



GSMA IoT Marketing Group Quarterly Update

10 June 2021

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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



AGENDA





5G IoT Strategy Group – Mobile IoT Workstreams



5G IoT Strategy Group

Chair

Wayne Law

Senior Technology Specialist



Vice Chair

Nicolas Damour

Director of Technology Partnership





5G IoT Strategy Group Charter

- The 5G IoT Strategy Group evolved from the previous “Mobile IoT Forum” & “Tech Enablers” groups
- Aim of promoting IoT technology/capabilities and accelerating the adoption of 5G IoT solutions.
- The group works across horizontal enablers and looks for attributes that will feed into specified industry verticals (Utilities, Manufacturing etc.)
- This is a **Strategic Steering Group** with limited numbers that will be able to propose new IoT Projects in the future or pick up projects from GSMA Foundry
- Represents a move away from large and drawn-out programs of work to dynamically established, small and fast-paced strategy groups

What have we done so far ?

- **Coverage**

- Revised global coverage map
- Introduced links to localised coverage

- **Roaming**

- IoT application works at home but what about when roaming
- Upgrades to IR.21
- Opportunity for MNOs to document key parameters in IR.21
- Looking at ways to make those parameters more public

- **Energy**

- Some IoT business cases depend on 10-15 year battery life
- Quantify energy performance of devices
- Finalising scope and documenting test plan

- **2G/3G shutdown**

- Some MNOs have 2G, 3G, 4G & 5G networks
- There is a need to shutdown legacy networks
- What are the blockers to network shutdown? (Voice, SMS, eCall)?
- Develop strategies to ease the closure of legacy networks.

Where to next?

- Pick up projects from GSMA Foundry
- Refresh previous work
 - Connection Efficiency guidelines
 - IoT Deployment guidelines
 - IoT Security guidelines
- Other member initiatives
- Widen active participation





Any questions?

The background consists of flowing, wavy lines in shades of blue and purple. In the center, there is a complex, starburst-like graphic made of overlapping, semi-transparent shapes in various colors, including red, blue, and white.

CONNECTED IMPACT

27 June - 1 July 2021



Pass Types

Physical Passes				Virtual Passes	
Discovery	Intelligence	Leader's	VIP	iDiscovery	iLeader's
<p>The pass for attendees to access the entire exhibition floor and start-up ecosystem – as well as virtual conference sessions and keynotes.</p>	<p>Get the benefits of the Discovery Pass – as well as physical and virtual conference sessions, keynotes and panel discussions for the latest insights and expert opinions.</p>	<p>All the features of the Discovery and Intelligence passes, but with enhanced networking, Specialist Workshop discussions – and access to our VIP networking lounge.</p>	<p>From travelling to the venue, to staying at the best hotels, get all the features of the Discovery, Intelligence and Leader's passes – but with exclusive VIP benefits.</p>	<p>The virtual pass that accesses a world of knowledge, new and innovative products and networking opportunities.</p>	<p>All the benefits of iDiscovery, plus remote access to insights from industry leaders and enhanced virtual networking to build relationships, form partnerships and seal that deal.</p>
<p>Virtual Conference ONLY</p> <p>Stream conference sessions and keynotes at MWC Barcelona and 4YFN start-up exhibition and programme</p>	<ul style="list-style-type: none"> • Access every conference room and join over 30 CEO keynotes, 250+ speakers and 33 track sessions at MWC Barcelona • Access every conference room and join 60 keynotes, 150+ speakers and 20 main stage sessions at 4YFN • My MWC virtual networking – connect with recommended attendees via Chat 	<ul style="list-style-type: none"> • Access every conference room and join over 30 CEO keynotes, 250+ speakers and 33 track sessions at MWC Barcelona • Access every conference room and join 60 keynotes, 150+ speakers and 20 main stage sessions at 4YFN • My MWC virtual networking – connect with recommended attendees via Chat 	<ul style="list-style-type: none"> • Access every conference room and join over 30 CEO keynotes, 250+ speakers and 33 track sessions at MWC Barcelona • Access every conference room and join 60 keynotes, 150+ speakers and 20 main stage sessions at 4YFN • Priority seating at keynotes • Exclusive on-site speaker engagement • My MWC virtual networking – connect with recommended attendees via Chat 	<p>Stream conference sessions and keynotes at MWC Barcelona and 4YFN start-up exhibition and programme</p>	<p>Stream conference sessions and keynotes at MWC Barcelona and 4YFN start-up exhibition and programme</p>



