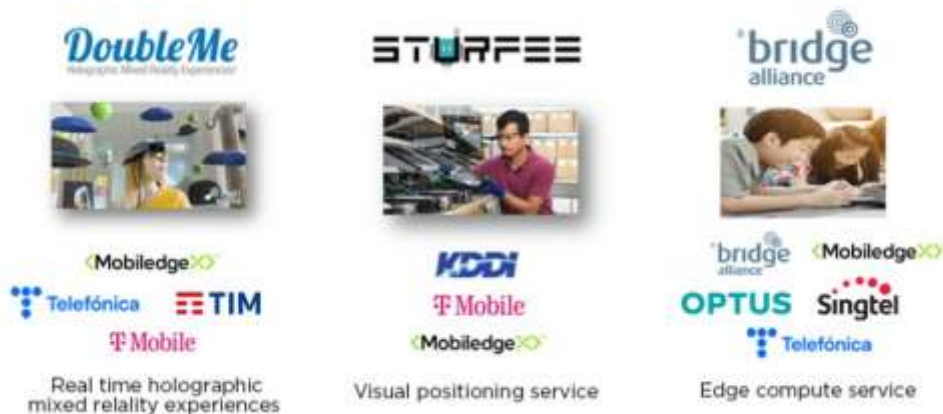
- The OPG brings together operators, platform developers, edge cloud providers, Standards Developing Organisations (SDOs), Open Source Projects and more to collaboratively work on solutions for developers of products and services globally.
- The OP defines a common platform exposing operator services/capabilities to customers/developers in the 5G-era in a connect once, connect to many models. The first phase of the platform focuses on Edge which will be expanded in future phases with other capabilities such as connectivity, slicing and IPComms.
- The Operator Platform Group is currently made up of **over 40 of the world's leading operators and over 25 key ecosystem partners** and is focused on developing requirements to deliver a common solution to the ecosystem.

[More Information](#)



Networks Marketing Group

- **Telco Edge Cloud**
- The Telco Edge Cloud (TEC) Pre-Commercial Trials Foundry project aims to bring the industry together to collaborate around a number of pre-commercial trials of Telco Edge Cloud capabilities with app developers and service providers sponsored by the industry partners and supported by MNOs.
- We want to find beacon use cases that are best served by TEC and share the learnings from the trials with the TEC community via the GSMA TEC Forum.



[More Information](#)

Opportunities

- **Key inputs into our Network Marketing Activities including:**

- Activities at MWC such as Seminars, Partner Summits, Demo Showcases and more
- Regional, targeted activities at M360's globally including speaking opportunities
- Bespoke Webinar opportunities (e.g. 5G Live)
- Attend future Networks Marketing Group meetings to discover the latest opportunities

- **Your Organisation's participation in our Technical working groups**

- Input into existing groups (OPG / TEC), or future activities such as Open Source, Network Slicing, IPComms
- Drive the messages – e.g. Partner Blogs / Videos / Interviews on gsma.com
- Discuss getting involved in trials or other key activities with our existing groups

For more information or to get involved in these activities, please email [Andrew Milne](#) (Snr. Marketing Manager | Networks, Security & Identity)



SMART MOBILITY

Connecting People, Vehicles & Transport

Jacqueline Lynes, IoT Marketing Manager, GSMA

Vertical Proposition Work

Introduction

- Better understand existing verticals by looking at their value chains
- Use Automotive to test new methodology

Purpose

- Identify where the GSMA currently adds value
- Identify future opportunities for the GSMA
- Build an action plan to better align GSMA teams for vertical value chains

Smart Mobility – Scope & Definition

Focused on **connecting vehicles and their surroundings in the automotive and public transport industries**, helping to create more efficient and more convenient travel experiences across road and public transport networks.

- Includes

- Connected vehicles as a means of transport for people, e.g. cars, vans, motorbikes, bicycles, scooters, busses, trains, taxis
- Connected vehicle surroundings: vulnerable road users and smart roadside infrastructure, e.g. pedestrians, cyclists, traffic lights, speed signs, toll stations

- Excludes

- Means of transport in the naval and aviation industries, e.g. boats, ships, planes, drones

Six Value Chains

Personal Mobility

Individual travel, incl. owned, rented, leased vehicle experience and all associated services, e.g. journey planning, navigation, entertainment, ADAS, GLOSA, VRU safety applications. Vehicles include e.g. cars, vans, motorbikes, bicycles, scooters.

Shared Mobility

Travel experience shared with other people, vehicles include e.g. car pooling, busses, trains. Also includes services such as ticketing, journey planning, navigation and vehicle-specific services such as GLOSA, ADAS, entertainment, infotainment.

