



GSMA IoT Marketing Group Quarterly Update

10 September 2020

Andrew Parker, Programme Marketing Director IoT, 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



A futuristic, metallic robotic hand is shown in the foreground, holding a glowing blue Earth. The Earth is the central focus, with white clouds and blue oceans visible. The background is a dark, starry space with a teal glow around the Earth. The overall scene is futuristic and high-tech.

IoT Marketing Insights Project

Andrew Parker, Programme Marketing Director IoT, GSMA

OBJECTIVES

- Understand from partner members their marketing priorities for focused verticals, IoT connectivity and platforms and ecosystem in the next 12 to 18 months
- Identify new opportunities for collaboration in 2020/21
- Communicate the new GSMA project planning model to the partners

TARGET AUDIENCE

- IoT Marketing/Business/Strategy Heads and teams

PARTNERS

- 14 IoT Operators and 4 Global Vendors

FORMAT

- 1-hour 1:1 interviews between April and June 2020



Your Organisation

1. What are your top business priorities/areas in the IoT, corresponding to your corporate missions, in the next 18 months?
2. What are your top 3 industry verticals for IoT in the next 18 months?
 - Examples – Agriculture; Automotive; Aviation/Drones; Construction/Buildings; Consumer Electronics; Emergency Services; Logistics; Health; Manufacturing; Retail; Smart Cities/Govt., Utilities.
3. Do you have any major vertical market engagement ideas or plans which would benefit from GSMA support?
 - Examples: Participation in vertical industry events, specialist vertical webinars, strategic partnership case studies, market/technical development fora, publications on vertical specific issues, industry participation in vertically focused trade associations.

Technology

1. What are the top 3 IoT priority connectivity technologies for your organisation's IoT market growth in 2020/21, e.g. 2G, 3G, LTE, 5G, NB-IoT, LTE-M (Both Mobile IoT), Lora, Wi-Fi and Local - Zigbee/Mesh/Bluetooth.
 - How do you see Mobile IoT being developed or enhanced this year?
2. For your organisation, what are the highest priority smart IoT platform services being grown/developed in 2020/21, e.g. AI, Big Data Analytics, Blockchain, Edge, Security, IoT CRM, Billing & ecommerce, QoS?
 - Are you developing these platforms yourselves or partnering with other organisations?
3. Are you launching any new IoT services in the next 18 months?

The Ecosystem

1. Have you got an IoT developer community or are you actively involved with a partner developer community? Are you planning any IoT ecosystem or IoT vertical developer engagement activities which would benefit from GSMA involvement? E.g. developer group meetings, workshops, competitions/hackathons

Your Partnership with GSMA IoT

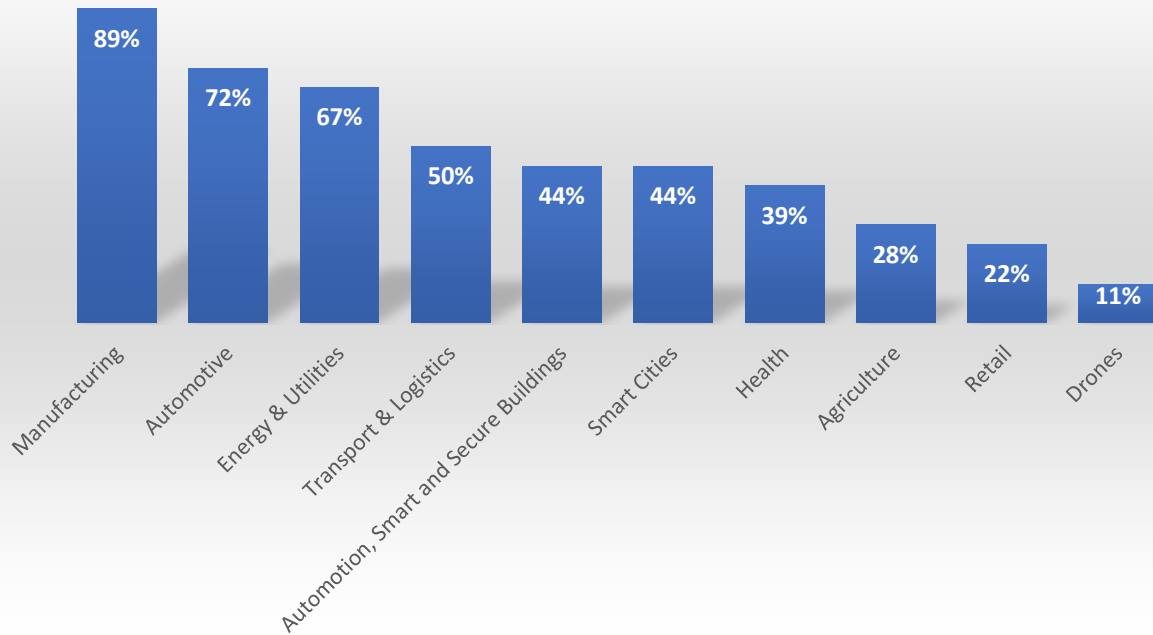
1. Are you generally satisfied with the partnership with the GSMA IoT? Is there any specific types of support you like from the GSMA IoT now or in the near future?