Technology Activities Overview

Event Type	Monday 28/6	Tuesday 29/6	Wednesday 30/6	Thursday 1/7
Physical	4YFN Financial Services Panel 13:10 – 13:45 Agora Stage Hall 2	Autonomous Network Forum 09:00-11:00 Aud B Hall 2		4YFN - GSMA Foundry 12:00-12:45 Agora Stage Hall 2
		5G IoT for Industry 4.0 13:00-14:00 Aud B Hall 2		
		Building the Edge 14:30-15:30 Aud A Hall 3		
		Transforming Automotive 15:00-16:00 Aud B Hall 2		
		Ind. Apps. for Mobile Enabled Drones 17:00-18:00 Aud B Hall 2		
Hybrid			Launching FinTech 12:00-12:45 The Studio Hall 3	
			Mobile IoT Summit 14:00-17:30 Keynote Stage Hall 3	
Virtual (My MWC Online ONLY)		eSIM Seminar 10:00-12:30		
		5G Network Sharing 08.00–09.30		
	Auto. 5G Autonomous Workshop 13:30:14:30	Auto. Identity Workshop 16:30-17:30	Auto. Edge for Computing for Vehicles 16:30-17:30	Auto. Smart Mobility 18:00-19:00
	Aviation Workshop 16:30-17:30	Unlocking Fintech 16:30-17:30	Operator Platform Workshop 13:30:14:30	
	Identity Fraud Workshop 15:00-16:00	FinTech - Stronger Together Workshop 15:00-16:00	Authentication Workshop 18:00-19:00	Credit Risk Networking Workshop 13:00-14:00
	Manufacturing 5G Workshop 18:00-19:00	Manufacturing PN/DN Workshop 18:00-19:00	Manufacturing Opp. Telco Workshop 15:00-16:00	Opportunities Manufacturing Workshop 14:30-17:30



Mobile IoT Summit at MWC21

Connecting the Next **Billion of Everything**

Keynote Stage, Hall 3, Fira Gran Via | Wednesday 30 June 2021

Platinum Sponsor



Supporting Sponsor

SONY



Mobile IoT Summit Overview

- Fully integrated into MWC21 main conference
- Date & Time: Wednesday 30 June 2021 | 14:00 – 17:30 (door opens at 13:45)
- Venue: Keynote Stage, Hall 3
- Number of Seats: 500
- Live-stream on My MWC Online and available on-demand after MWC21
- Open to ALL, including Discovery and iDiscovery Pass Types
- 5 presentations & 3 panels
- Speaker Demographics:
 - Female = 20%
 - In-Person = 81%





Mobile IoT Summit Overview (cont.)

- 3 main themes:
 - Mobile IoT LPWA Roaming & Global Partnership
 - The Future of 5G with iSIM and eSIM
 - IoT Security with IoT SAFE
- Speakers:





GSMA Technology Showcase

- Join us on our stand in **Hall 3 3K63** (next to The Studio) to meet the GSMA experts to discover more about the latest mobile industry activities, advocacy initiatives, benefits of membership, GSMA Intelligence and the GSMA Foundry.
- Launched in March 2021 the **GSMA Foundry** is the 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.

Automotive / Smart Mobility

Mobile IoT LPWA

Networks

GSMA Foundry

Aviation / Commercial Air Mobility

Manufacturing / Industrial 4.0



IoT Conference Sessions

5G IoT for Industry 4.0

Tue 29 Jun | 13:00 – 14:00 CET | Aud B, Hall 2



In alphabetical order



Transforming Automotive and Mobility with 5G

Tue 29 Jun | 15:00 – 16:00 CET | Aud B, Hall 2



In alphabetical order



Industrial Applications for Mobile-Enabled Drones

Tue 29 Jun | 17:00 – 18:00 CET | Aud B, Hall 2



In alphabetical order





IoT Networking Workshops

5G IoT for Industry 4.0

Automotive / Smart Mobility

Aviation / Commercial Air Mobility

IoT at MWC Barcelona 2021
5G IoT FOR MANUFACTURING
28 June - 1 July 2021

IoT at MWC Barcelona 2021
AUTOMOTIVE & MOBILITY
28 June - 1 July 2021

IoT at MWC Barcelona 2021
CONNECTIVITY FOR AVIATION
28 June - 1 July 2021

<p>5G for Industry 4.0 Operational Technology Networks Monday 28 June 18:00-19:00 CET</p>	<p>Private & Dedicated Networks for Industry 4.0 Tuesday 29 June 18:00-19:00 CET</p>
<p>5G in Action: The Benefits to Smart Manufacturing Wednesday 30 June 15:00-16:00 CET</p>	<p>The Benefits of 5G in Manufacturing, from Logistics to Factory Efficiency Thursday 1 July 16:30-17:30 CET</p>