Vehicle Manufacturing

The manufacturing of vehicles in factory plants, including the use of private networks. Includes both hardware and software vehicle production. (Positive overlap with manufacturing vertical)

Six Value Chains

Vehicle Lifecycle

From point of sale to end of lifetime, including sales/renting/leasing, insurance and maintenance (hardware, e.g. repairs, MOT; and software, e.g. OTA firmware and security). Includes all vehicles, e.g. cars, busses, trains, bikes.

Fleet Management

The management and coordination of a pool of vehicles, e.g. cars, delivery vans, bikes, scooters and autonomous vehicles, e.g. robo-taxis, robo-shuttles.

Public Access

Public access management, including tax, tolling, road network infrastructure, railway infrastructure, legal requirements/law, parking, EV charging infrastructure, smart motorways.

Mobile Opportunities

Key: **RED** = current GSMA

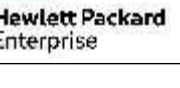
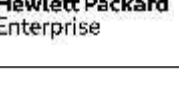
Personal Mobility	Shared Mobility	Vehicle Production	Vehicle Lifecycle	Fleet Management	Public Access
eCall	eCall	eCall		eCall	
Navigation	Navigation	Navigation	Navigation	Navigation	Navigation
In-vehicle experience	In-vehicle experience	In-vehicle experience	In-vehicle experience		
Network reselection	Network reselection	Network reselection			
Autonomous vehicles	Autonomous vehicles	Autonomous vehicles	Autonomous vehicles	Autonomous vehicles	
Electric Vehicles	Electric Vehicles	Electric Vehicles		Electric vehicles	Electric Vehicles
In-vehicle Wi-Fi	In-vehicle Wi-Fi	In-vehicle Wi-Fi			
Traffic prioritisation	Traffic prioritisation				
	Mobility services				
		Private Networks			
				Asset tracking	

Horizontal Enablers						
Security	C-V2X	eSIM	Identity	Roaming	Spectrum	Coverage
MEC	QoS	Precise Positioning	Network Slicing	Network Settings	Device Information	

Current GSMA Activities

		Regulatory	Technology	Events
Vertical-specific projects	2G/3G Sunset (eCall)	X	X	
	C-V2X	X	X	X
	Identity		X	
	Network Reselection (NRI)		X	
	Network Slicing		X	
Generic projects relevant for, but not specific to the vertical	Security		X	
	eSIM		X	X
	Private Networks		X	X
	Roaming	X	X	
	Spectrum	X		
	MEC/edge capabilities		X	X
	Network Settings		X	
	Device Information		X	

Industry Support: Snapshot

2/3G Sunset (eCall)	        SoftBank
C-V2X	      
Identity	          
Network Reselection (NRI)	      
Network Slicing	      
Security	        
eSIM	          
Private Networks	         
Roaming	       
Spectrum	        
MEC/edge capabilities	        

Next Steps (Not exhaustive)

- Change Automotive vertical label to Smart Mobility
- Communicate ‘whole story’ of GSMA current value
- Membership, event, and technology enablement
- Establish internal cross-functional collaborative GSMA Smart Mobility team
- Build lists by value chain to identify current members and prospects for future promotion & engagement of Smart Mobility
- Orientate GSMA activities around specific value chains & horizontal activities
- Identify gaps & opportunities for GSMA activity in Smart Mobility – deliver these change projects using the GSMA Foundry & Technology team
- Develop value chain blueprint approach for other GSMA vertical projects



Does this approach align with your understanding of 'Smart Mobility'?



CONNECTED IMPACT

27 June - 1 July 2021



IoT Activities @ MWC Barcelona 2021

Mobile IoT Summit

19

Speakers

15

Partner
Organisations

Live Attendance

90 Physical | 230 Online



5G IoT for Industry 4.0



Transforming Automotive & Mobility with 5G



Industrial Applications for Mobile-Enabled Drones





APAC Connected Drone Workshop

Integration of Mobile, Aviation and Drone Industries

Thursday, 19 August 2021

In conjunction with:



Speakers

- Aerodyne Group
- CAAM (Civil Aviation Authority of Malaysia)
- CASA (Civil Aviation Safety Authority)
- DRZ Iskandar
- Garuda Robotics
- IMDA (Infocomm Media Development Authority)
- OneSky
- StratAero Malaysia (SAM)
- Telstra
- GSMA

Jointly Organised by:

ISKANDAR NEXT
NEW TECHNOLOGY EXPERIENCE TALENT

GSMA

ISKANDAR INVESTMENT
Digital & Growth

APAC Connected Drone Workshop
INTEGRATION OF MOBILE, AVIATION AND DRONE INDUSTRIES

19 August 2021

Scan Here To Register

MEET OUR SPEAKERS

 Zulfiqar Zainuddin	 Julian Gorman	 Barbara Pareglio	 Dato' Sri Azharuddin Abdul Rahman	 Jilin Joo Ong	 Kamarul A Muhamed	
 Jeanette Whyte	 Chris Kucera	 Peter Jones	 Illyaqila Fateen Ismail	 Muhammad Fadillah Rosli	 Cheong Hai Thoo	 Heath Macdonald

DRZ ISKANDAR
DRONE & ROBOTICS ZONE

In Conjunction with:

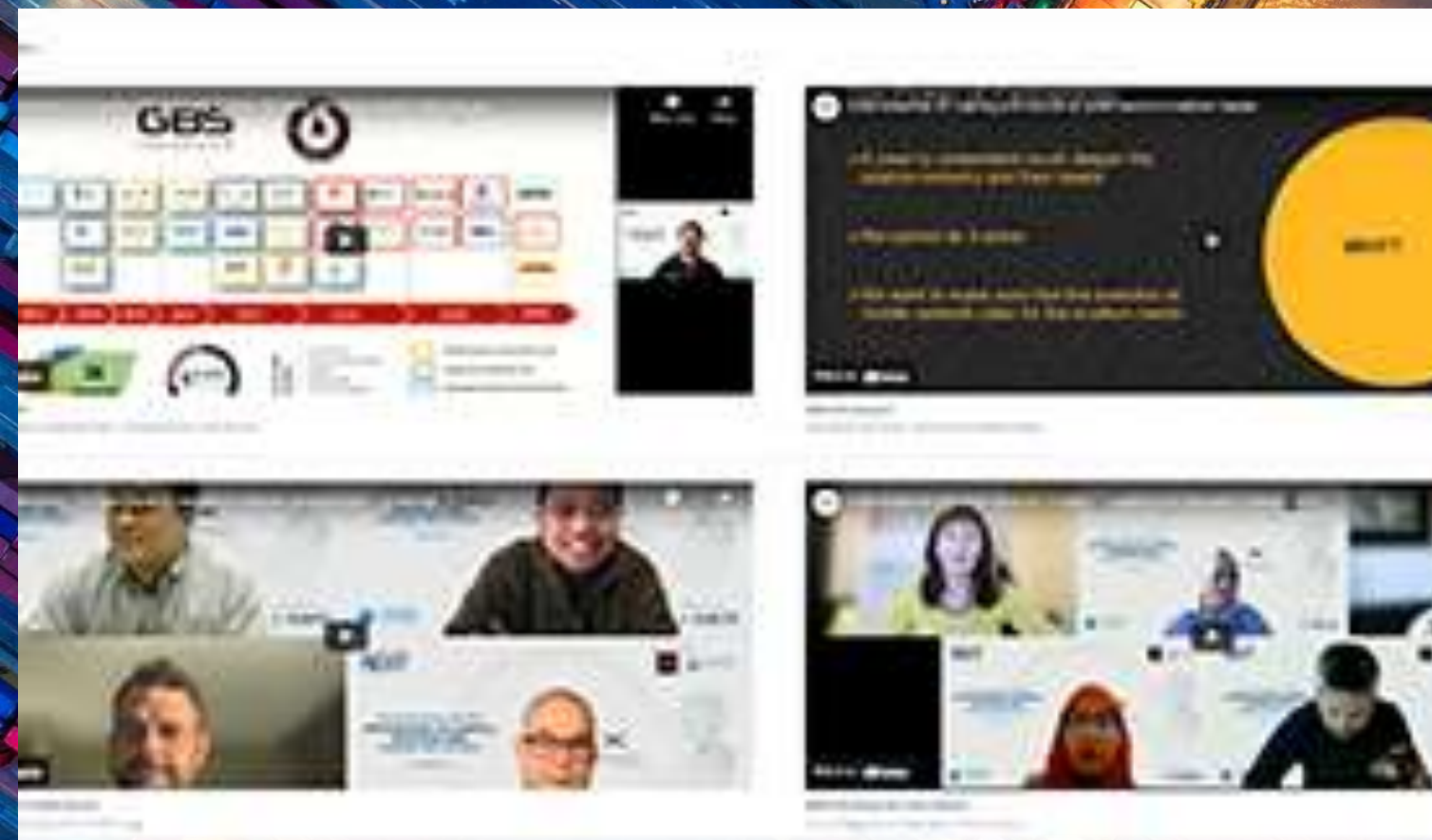
IGNITE
DIGITAL INNOVATION ECOSYSTEM FOR GROWTH & EMPLOYMENT

APAC Connected Drone Workshop Audience

- 376 Registered
- 218 Attended
- APAC: 92.5%
- Europe: 4.5%
- North America: 2%
- MENA: 0.5%
- LATAM: 0.25%
- Sub-saharan Africa: 0.25%