- Change of approach to the market from **big enablers** towards **customer-centric solutions**
- **Vertical strategies** are prioritised – almost all top-tier partners have more than three focused verticals
- **Mobile IoT growth** is highly expected with some concerns from customers towards NB-IoT growth due to NTT Docomo's departure
- **IoT roaming** (mentioned by 9 MNO partners) enabling global coverage and mass market is considered very important. This requires acceleration.
- **eSIM for IoT**, both Mobile IoT and cellular IoT, must be considered as the key technology for scaling the market adoption (deployment model, build cost, etc.)
- The importance of **GSMA case studies and best practices** (e.g. LTE-M/NB-IoT Deployment Guides, IoT Security Guidelines, Beyond Connectivity case studies) have been highly appreciated
 - 100% satisfaction
 - Share and promote of case studies/reports/guides/best practices (72% satisfaction)
- **Selling What You Have** (immediate local revenue) VERSUS **Selling the Future** (5G & Big Revenue)
- GSMA to bridge partnerships and communications across **regions**: lessons learned, ecosystem communities



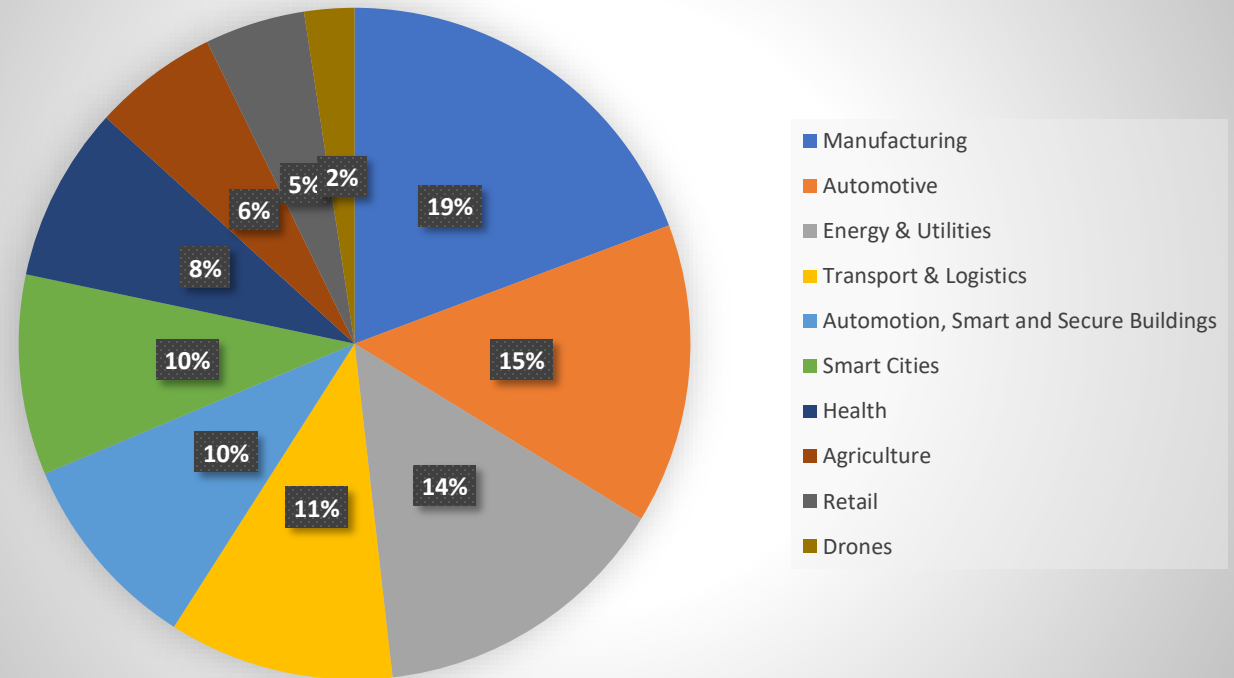
Key Insights – Overall Findings on Verticals

