



GSMA IoT Marketing Group Quarterly Update

10 December 2020

Andrew Parker, Marketing Director Technology, GSMA
Eric Yu, Senior Marketing Manager IoT, GSMA

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



Technology Project Ideas

Andrew Parker, Marketing Director Technology, GSMA

5

This slide features a dark background with a glowing blue circuit board pattern. In the center, there is a semi-transparent window displaying lines of code in a light blue font. The text "Technology Project Ideas" is prominently displayed in white, bold font on the left side. At the bottom left, the name "Andrew Parker, Marketing Director Technology, GSMA" is written in a smaller white font, and the number "5" is at the bottom right.

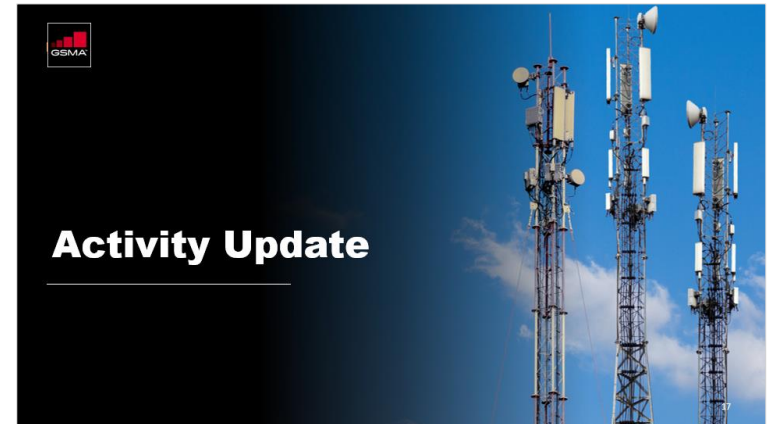


MWC Barcelona
28 June - 1 July 2021

GSMA HIGHWAY TO 5G

Experience the Future of Connected Transport

This slide has a vibrant red background with a black, winding road graphic that recedes into the distance. The GSMA logo is in the top left corner. The text "MWC Barcelona 28 June - 1 July 2021" is in the top left. The main title "GSMA HIGHWAY TO 5G" is in large, white, bold letters, with "5G" being significantly larger. Below it, the subtitle "Experience the Future of Connected Transport" is in a smaller white font.



Activity Update

This slide features a blue sky background with several tall, silver communication towers with white antennas. The GSMA logo is in the top left corner. The text "Activity Update" is centered in a white, bold font.



Mobile IoT Update

This slide shows a night cityscape with a digital overlay of various icons and data points, representing the Internet of Things. The text "Mobile IoT Update" is in white, bold font at the top left.



LATEST GSMA IoT RESOURCES

This slide features a dark blue background with a glowing globe in the center, surrounded by various IoT-related icons like a smartphone, a location pin, a laptop, and a person. Two hands are shown reaching towards the globe. The text "LATEST GSMA IoT RESOURCES" is in white, bold font at the bottom.

Technology Project Ideas

EXAMPLES

Advancing Mobile IoT

- Continue to drive Mobile IoT deployment by promoting 2G/3G sunsetting, eSIM/iSIM advancement, roaming partnerships, global deployment, etc.

Global IoT Marketplace

- Collect, publish and host the available IoT solutions and services onto the centralised web platform for one-stop easy access and navigation

The Mobile Formula 1

- Partner with motor track & vendor to build European C-V2X & 5G automotive test centre

Manufacturing Centre of Excellence

- Research & Test centre sponsored by government to educate manufacturers, suppliers and students in the application of 5G & Private Networks.

Connected Drone Port for VLOS

- Create a licensed mobile connected drone port, where new drone services, coordination, remote line of sight and high altitude can be tested with the latest 5G networks.

VR with eSIM/iSIM

- Build an VR and online immersive experience to showcase how eSIM & iSIM will transform connected devices. The immersive experience will be available online and a super experience will be available to event attendees with all the VR kit.