APAC Connected Drone Workshop – On Demand



Video recording on demand:

www.gsma.com/iot/iot-Blog:

www.gsma.com/iot/news/

Get involved:

www.gsma.com/drones



Mobile360

Asia Pacific

October 2021

<https://www.mobile360series.com/apac/>

#MOBILE360

Driving Business Success in Digital Transformation in APAC

‘Digital Enterprises’ IoT Session

- Fireside Chat: **How private, public and hybrid networks meet the enterprise IoT requirements**
 - Jo Gilbert, Technical Director & Manufacturing lead, **GSMA**
 - Paul Hodges, Senior Vice President, Asia Pacific, **Syniverse Technologies**
- Panel: **How MNOs enhance their IoT offerings to drive enterprise adoption?**
 - *Moderator:* David Turkington, Head of Technology APAC, **GSMA**
 - Charles Ridler, Head of IoT Business Development, **Telstra**
 - Christopher Soon, Head Enterprise Solutions (5G & IOT), **Celcom Axiata**
 - Johnson Chang, EVP of Mobile IoT Turnkey Solution in Transportation, **Nietzsche Enterprise (NHR)**
 - Kai Li, Chief Product Officer, **China Unicom Internet of Things Company**
 - Kathiravan Kandasamy, Senior Product Management Director, **Syniverse Technologies**
 - Dr. Reduan Hasan Khan, Head of B2B Products, **dtac (Telenor Group)**

https://www.gsma.com/iot/gsma_events/m360-apac-enterprise/

5G IoT Industry Community Summit

- **A community ecosystem empowering collaboration for joint success**
 - APAC 5G Industry Community – Julian Gorman, Head of APAC, **GSMA**
 - Keynote: 5G lights up Thailand’s Digital Future – Dr Supakorn Siddhichai, Executive VP, **Digital Economy Promotion Agency (DEPA)**
- **Realising how 5G create values for industries**
 - Keynote: 5G empower digitalisation and create new intelligent manufacturing – Asnee Wipatawate, Head of Enterprise Telecom Technology Product Department, **AIS**
 - Panel: Smart Manufacturing in ASEAN – **GSMA, Telkomsel, Globe Telecom**
 - Keynote: Learning from a real 5G hospital deployment – Michael Fung, CIO, **CUHK Medical Centre**
 - Panel: 5G + Edge-Cloud + AI enable smart healthcare in the post-epidemic era – **KPMG, Huawei, HKT, CUHK Medical Centre**
 - Keynote: How can MNOs and industries embrace digital transformation for sustainability – Martin Creaner, Head of SPO Lab, **Huawei**

https://www.gsma.com/iot/gsma_events/m360apac-2021-industry-summit/

The Connected Skies – Where are the Commercial Opportunities?

- Host: Barbara Pareglio, Executive Director, GSMA
- Panel: GVLOS – The Benefits, Challenges & Commercial Opportunities
 - Moderator: Thomas Neubauer, Vice President of Innovations, TEOCO
 - Amit Ganjoo, Founder & CEO, ANRA Technologies
 - Jiin Joo Ong, Chief Technology Officer & Co-Founder, Garuda Robotics
 - Dato' Lester Tay Kean Boon, CEO, Strat Aero Malaysia
- Rea Life Case Studies
 - Michael Currie, Founder & CEO, Fling
 - Yun Yuan Tay, Head of Asia Pacific, Skyports



https://www.gsma.com/iot/gsma_events/gsma-mobile-360-apac-seminar-the-connected-skies-where-are-the-commercial-opportunities/

ATTEND

CONFERENCE

EXHIBITION

SPONSORS & PARTNERS

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REGISTER

MWC Los Angeles 2021

North America's most innovative technology event

Los Angeles Convention Center

Los Angeles, California

October 26 - 28, 2021

MWC Los Angeles, in partnership with CTIA, gathers U.S. policymakers and key wireless industry stakeholders to discuss trends and developments in government and public policy – as well as exploring our theme **Connected Impact**. This year we discover the technology that's shaping our world: **The 5G Era, IoT Connectivity, Telco Cloud and Disruptive Innovation**.