Key Verticals



Showing the importance of key verticals
= counter/18

Number of Mentions



Some verticals are mentioned but not prioritised as top 3
= counter/total number of all vertical mentions

Vertical approach

- GSMA to act as bridge between Mobile and Vertical industries (e.g Utilities, Automotive) and to represent IoT within these vertical organisations as one collective voice to represent all MNOs + wider ecosystem.
- Timeline of big industry movements/news – digital graphical representation of the development of IoT cellular connectivity from 2G to 5G including key technology milestones & links to important examples

Market Insights

- Insights on other markets: to help MNOs expand their geographical reach and brand profile beyond their local/established markets

Market Education

- Mobile IoT: educate the market on the benefits of LTE-M and NB-IoT and on the need for this duality in offerings and the limitations of unlicensed technologies

Event

- Offer mix of physical and virtual events



What's next?

- Increased IoT marketing focus on promoting operator managed customer solutions for Manufacturing / Private Networking & Automotive / C-V2X in 2020 & 2021
- Follow up research on specific topics – E.G. Aviation & Drones opportunity and IoT Developer initiative
- Use output from research for proposing new IoT projects in 2021 & input to GSMA future IoT strategy





GSMA Automotive & Mobility

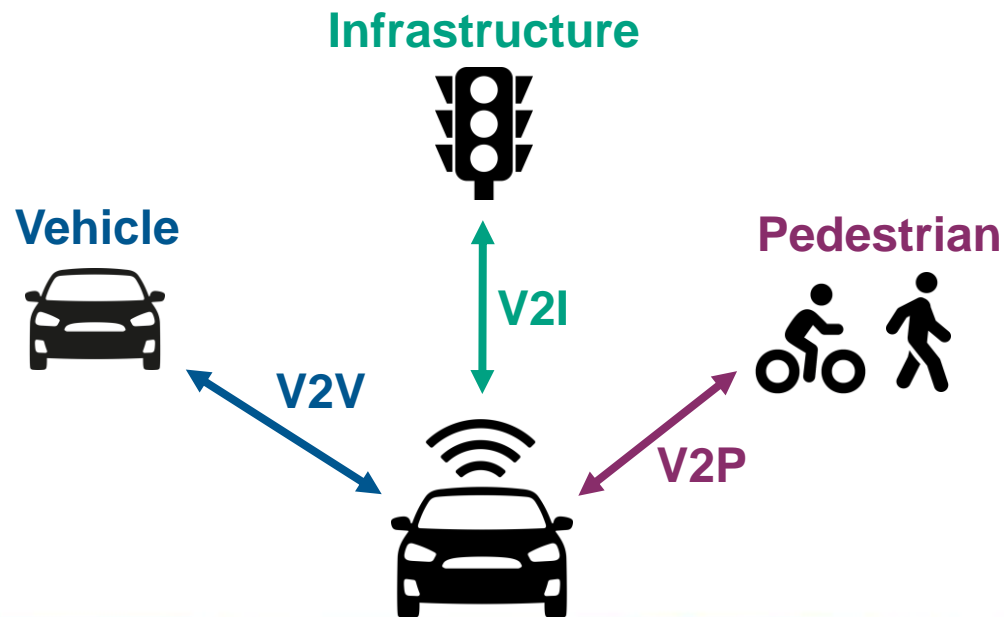
Jacqueline Woerner, Marketing Manager, GSMA