- There are unlimited number of good ideas. We need your feedbacks, suggestions or proposals for our 21/22 planning.
- Please be mindful about some of the key elements:
 1. The proposal should be marketable and commercial-sable which will welcome and embrace the participation by the wider ecosystem
 2. Member support is core to the deliverables. The proposal should have you committed as the centre and valuable drive. Joint ventures with other industry players and mobile operators would intensify the industry support and demonstrate industry-wide engagement.
 3. The ideas in the previous slide are the examples we brainstormed. Feel free to suggest new market segments or technology areas within 5G and IoT you believe the GSMA is the right platform for delivering so.
 4. Here is the suggested structure for your proposal:

Headline	Short Description	Type (service or solution)	Investment Vehicle/Idea

- We need your support! Please share your ideas with Eric (eyu@gsma.com) before 18 December 2020.



MWC Barcelona
28 June - 1 July 2021

GSMA HIGHWAY TO 5G

Experience the Future of Connected Transport



GSMA HIGHWAY TO 5G

The GSMA Highway to 5G is a new and unparalleled experience for delegates at MWC Barcelona. Similar to the GSMA Innovation City, the GSMA Highway to 5G is owned and run by the GSMA and brings together a consortium of partners from across the value chain showcasing the latest mobile innovations in automotive and mobility – illustrating the path towards 5G and its impact on communication, cities and citizens.

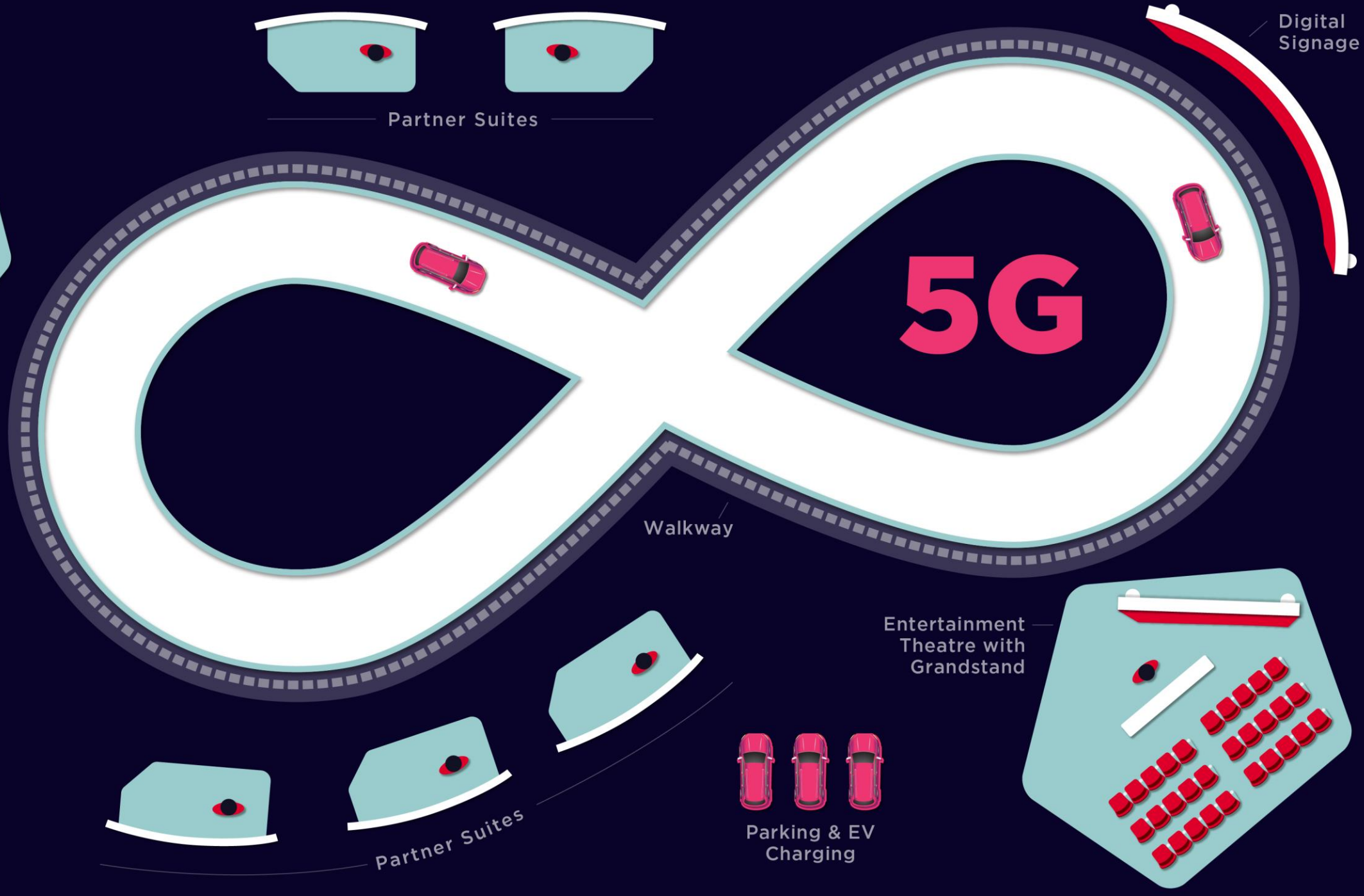
The GSMA Highway to 5G is a live showcase of flexible, responsive mobile networks delivering large scale, critical communications for all types of transportation. We will demonstrate how 5G will transform living space in, around and over the cityscape for a smarter, safer world.