Some key IoT sessions – Securing IoT Connectivity, IoT in Healthcare, eSIM and Edge

<https://www.mwclosangeles.com/>



MWVTM

Barcelona

28 February – 03 March 2022

Overview of IoT Activities Being Planned

- Mobile IoT Summit – 5G Opportunities
- Highway to 5G – Smart Mobility Experience
- Vertical Focus – Automotive/Smart Mobility, Aviation/Drones, FinTech & Manufacturing
- Technology Showcase including IoT demos, GSMA Foundry & Theatre
- Seminars & Workshops including eSIM, FinTech, Identity, Security, Verticals (Automotive/Aviation/Manufacturing) and key 5G Technologies
- **Plus more...**



MWC Barcelona

28 February – 3 March 2022

GSMA HIGHWAY TO 5G

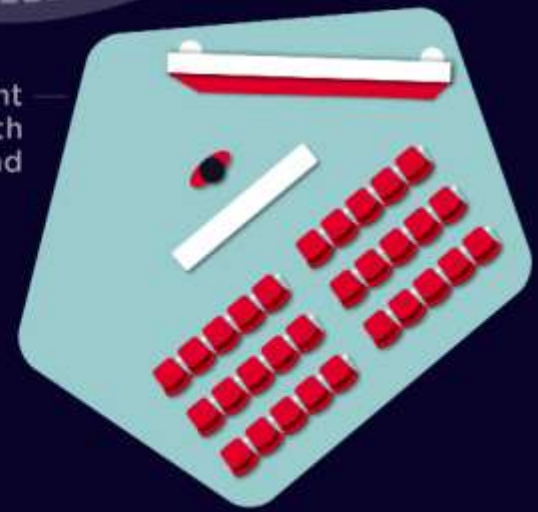
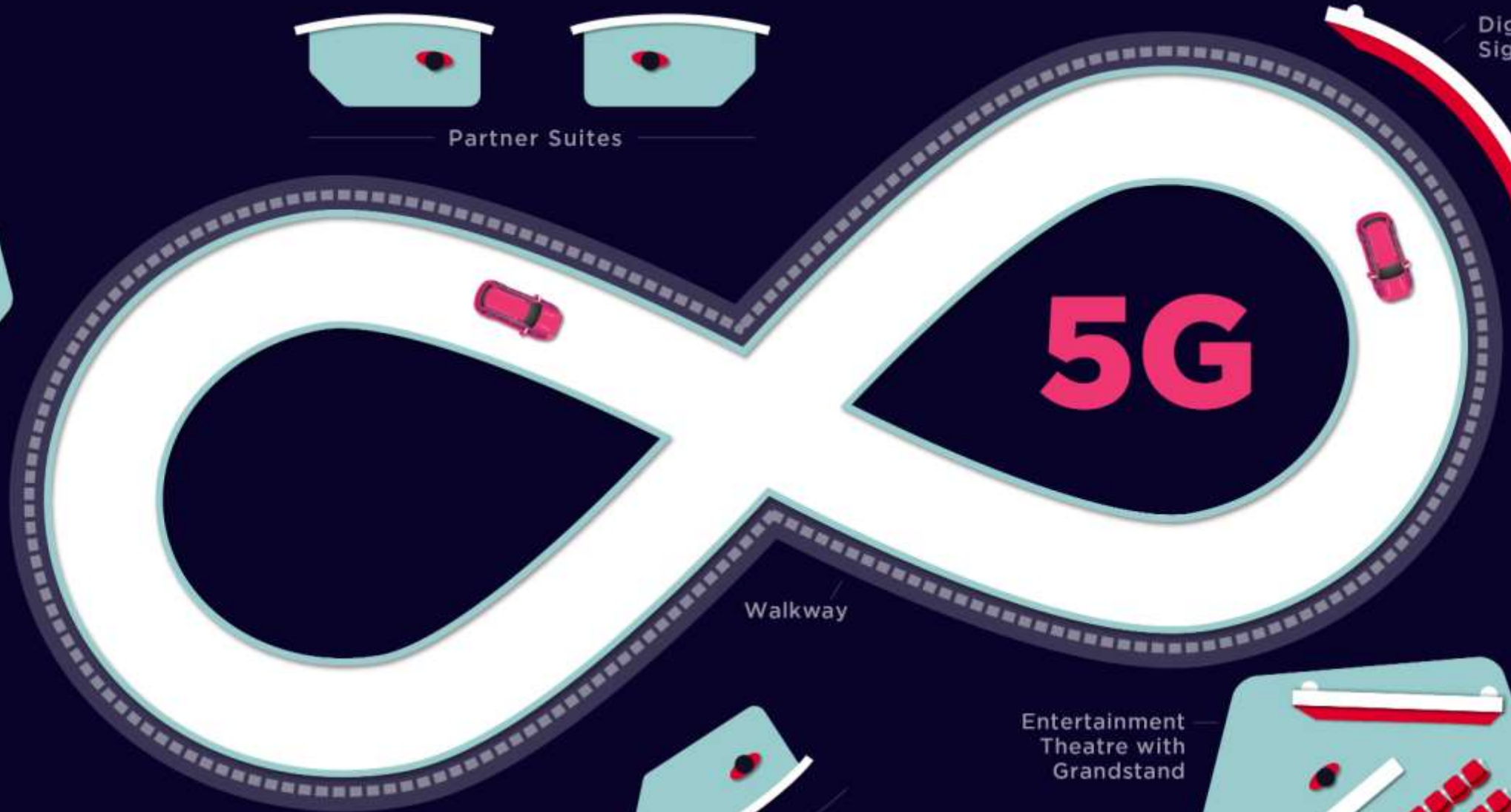
Experience the Future of Smart Mobility