<p>5G – Enabling Autonomous Driving Monday 28 June 13:30-14:30 CET</p>	<p>Automotive Identity for the Connected Car Tuesday 29 June 16:30-17:30 CET</p>
<p>Edge Computing for Connected and Autonomous Vehicles Wednesday 30 June 16:30-17:30 CET</p>	<p>Smart Mobility Thursday 1 July 18:00-19:00 CET</p>

<p>Commercial and Strategic Opportunities for Mobile-Enabled Drones Tuesday 29 June 17:00-18:00 CET</p>
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https://www.gsma.com/iot/gsma_events/manufacturing-mwc21/

https://www.gsma.com/iot/gsma_events/automotive-mwc21/

https://www.gsma.com/iot/gsma_events/aviation-mwc21/

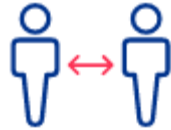


Protocol on Safety & Prevention against COVID-19



1. Use of face masks

Use of face masks is compulsory at the venues, except in specific parts of the catering area.



2. Social distancing

Spaces and access control, flows and capacities designed to ensure social distancing between people.



3. Sanitising stations

Deployment of hand sanitizing stations with hydroalcoholic gel dispensers throughout the venue.



4. Disinfection and cleaning

Reinforcement of the cleaning and disinfection protocols to fully guarantee the attendees' safety.



5. Reinforced ventilation

Improvement of the ventilation system by means of the use of antibacterial filters and increased air renewal frequency.



6. Digitalisation

100% digital registration and access control, cashless payments in all the catering outlets, an online sales service and minimisation of the use and exchange of physical deliverables during the event.



7. Contact traceability

Location of sales contacts through the Lead Retrieval system, which identifies and monitors them in the event of a positive case.



8. AI for capacity control

Cameras equipped with AI (Artificial Intelligence) to regulate the capacities and flows. Wi-Fi control of capacity distribution to ensure social distancing.

Details: <https://www.firabarcelona.com/en/safety-and-prevention-protocol-against-covid-19>





Protocol on Safety & Prevention against COVID-19



Access to events

- Access via mobile phone
- Allocation of access hours
- Elimination of queues
- Temperature control and use of masks by attendees at access points



In the venue

- Redesign of the exhibition spaces to ensure distance – **each has 2.5 sqm space and 1.5m distance from each other**
- Traceability of contacts using Lead Retrieval
- Installation of screens at all information and customer service points.
- Provision of sanitisation points throughout the venue
- Reinforcement of first aid rooms
- Creation of isolation rooms for possible positive cases



Stands and congress spaces

- Promotion of virtual activities
- Distance measures and capacity control at conferences and congresses
- Capacity limitation at the stands



Catering

- Reinforcement of hygienic-sanitary controls in all catering services
- Delivery of the food in individual units
- Installation of partitions at all catering points

Details: <https://www.firabarcelona.com/en/safety-and-prevention-protocol-against-covid-19>





Resources



Topic	Attendance/Registration	View On-Demand
Transformative IoT Beyond Connectivity , The Power of Partnership	162 / 469 (34.5%)	Here
5G IoT for Manufacturing – Transforming Industry with Mobile	465 / 987 (47%)	Here
How Can C-V2X Create an Environment that Improves Quality of Life for Everyone?	250 / 677 (37%)	Here
Utilising Mobile Connectivity for Drones Remote Identification	154 / 379 (40.6%)	Here
Leveraging C-V2X and the Power of Partnership to Create Safer Roads	153 / 462 (33.1%)	Here
5G Private & Dedicated Networks for Industry 4.0	345 / 771 (44.7%)	Here
Interview with Zenzic – Connected and Automated Mobility	N/A	Here
Delivering 5G Quality of Service (QoS) for Connected and Automated Driving	119 / 328 (36.3%)	Here
Reaching New Heights – The Future Role of Mobile Networks in Aviation and Drones	113 / 440 (25.7%)	Here
The Power of Partnership : Clear Sky Ahead for Mobile-Enabled Aviation	151 / 506 (30%)	Here