More Information : Contact Jacqui Woerner JWoerner@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
- **Exclusive Cloud Sponsor** while 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**



Filming Platform

Interview Station

Digital Signage

Partner Suites

Walkway

Partner Suites

Parking & EV Charging

Entertainment Theatre with Grandstand

Digital Signage

5G



Scenarios

The experiential demo track focuses on innovative mobility services and connected and automated driving solutions, highlighting how connectivity creates safer roads for all traffic participants, more efficient driving and smoother travelling experiences for the urban citizen. The scenarios featured and experienced by delegates could include:

- Protecting cyclists on busy streets
- Protecting passengers getting off busses
- Protecting pedestrians at intersections / ped. crossings
- Enabling fast passing through of emergency services
- AI mobility assistant
- Micro-mobility or shared mobility services
- Critical communications for emergency services



Attracting Attention at MWC

- At a busy event like MWC Barcelona, the experiential driving track is a powerful USP getting the attention of the delegation and media alike
- A week-long, live automotive technology showcase that offers delegates the chance to experience the future of connected transport will become central talking point at MWC Barcelona
- With a strong consortium of partners*, the GSMA Highway to 5G tells a powerful story of partnership and collaboration – leading companies from across the ecosystem coming together to drive innovation, progress and delivery of socio-economic benefits

MNO + OEM + infrastructure vendor + cloud service/platform provider





Benefits

Marketing & Promotion

- Extensive digital branding and promotion with logo placement before, during and after the event, including the official MWC Barcelona website and app, the GSMA IoT website, official GSMA social media channels, inclusion in several emails and newsletters sent to the GSMA database
- Prominent on-site branding with logo placement as part of the experience hub to attract attention and drive engagement with delegates and media
- Placement of relevant key messaging as part of overall storyline delivered by narrator in the entertainment theatre
- Inclusion of the GSMA Highway to 5G and exclusive sponsors in media briefings and relevant press releases
- Main Conference speaking slot at MWC Barcelona 2021 as part of the GSMA IoT automotive & mobility session



Benefits

Managed by the GSMA

- Central planning and coordination across partners and suppliers to ensure successful delivery
- Full project coordination before, during and after the event to support and manage the logistics of preparation, build, installation and on-site demo and visitor management
- Managing design and production of required and agreed digital promotional materials and physical on-site branding
- Close collaboration with the 5GAA, particularly on technical aspects, to ensure successful delivery



Unmissable Media Magnet

- Worlds media attend MWC Barcelona
- High profile journalists will be invited to experience and to report on the Highway to 5G
- Pre-booked automotive experiences for selected Tier 1 media
- Dedicated filming platform to capture all the action and sponsor identities
- Dedicated interview station to meet selected sponsors spokespeople
- Pre-roll video for media with sponsor identities
- Group VIP tours



More Information : Contact Jacqui Woerner JWoerner@GSMA.com



Activity Update



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

We are planning the new series for 21/22. For proposals, please contact Eric (eyu@gsma.com).



IoT WebTalk

REACHING NEW HEIGHTS

The Future Role of Mobile Networks
in Aviation and Drones

Tuesday, 15 December 2020 | 10:00 EST | 15:00 GMT | 16:00 CET

Senior industry speakers will outline their vision for the future of aviation and drones. We will first look at emerging drone use cases and what the benefits are. Then we will explore how mobile connectivity helps support these.