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

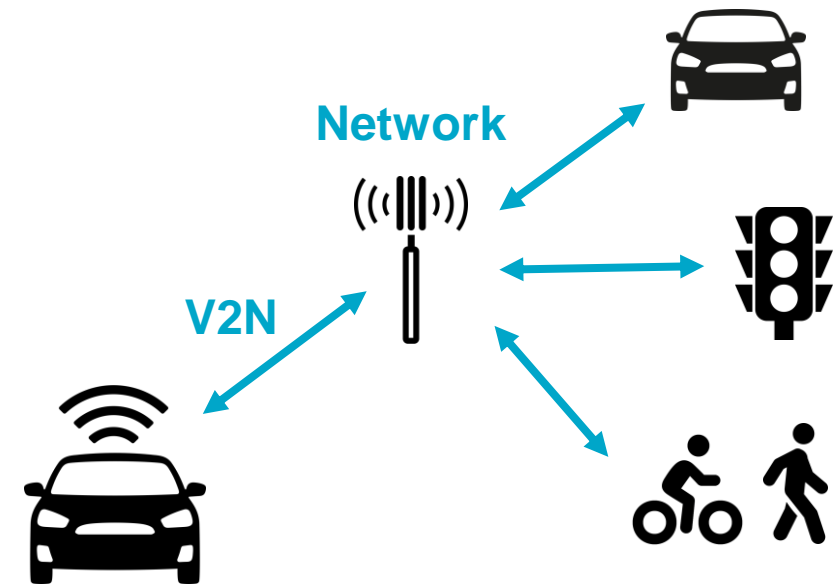
C-V2X is an enhanced 3GPP LTE standard that describes a set of technologies enabling communication messages between vehicles, infrastructure and people.

Its uses and benefits include enhanced safety, more efficient driving, reduced traffic congestion and pollution, and value-added services for end customers.

Direct Communications



Network Communications



Objectives

- **Educate & influence around the benefits** of cellular connectivity, and C-V2X in particular
- **Demonstrate the capabilities and use cases** of cellular connectivity, and C-V2X in particular

Target Audiences

- European regulators / regulatory bodies
- OEMs
- Mobility Ecosystem

Messaging Focus

- C-V2X (vs. DSRC)
- 5G
- Multi-modal Transport and Mobility

- C-V2X technology is **commercially available globally**, leveraging the secure and established 4G LTE network infrastructure to provide the benefits of a connected vehicle market already today.
- C-V2X provides **superior levels of security, range, latency and reliability** that have been proven to vastly exceed the capabilities of DSRC/802.11p.
- C-V2X is already evolving from 4G LTE networks (LTE-V2X) to the next generation of mobile networks (5G NR-V2X), making it the only V2X technology with a **sustainable roadmap to 5G** while upholding backward compatibility.
- **With 5G, C-V2X and the connected vehicle market will scale to its full potential**, enabling fully autonomous and connected driving, and delivering societal benefits and business opportunities at large.
- **5G is crucial for the development of wider mobility solutions** and a fully Cooperative Intelligent Transport System (C-ITS) that leads to reduced congestion and pollution, safer and more efficient driving, and a better quality of life for all citizens.