Title	Technology Area	Asset Type	Link
Project Xcelerate: Powering the future of drone services across the UK (May 21)	Aviation	Case Study	Here
Ford and Vodafone Harness Private 5G Networks to Continually Optimise Vehicle Manufacturing (May 21)	Manufacturing	Case Study	Here
Exploring Future Opportunities for Mobile Networks and the Drone Industry: Benefits and Use Cases (Apr 21)	Aviation	Report	Here
Regulators must recognise the role of mobile connectivity for commercial drones to flourish (Apr 21)	Aviation	Blog	Here
5G for Industry 4.0 Operational Technology Networks (Mar 21)	Manufacturing	Report	Here
The ecosystem must adapt to meet the promise of cellular drones: reflections from the Chair of the GSMA Drone Interest Group (Mar 21)	Aviation	Blog	Here
On-Demand IoT WebTalk: The Power of Partnership – Clear Skies Ahead for Mobile-Enabled Aviation (Mar 21)	Aviation	Video	Here
GSMA Intelligence Spotlight: Licensed LPWA: Scaling IoT in the 5G Era (Mar 21)	Mobile IoT	Analyst Article	Here

Upcoming Resources

Title	Technology Area	Asset Type	Expected Publication Date
Automotive Identity High Level Description whitepaper	Automotive	Report	w/c 14 June
Mobile IoT Roaming Features & Parameters	Mobile IoT	Web	June/July
Mobile Networks for Industry 4.0	Manufacturing	Web	June/July
5G IoT Private Networks for Manufacturing Case Study – Verizon	Manufacturing	Case Study	June/July

[GSMA IoT Events](#)

[GSMA IoT Resource Library](#)

[GSMA IoT Industry News](#)

Mobile IoT

5G IoT for Manufacturing

Automotive & Mobility

Connectivity for Aviation

The screenshot shows the 'Mobile IoT Resources' page. It features a navigation menu at the top with 'ABOUT', 'WHAT WE DO', 'MEMBERSHIP', 'SERVICES', 'EVENTS', and 'NEWS'. Below the navigation is a search bar and a 'Home > Mobile IoT Resources' breadcrumb. The main content area includes a 'Mobile IoT Resources' header with a background image of a city at night. Below this, there is a 'Mobile IoT Developers' sidebar with links to 'Resources', 'Resource Library', 'Add the Mobile IoT Developer', 'Mobile IoT Innovators', and 'Directory'. The main content area has a 'Mobile IoT Resources' section with a sub-header 'Mobile IoT Resources' and a paragraph: 'Mobile IoT technologies are quickly taking over the world. Commercial deployments are happening across the globe, the ecosystem is growing at an unprecedented pace, numerous companies are producing commercially available modules and development kits, and a great number of IoT Labs have opened all over the world. IoT help nurture innovation and further accelerate the growth of the market. The GSMA Internet of Things programme is creating a list of insightful resources from across the industry. These resources are meant to create value for the wider ecosystem and provide insight into the technologies, use cases, market developments, and more. IoT help nurture innovation and further accelerate the growth of the market. The GSMA Internet of Things programme is creating a list of insightful resources from across the industry. These resources are meant to create value for the wider ecosystem and provide insight into the technologies, use cases, market developments, and more. All content is carefully reviewed by an editorial board. If you would like your content to be considered for publication, please email res@innovations.gsma.com. Below this, there is a 'Filter' dropdown and a section titled 'What is the Difference in Data Throughput between LTE-M/NB-IoT and 3G or 4G?' with a 'Read More' link. There are also sections for 'Deep Dive into NB-IoT for Smart Cities' and 'Presentation Decks: APAC IoT Innovation Summit'.