For more information contact Jacqui Lynes jlynes@gsma.com

GSMA HIGHWAY TO 5G

THE HIGHWAY TO A SAFER, GREENER AND MORE EFFICIENT FUTURE

- The **first ever** large-scale live driving track with entertainment theatre at MWC Barcelona
- Approx. **600m²** in-demand outdoors space for a safe, socially-distanced experience
- Experience **Sponsor** and part of a leading technology partner collective
- A powerful consortium of technology leaders for **exponential reach, awareness & exposure**
- GSMA as experienced partner to ensure successful **multi-partner experiential live demonstration zone**
- **Unparalleled exposure** to 109,000+ industry delegates*
- **Exceptional Tier 1 media presence**: Coverage reach to a potential audience of over 3.8 billion globally**





Example Scenarios

Focusing on innovative mobility services and connected and automated driving solutions, the experiential driving track highlights how connectivity creates safer roads, more efficient driving and more convenient travelling experiences for the urban citizen.

The Highway to 5G brings to life the opportunities of today and the possibilities of tomorrow.

Advanced Mobile Features and Cellular Capabilities

- New software-based vehicle architecture / applications
- Infotainment and smart navigation services, e.g. connected parking, e-charging station info, real-time traffic info, points of interest, vehicle status & diagnostics
- ADAS, incl. V2V & V2I functionalities, e.g. GLOSA, collision warning, emergency breaking warning
- Entertainment, e.g. music-on-demand, Apple CarPlay, Android Auto, voice control, personal assistant, concierge services

Advanced Safety and Value with 5G C-V2X

- Protecting cyclists on busy streets
- Protecting passengers getting off busses
- Protecting pedestrians at intersections / pedestrian crossings
- Enabling fast passing through of emergency services
- Micro-mobility or shared mobility services
- MEC and low latency



Mobile IoT Summit @ MWC Barcelona 2022

- Fully integrated into MWC21 main conference
- Number of Seats: target at least 200 to 250 – subject to health & safety protocol
- Prioritise in-person experience
- Open to ALL pass types
- Suggested topics:
 - 5G & Mobile IoT Roaming
 - 5G IoT End-to-End Journey
 - 2G/3G Sunsetting
 - Energy Efficiency in IoT Devices
 - IoT SAFE
 - eSIM
 - Private (Non-Public) Networks





GSMA Mobile FinTech

We are focusing on the financial services vertical and the mobile eco-system. Looking at **MNO FinTech Partner Engagement** and **establish a Mobile FinTech Community** to tackle fraud and improve customer experience whilst generating new revenues for MNOs.

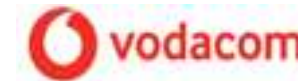
Driving non-core revenue growth from entering the FS vertical is a critical component of MNOs strategy across the globe *(including 70% of GSMA board)*.