- Discover emerging new use cases for mobile-enabled drones
- Learn about the significant role of the mobile industry
- Find out how MNOs will work with key aviation and drone partners

[REGISTER HERE](#)



Hendrik Bodecker
Found & CFO
DRONEII



Jef Geudens
Head of Deliveries
Skyports



Andreas Petrotti
Chief Marketing Officer
EHang



Daan van Dijk
Innovation Consultant
KPN



Barbara Pareglio
Senior Director, IoT Technology
GSMA

和合共生

CONNECTED
IMPACT

#MWC21

2021年2月23至25日
23 - 25 February 2021


MWC Shanghai 2019 in numbers



The world's largest event with live 5G coverage

More than
75,000
ATTENDEES
from 100+ Countries & Territories
+20 first-time countries represented



←  →
Around
500
Exhibitors
Almost 50% from
outside China

4YFN

Connecting
Startups
联结创业公司


16,000+
ATTENDEES


117
EXHIBITORS


110
INVESTORS


\$43B
FUNDS REPRESENTED

4,000+
CONFERENCE ATTENDEES
60% SENIOR-LEVEL
POSITIONS 


1,100
International Media
and Industry Analysts



2.75M+
Social Media Impressions



 **260,000+**
Total followers

@ **103,000+**
Total mentions

Click here to read full [POST-EVENT REPORT](#)

Top 5 Industries Represented



Over **12,000** registrations from **153** Countries and Territories



Mobile Network Operator



Network Infrastructure Vendor



IoT/M2M



Advertising/Marketing/PR



Consultancy

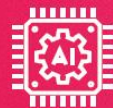


40% of attendees hold Senior Level positions
25% Vice President and C-Level

Top 5 Areas of Interest



5G: **28%**



AI: **18%**



IoT/M2M: **17%**



Digital Transformation: **13%**



Mobile Devices: **6%**



235 MNOs from 99 Countries and Territories



150 Governments/NGOs from 63 Countries and Territories



Networking

- Attendees from **250** companies shared over **2,300** business cards
- 25%** of cards exchanged were Vice President level and above



ONLINE

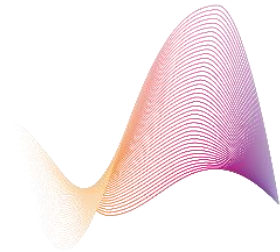
2021 Event Themes

#Connected Impact

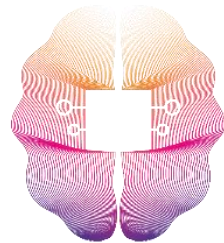
The headline for MWC Shanghai 2021 is Connected Impact, showcasing how the entire digital ecosystem continues to transform our lives towards a safer and better world.

MWC Shanghai 2021 promises conversation guided by technology's visionaries, networking opportunities to forge partnerships and a packed exhibition listing of technology that will define the future and advance your business strategy.

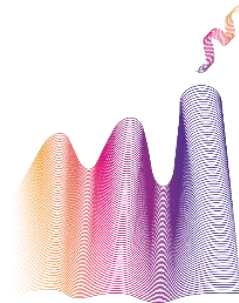
Be part of our hybrid event experience and join the journey on fully realising the potential of Connected Impact on your business, the planet and society.



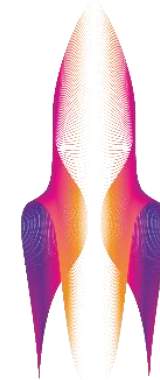
Connectivity



**Artificial
Intelligence**



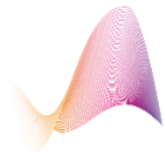
**Connected
Industry**



**Startup
Innovation**

Summit Sessions

Themes



5G Connectivity

- **5G IN Summit (Day 1)**
 - Innovation & Investment
- **5G Network Summit (Day 2)**
 - Smart City
 - Small Cells
 - Network (Edge, Cloud)
- **5G Tech Summit (Day 3)**
 - Security
 - Emerging Technology