Road Traffic Accidents

In the top 10 causes of death globally across all age groups

1.35 million lives lost every year

Over 90% of vehicle collisions caused by human error

Over 500 Million Connected Cars on the Road by 2025

Yearly Benefits of Connected Cars by 2025

11,000 lives saved

260,000 fewer accidents

400,000 tones of CO₂ emissions avoided

280 million hours of driving saved

The GSMA Automotive and Mobility Advisory Board brings together leading automotive manufacturers and mobility solution providers to advance the development and deployment of connected vehicles and mobility solutions together with the mobile industry.

The Board advises on key issues the automotive/transport industry faces for connected vehicles, provides guidance on 5G requirements and connectivity needs, and suggests cross-industry projects to the GSMA that will help accelerate the growth of the market.

BMW Group

Continental

Daimler

Denso

Ford

**Jaguar
Land Rover**

Porsche

SEAT

**Tech
Mahindra**

Volkswagen



GSMA **5GAA**
Automotive Association

IoT WebTalk

How Can **C-V2X** Create an Environment that Improves Quality of Life for Everyone?

Wednesday, 1 July 2020 | 09:00 EDT | 14:00 BST | 15:00 CEST

- The socio-economic benefits of connected vehicles for people and the environment (V2P and V2I)
- The seamless evolution for C-V2X from 4G to 5G
- C-V2X trials and use cases
- C-V2X state of the market and deployment roadmap

677 registrations
250 attendees
23% director-level or above



**BMW
GROUP**



Available On-Demand: <https://www.gsma.com/iot/resources/on-demand-iot-webtalk-how-can-c-v2x-create-an-environment-that-improves-quality-of-life-for-everyone/>



IoT WebTalks: Coming Up

IoT WebTalk

Leveraging
**C-V2X AND THE
POWER OF PARTNERSHIP**
to Create Safer Roads

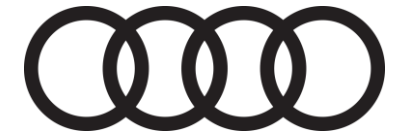
Monday, 28 September 2020 | 10:30 EDT | 15:30 BST | 16:30 CEST

- Objective and scope of the C-V2X pilot programme
- Societal benefits, incl. improved safety, driving efficiency and convenience
- Why forging partnerships across the value chain is fundamental to success
- The need for new and scalable business models

Registration: https://www.gsma.com/iot/gsma_events/iot-webtalk-leveraging-c-v2x-and-the-power-of-partnership-to-create-safer-roads/



AMERICAN TOWER®



Qualcomm



ZENZIC²

**UK Connected and Automated
Mobility Roadmap to 2030**
(Recording; October)

T·Systems·
ottopia

QoS in Teleoperations
(3 November)

Cooperation Agreement with 5GAA

- Technical & regulatory
- Marketing
 - Co-hosted GSMA IoT WebTalk
 - GSMA to co-host 5GAA event in 2021
 - Collaboration on MWC Barcelona 2021

Content Marketing

- Blogs
- Q&As
- Infographic



- **Main conference session**

- CASE
- C-V2X and 5G
- Multi-modal transport & mobility



- **Interactive live experience**

- Demonstrating the capabilities of cellular connectivity for automotive and mobility
- Multi-modal transport / mobility experience and/or connected driving experience
- Outdoors driving track with first-hand experience for delegates

- **Automotive and Mobility Advisory Board meeting**



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

The IoT WebTalk Series is open for sponsorship. Please contact Eric (eyu@gsma.com) for details.