Grab-Singtel venture files for Malaysian digital bank license



Russia's MTS Bank considering 2022 IPO,



Docomo, MUFG Bank plan tie-up on financial products



Reliance Industries to expand its financial services offerings



Orange Bank expands further with the acquisition of Anytime, a neobank dedicated to independent professionals, small businesses and associations



América Móvil launches credit in Brazil as 'fintelco' market heats up



KT issues \$2 billion digital currency as telecoms firms eye payments



Telenor Microfinance Bank joins new global coalition to reach one billion people and drive green actions



VEON and Mastercard enter into global partnership to boost digital financial services



Telecom Italia exploring Brazil financial service move



Telefónica boosts Movistar Money with higher loans and lower rates



Dialog Axiata's Genie payments platform transactions top LKR 10 billion



BBVA and Telefónica create a joint venture to offer consumer loans in Colombia



Airtel Africa receives \$100M for its mobile money business from Mastercard



Mastercard & MTN empower millions of consumers in Africa to make payments on global platforms, advancing digital financial inclusion



Showcase the latest
MNOs providing
FinTech Propositions

Explore solution
providers and
services that are
helping to prevent
fraud

Present FinTech &
MNO investments/
collaborations

Our MWC22 Fintech Topic Areas:

Voice & SMS Phishing

MNO FinTech
Strategy

Digital Identity
Solutions

Innovation - NFTs
and Metaverse

Digital currency and
crypto

Blockchain
Innovation/
enterprise props

Mobile commerce
trends (payments)

Share your FinTech propositions | Keynote speaker | Use case
Email - Kiran Bachra, Marketing Manager kbachra@gsma.com

More info: <https://www.gsma.com/identity/financial-services>



GLOMO Awards

NOW OPEN FOR SUBMISSIONS



- The Global Mobile (GLOMO) Awards is the mobile industry's most prestigious accolade. For 27 years, we've championed and celebrated those who have transformed how people, communities and businesses interact in a digital first world. This year, the #GLOMOAwards feature **24 awards under seven categories**.
- Check out the full 2022 GLOMO categories and awards: <https://www.mwcbarcelona.com/mobile-awards>
- Milestones:
 - Deadline for Entries: Wednesday 17 November 2021
 - Nominees Announcement: Late January 2022
 - Award Ceremony (virtual): MWC Barcelona 28 February – 3 March 2022
- Apply NOW: <https://www.mwcbarcelona.com/mobile-awards/2021-categories-and-awards>
- Enquiries: awards@mwcbarcelona.com



GSMA Foundry

Go-to place for **cross-industry collaboration** and business development, where GSMA members and industry players come together to rapidly develop **real-world solutions** to industry challenges, nurture new ideas through initial commercial trials and scale proven solutions at a regional and global level.

INFLUENCE

Collaboration to promote the benefits of mobile enablers and drive global adoption

FORCE

Bringing companies together to create innovative solutions & business opportunities to a specific challenge or industry issue

NURTURE

Enabling innovators to develop their ideas and generate proof points through in-market commercial trials

ACCELERATE

Scaling proven solutions in partnership with Operators and key Industry Partners



Cross-industry collaboration

- Small groups of committed companies
- Multi-disciplinary teams



Independent

- Self-governed
- Self-funded and resourced (budget, infrastructure, headcount)
- + GSMA technical/legal/regulatory expertise