Connected Industry

- **Digital Government Summit (Day 1)**
 - Future Policy
 - 5G Spectrum
- **IoT Summit (Day 2)**
 - **5G IoT and Private Networks for Industry 4.0**
 - **Transforming Automotive and Mobility with 5G**
 - **Future Opportunities for Mobile-Enabled Drones**



Artificial Intelligence

- **AI Summit (Day 3)**
 - AI & Machine Learning
 - AI in Networks
 - Doing great things with data



Start-up Innovation

- **Leaders Stage (3 Days)**
 - Emerging Tech
 - Start Up pitching
 - Open Stage

Summits & key topics



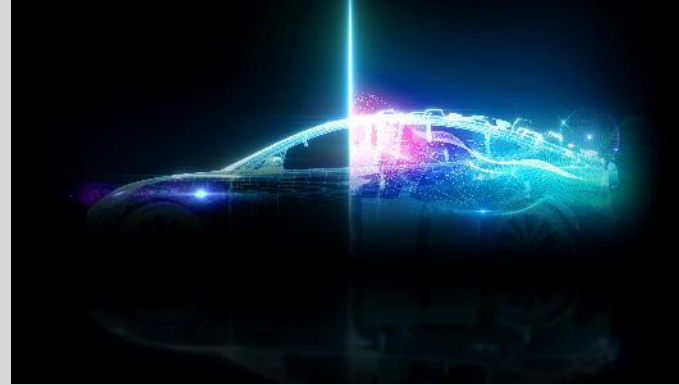
IoT Summit Agenda

5G IoT and Private Networks for Industry 4.0



5 mins	Introduction to 5G IoT for Manufacturing Speaker: GSMA
15 mins	Sponsored Keynote - Wi-Fi Versus 5G Speaker: to be announced
15 mins	Sponsored Keynote – Private & Dedicated Networks Speaker: to be announced
10 mins	Vertical 5G Use Case Speaker: to be announced
30 mins	Panel: The Benefits of Partnership & Ecosystem Moderator: Industry Analyst Panellists: Government, MNO, Manufacturer & Vendor

Transforming Automotive and Mobility with 5G



5 mins	Welcome Speaker: GSMA
10 mins	MNO perspective & importance of partnerships Speaker: Vodafone
10 mins	Operator Presentation Speaker: to be announced
10 mins	Vendor Presentation Speaker: to be announced
10 mins	OEM Presentation Speaker: to be announced
45 mins	Panel with operator, vendor & OEM Moderator: Industry Analyst/Consultant Panellists: to be announced

Future Opportunities for Mobile-Enabled Drones



5 mins	Introduction to Future Opportunities for Mobile Enabled Drones Speaker: GSMA
10 mins	Keynote 1 Speaker: to be announced
10 mins	Keynote 2 Speaker: to be announced
10 mins	Case Study: Managing Urban Airspace for Unmanned Aircraft Speaker: Garuda Robotics
10 mins	Case Study: Enabling Cost Effective Deliveries by Drones Speaker: Fling
10 mins	To be announced Speaker: to be announced
35 mins	Panel: The Vision for the Future of Mobile Enabled Drones Moderator: Industry Analyst/Consultant Panellists: MNO, Vendor and a global partner

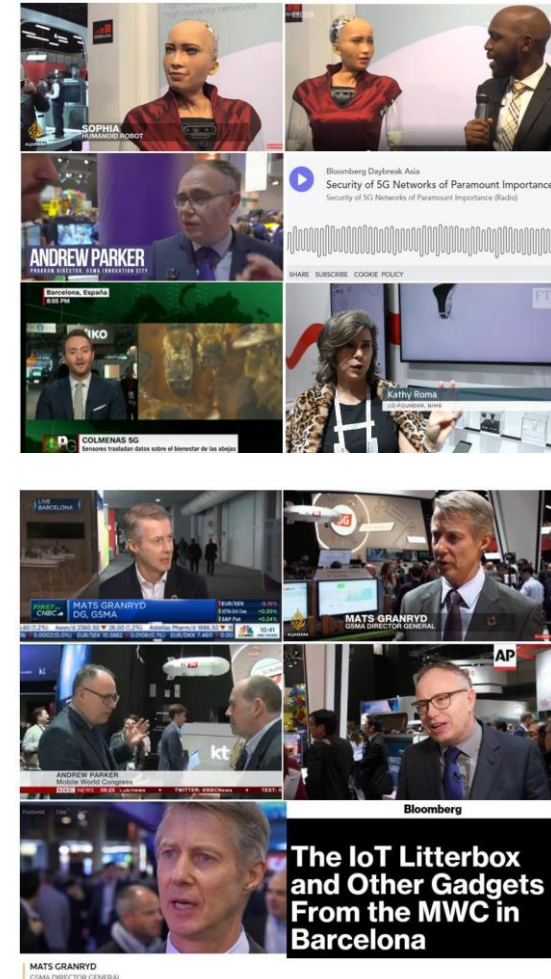
The background consists of flowing, wavy lines in shades of blue and purple, creating a sense of motion and connectivity. In the center, there is a complex, multi-colored starburst or explosion-like graphic with red, blue, and white elements.