The screenshot shows the '5G IoT for Manufacturing Resources' page. It features a navigation menu at the top with 'ABOUT', 'WHAT WE DO', 'MEMBERSHIP', 'SERVICES', 'EVENTS', and 'NEWS'. Below the navigation is a search bar and a 'Home > 5G IoT for Manufacturing > Resource Library' breadcrumb. The main content area includes a '5G IoT for Manufacturing' header with a background image of a factory. Below this, there is a '5G IoT for Manufacturing' sidebar with links to 'Resource Library', 'Upcoming Events', 'Latest Resources', and 'Latest News'. The main content area has a '5G IoT for Manufacturing - Resources' section with a sub-header '5G IoT for Manufacturing - Resources' and a paragraph: 'Manufacturing is on the cusp of a major transformation. Industry 4.0, the convergence of manufacturing processes and equipment use in cloud for manufacturing, offering sustainable production and 5G for IoT underpins the transformation. All the main industry players are now making substantial investments in IoT and 5G. You may want your manufacturing operations to be visible in the GSMA IoT Manufacturing. Our website board regularly releases and publishes content related to cellular technologies, 5G, and related topics. Big Data Analytics, Edge and Mobile IoT (5G) are key areas. Below this, there is a 'Filter' dropdown and a section titled '5G for Smart Manufacturing - Insights on How 5G and IoT Can Transform Industry' with a 'Read More' link. There are also sections for 'Ericsson and Hexagon Joint Host Webinar: 5G and Industry 4.0' and 'Webinar - The New Service and Maintenance Models: IIoT Technology Drives Revenue and Profit'.

The screenshot shows the 'Automotive & Mobility Resources' page. It features a navigation menu at the top with 'ABOUT', 'WHAT WE DO', 'MEMBERSHIP', 'SERVICES', 'EVENTS', and 'NEWS'. Below the navigation is a search bar and a 'Home > Automotive & Mobility > Resource Library' breadcrumb. The main content area includes an 'Automotive & Mobility' header with a background image of a car. Below this, there is an 'Automotive & Mobility' sidebar with links to 'Resource Library', 'Upcoming Events', 'Latest Resources', and 'Latest News'. The main content area has an 'Automotive & Mobility Resources' section with a sub-header 'Automotive & Mobility Resources' and a paragraph: 'Connect to the car ecosystem. This is the information of the automotive industry and the mobility ecosystem. The automotive ecosystem is a complex one. It involves a wide range of stakeholders, from a manufacturer to a service provider to a service provider. The automotive ecosystem is a complex one. It involves a wide range of stakeholders, from a manufacturer to a service provider to a service provider. All content is carefully reviewed by an editorial board. If you would like your content to be considered for publication, please email res@innovations.gsma.com. Below this, there is a 'Filter' dropdown and a section titled 'C-V2X Use Cases: Methodology, Examples and Service Level Requirements' with a 'Read More' link. There are also sections for 'On-Demand IoT WebTalk: Delivering 5G Quality of Service (QoS) for Connected and Automated Driving' and 'GSMA Thrive North America On-Demand: 5G Mobility Summit'.

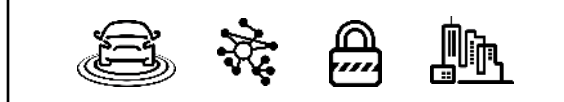
The screenshot shows the 'Connectivity for Aviation Resources' page. It features a navigation menu at the top with 'ABOUT', 'WHAT WE DO', 'MEMBERSHIP', 'SERVICES', 'EVENTS', and 'NEWS'. Below the navigation is a search bar and a 'Home > Connectivity for Aviation' breadcrumb. The main content area includes a 'Connectivity for Aviation' header with a background image of an airplane. Below this, there is a 'Connectivity for Aviation' sidebar with links to 'Resource Library', 'Upcoming Events', 'Latest Resources', and 'Latest News'. The main content area has a 'Connectivity for Aviation Resources' section with a sub-header 'Connectivity for Aviation Resources' and a paragraph: 'The aviation ecosystem is a complex one. It involves a wide range of stakeholders, from a manufacturer to a service provider to a service provider. The aviation ecosystem is a complex one. It involves a wide range of stakeholders, from a manufacturer to a service provider to a service provider. All content is carefully reviewed by an editorial board. If you would like your content to be considered for publication, please email res@innovations.gsma.com. Below this, there is a 'Filter' dropdown and a section titled 'ACJA Network Coverage Service Definition 1.0.0' with a 'Read More' link. There are also sections for 'On-Demand IoT WebTalk: Reaching New Heights - The Future Role of Mobile Networks in Aviation and Drones' and 'Unmanned Aircraft Remote Identification Through Cellular Networks'.



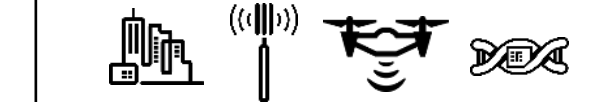
<https://www.gsma.com/iot/mobile-iot-resources/>



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



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



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

Submit Your Contents

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THANK YOU!

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<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/>