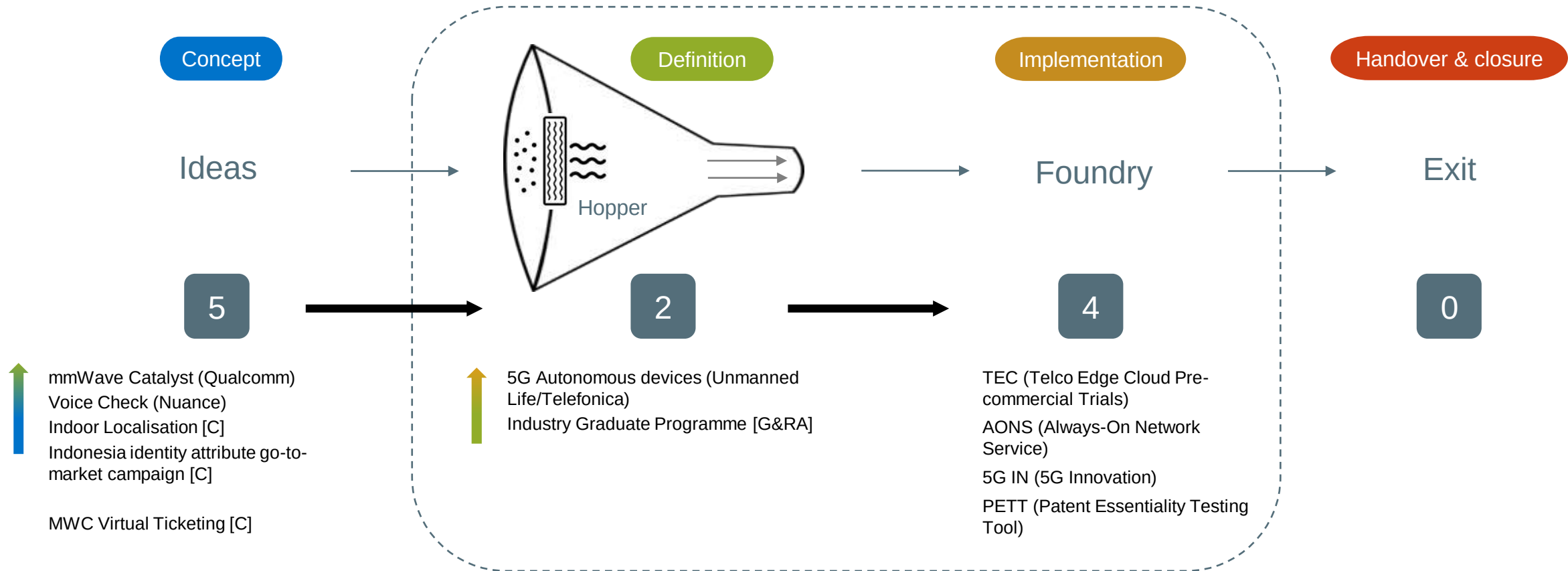


Agile & flexible

- Collaborative and agile way of working
- Ability to pivot and fail fast
- Outcome focused



Foundry pipeline



Resources





Title	Technology Area	Asset Type	Link
<i>APAC 5G IoT Manufacturing Whitepaper (Nov/Dec 21)</i>	Manufacturing	Report	TBA
<i>Industry deepens alignment on security for 5G era and remains 'laser-focused' on business needs (Oct 21)</i>	Mobile IoT	Blog	TBA
<i>On-Demand IoT WebTalk: Enabling 5G Autonomous Robots in the Factory (Sep 21)</i>	Manufacturing	Video	TBA
Mobile Networks for Industry 4.0	Manufacturing	Web	Here
Mobile IoT (LPWA) Roaming	Mobile IoT	Web	Here
Mobile and aviation industries take collaborative steps as commercial drones market set for massive growth (Sep 21)	Aviation	Blog	Here
5G IoT is winning the trust of manufacturers – from now it's all about efficiency (Aug 21)	Manufacturing	Blog	Here
On-Demand: APAC Connected Drones Workshop – Integration of Mobile, Aviation and Drone Industries (Aug 21)	Aviation	Video	Here
Mobile industry prepares for new phase of intelligent transportation networks following alignment at MWC Barcelona (Aug 2021)	Automotive	Blog	Here
The Role of Mobile Network Operators in an Urban Air Mobility (UAM) Ecosystem (Jul 21)	Aviation	Report	Here
On-Demand: Mobile IoT Summit at MWC Barcelona 2021 (Jul 21)	Mobile IoT	Video	Here
Safety first: a glimpse into the future of cellular drones from MWC21 Barcelona (Jul 21)	Aviation	Blog	Here
On-Demand: 5G IoT for Industry 4.0 at MWC Barcelona 2021 (Jul 21)	Manufacturing	Video	Here
On-Demand: Transforming Automotive and Mobility with 5G at MWC Barcelona 2021 (Jul 21)	Automotive	Video	Here
On-Demand: Industrial Applications for Mobile-Enabled Drones (Jul 21)	Aviation	Video	Here
IoT SAFE: Robust IoT Security at Scale (Jun 21)	IoT Security	Report	Here
Automotive Identity High Level Description (Jun 21)	Automotive	Report	Here



IoT Industry Resource Libraries

GSMA INTERNET OF THINGS 43

Mobile IoT

5G IoT for Manufacturing

Automotive & Mobility

Connectivity for Aviation



<https://www.gsma.com/iot/mobile-iot-resources/>

Submit Your Contents



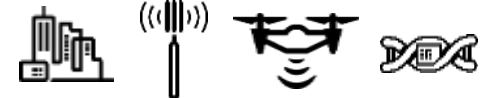
<https://www.gsma.com/iot/manufacturing/resources/>

Submit Your Contents



<https://www.gsma.com/iot/automotive-mobility-resources/>

Submit Your Contents



<https://www.gsma.com/iot/connectivity-for-aviation-resources/>

Submit Your Contents



THANK YOU!

GSMA IoT

<https://www.gsma.com/iot/>

GSMA Twitter

<https://twitter.com/GSMA>

GSMA IoT on LinkedIn

<http://gsma.at/iot>

GSMA IoT YouTube Playlist

<https://gsma.at/iotplaylist>

GSMA IoT Newsletter

<https://www.gsma.com/iot/newsletter/>

IoT Marketing Group Meeting Archive

<https://www.gsma.com/iot/iot-marketing-group/meetings/>