CONNECTED IMPACT

27 June - 1 July 2021

Sunday 27 Jun – Thursday 1 Jul 2021

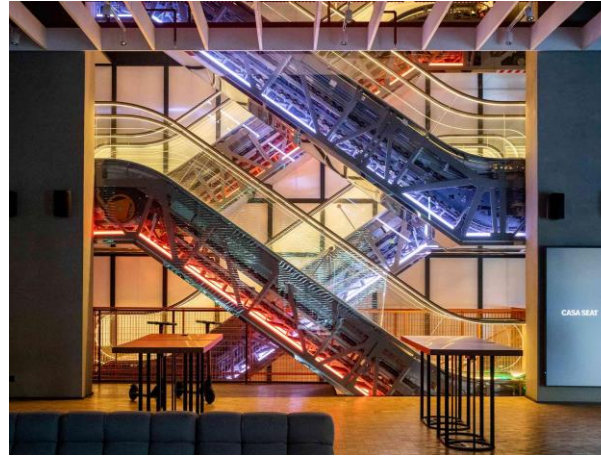
- **Mobile IoT Summit – CASA Seat**
 - Platinum Sponsor: **HUAWEI** | Supporting Sponsors:
- **IoT Conference Sessions – Hall 8**
 - 5G IoT and Private Networks for Industry 4.0
 - Automated and Connected Mobility
 - Industrial Applications of Drones
- **GSMA Innovation City (to be confirmed) – Technology Showcase**
- **‘Highway to 5G’ Technology Showcase**
- **Connectivity for Aviation**
 - Ministerial Programme Session – *to be confirmed*
- **Technology Group Meetings**
 - 5G IoT for Manufacturing Forum meeting
 - Drones Interest Group meeting/dinner reception – *to be confirmed*
 - Automotive & Mobility Advisory Board Meeting
- **IoT Topic Tours**



Contact Eric (eyu@gsma.com) for sponsorship, speaking or showcase opportunities.



**Sun
27 Jun
2021**



Represents the future of innovation, mobility, technology and design

Capacity	200pax in the auditorium – <i>subject to social distancing policy</i>
Format	Summit Session – Theatre Setting Exhibition (to be confirmed) Virtual Engagement – Online Product Showcase, Live Streaming Session (to be confirmed) Networking Reception (to be confirmed)
Key Topics	Use cases in 5G IoT, IoT Security, LTE-M, NB-IoT, etc.



Platinum Sponsor



Supporting Sponsors



Contact Eric (eyu@gsma.com) for sponsorship, speaking or showcase opportunities.

Ground Floor – CASA SEAT



*real images

Auditorium – CASA SEAT *renders



MWC Barcelona Call for Speaker

Are you ready to walk onto the most influential stage in the connectivity world?

We are looking for leaders, innovators, entrepreneurs, challengers, pioneers and boundary-breakers from across the ever-growing mobile ecosystem to join us on stage as we redefine what it means to be connected..

- 2021 Key areas of Interest:
 - AI
 - Connected Industry
 - Connectivity
 - Creative Technology
 - Customer Experience
 - Future Society
 - Startup Innovation

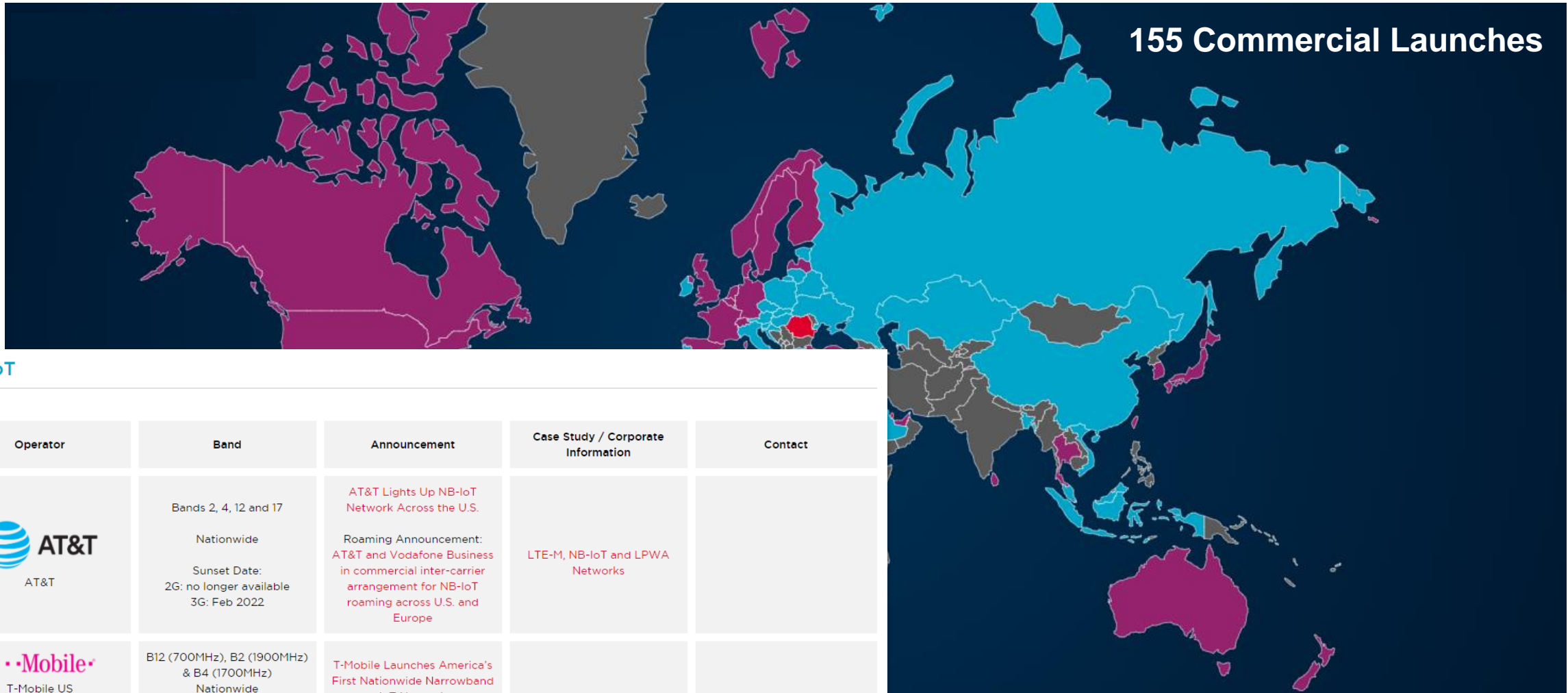
Deadline for Submission: Friday 5 February 2021

Enquiries – GSMA’s Conference Content Team: contentresearch@gsma.com

Details: <https://www.mwcbarcelona.com/themes/become-a-speaker>

Mobile IoT Update





NB-IoT

Operator	Band	Announcement	Case Study / Corporate Information	Contact
 AT&T	Bands 2, 4, 12 and 17 Nationwide Sunset Date: 2G: no longer available 3G: Feb 2022	AT&T Lights Up NB-IoT Network Across the U.S. Roaming Announcement: AT&T and Vodafone Business in commercial inter-carrier arrangement for NB-IoT roaming across U.S. and Europe	LTE-M, NB-IoT and LPWA Networks	
 T-Mobile US (Deutsche Telekom)	B12 (700MHz), B2 (1900MHz) & B4 (1700MHz) Nationwide (Coverage Map)	T-Mobile Launches America's First Nationwide Narrowband IoT Network		

<https://www.gsma.com/iot/deployment-map/>

Submit your case studies to Eric (eyu@gsma.com).



LATEST GSMA IoT RESOURCES



GSMA IoT Resources (Sep – Dec 2020)

Title	Technology Area	Asset Type	Link
Fully automated drone delivery flights over a prioritised network are getting closer (Nov 2020)	Connectivity for Aviation	Blog	Here
Factory Efficiency – 5G Era IoT Manufacturing Use Cases and Benefits (Nov 2020)	5G IoT for Manufacturing	Report	Here
Product Build & Quality – 5G Era IoT Manufacturing Use Cases and Benefits (Nov 2020)	5G IoT for Manufacturing	Report	Here
On-Demand IoT WebTalk: Delivering 5G Quality of Service (QoS) for Connected and Automated Driving (Nov 2020)	Automotive & Mobility	Webinar	Here
Unmanned Aircraft Remote Identification Through Cellular Networks (Nov 2020)	Connectivity for Aviation	Report	Here
IoT WebTalk Q&A: 5G Private & Dedicated Networks for Industry 4.0 (Nov 2020)	5G IoT for Manufacturing	Blog	Here
Q&A: Leveraging C-V2X and the Power of Partnership to Create Safer Roads (Oct 2020)	Automotive & Mobility	Blog	Here
GSMA Thrive Asia Pacific On-Demand: IoT Summit – How 5G IoT is transforming manufacturing (Nov 2020)	5G IoT for Manufacturing	Webinar	Here
GSMA Thrive Asia Pacific On-Demand: IoT Summit – What 5G IoT means for smart cities and enterprises? (Nov 2020)	Programme General	Webinar	Here
GSMA Thrive North America On-Demand: 5G Logistics, Manufacturing & Supply Chain Summit (Oct 2020)	5G IoT for Manufacturing	Webinar	Here
GSMA Thrive North America On-Demand: 5G Mobility Summit (Oct 2020)	Automotive & Mobility	Webinar	Here
IoT WebTalk: Interview with Zenzic – Connected and Automated Mobility (Oct 2020)	Automotive & Mobility	Webinar	Here
On-Demand IoT WebTalk: 5G Private & Dedicated Networks for Industry 4.0 (Oct 2020)	5G IoT for Manufacturing	Webinar	Here
Approaches to 5G Spectrum for Industry 4.0 (Oct 2020)	5G IoT for Manufacturing	Report	Here
5G Strategic Deployment Agenda for Connected and Automated Mobility in Europe (Oct 2020)	Automotive & Mobility	Report	Here
5G Private & Dedicated Networks for Industry 4.0 (Oct 2020)	5G IoT for Manufacturing	Report	Here
On-Demand IoT WebTalk: Leveraging C-V2X and the Power of Partnership to Create Safer Roads (Oct 2020)	Automotive & Mobility	Webinar	Here
On-Demand Webinar: “5G, Network & IoT Cybersecurity” Webinar by AllThingsConnected (Sep 2020)	Programme General	Webinar	Here
On-Demand Webinar: GSMA IoT at Maxis IoT Challenge (Sep 2020)	Mobile IoT	Webinar	Here
First cross-border drone flight conducted entirely over the mobile network between Latvia and Estonia (Sep 2020)	Connectivity for Aviation	Blog	Here

GSMA IoT Events

GSMA IoT Resource Library

GSMA IoT Industry News

5G Private & Dedicated Networks

<https://www.gsma.com/iot/manufacturing/private-networks/>



Promote the features, benefits and overview of important topics in security and spectrum in various network deployment options for Manufacturing

5G Era IoT Manufacturing Benefits & Use Cases

<https://www.gsma.com/iot/manufacturing/benefits-use-case/>



Demonstrate the use cases enabled by 5G (1) **Factory Efficiency** - creating an environment fit for innovation and high production performance through IoT deployments; and (2) **Product Build & Quality** - ensuring that high product quality is maintained through the effective use of IoT sensors and data



Private Networks



Hybrid Networks



Public Networks



DHL Supply Chain



Foxconn Lights-off Factory



Huaheng Smart Factory



Mercedes-Benz 5G Factory



GF Machining

The GSMA and GUTMA have an agreement to work closely together to explore the challenges, logistics and opportunities related to aerial connectivity



Find out more: <https://www.gsma.com/iot/aerial-connectivity-joint-activity/>



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/>