IoT WebTalk

Leveraging
**C-V2X AND THE
POWER OF PARTNERSHIP**
to Create Safer Roads

Monday, 28 September 2020 | 10:30 EDT | 15:30 BST | 16:30 CET

IoT WebTalk:

Leveraging C-V2X and the Power of Partnership to Create Safer Roads

Monday, 28 September 2020

- Objective and scope of the C-V2X pilot programme
- The societal benefits, including improved safety, driving efficiency and convenience
- Why forging partnerships across the value chain is fundamental to success
- The need for new and scalable business models
- How short-range and long-range communication modes of C-V2X complement each other

[REGISTER HERE](#)

IoT WebTalk

**5G Private & Dedicated Networks
FOR INDUSTRY 4.0**

Tuesday, 13 October 2020 | 09:00 EDT | 14:00 BST | 15:00 CEST

IoT WebTalk:

5G Private & Dedicated Networks for Industry 4.0

Tuesday, 13 October 2020

- What 5G Private and Dedicated Networks are and their benefits
- Enterprise drivers for 5G Private and Dedicated Networks
- The various deployment models possible and their features
- Enterprise case studies

[REGISTER HERE](#)

GSMA™
Thrive

GSMA Thrive North America

Innovation on demand


27 to 29 October 2020

https://www.gsma.com/iot/gsma_events/thrive-north-american-2020/


Agenda Overview

Time: PDT – GMT-7

Tuesday 27 October				Wednesday 28 October				Thursday 29 October			
09.00-10.00	Keynote: Opening			09.00-10.00	Keynote 1			09.00-10.00	Keynote 3		
10.00-11.00	CTIA 5G Summit			10.00-11.00	Keynote 2			10.00-11.00	Keynote 4		
11.00-12.00	Theme: 5G	CTIA Policy Track		11.00-12.00	CTIA 5G Summit			11.00-12.00	CTIA 5G Summit		
12.00-12.30	Virtual Networking Roundtables Shorts Released			12.00-13.00	Theme: IoT	CTIA Policy Track		12.00-12.30	Theme: AI	CTIA Policy Track	
12.30-13.30	Summit: Telco Cloud	Partner Program: Infoblox	Partner Program: Ericsson	13.00-13.30	Virtual Networking Roundtables Shorts Released			12.30-13.30	Virtual Networking Roundtables Shorts Released		
13.30-14.30	Summit: 5G Logistics, Manufacturing and Supply Chain	Partner Program: Available	Partner Program: Available	13.30-14.30	Summit: 5G Mobility	Partner Program: HCL Technologies	Partner Program: Available	13.30-14.30	Summit: 5G Smart Cities	Partner Program: Available	Partner Program: Available
14.30-15.30	Summit: Transforming Automotive	Partner Program: Available	Partner Program: Available	14.30-15.30	Summit: The Future of Manned & Unmanned Air Mobility	Partner Program: Available	Partner Program: Available	14.30-15.30	Summit: RCS	Partner Program: Available	Partner Program: Available
15.30-16.30	Virtual Networking Roundtables			15.30-16.30	Virtual Networking Roundtables			15.30-16.30	Virtual Networking Roundtables		

IoT Theme Sponsor: 

5G Logistics, Manufacturing & Supply Chain Summit Sponsor: 

5G Theme Sponsor: 

GSMA™
Thrive

APAC IoT Summits
at
GSMA Thrive Asia Pacific

3 to 5 November 2020

https://www.gsma.com/iot/gsma_events/thrive-asia-pacific-2020/

IoT Summit 1

How 5G IoT is transforming manufacturing – 3 Nov

Manufacturing is undergoing a major generational shift. Industry 4.0, the digitisation and advancement of the manufacturing processes and ecosystem, is set to create far more flexible, efficient and sustainable production lines. 5G for IoT underpins this transformation by enabling manufacturing companies and their supply chain partners the opportunity to utilise emerging technologies such as AI, AR/VR, robotics and edge to give vastly improved visibility over all aspects of their business.

Key Topics:

- Smart Manufacturing Applications, Platforms and Services
- 5G IoT Ecosystem for Manufacturing
- Smart Factory
- Security for 5G Manufacturing

IoT Summit 2

What 5G IoT means for smart cities and enterprises – 3 Nov

Asia Pacific share of IoT revenue in 2020 this will further increase to 38% by 2025 as government stimulus plans help digital transformation efforts across the region. Have the cities and enterprises embraced the technology to realize the benefits?

Key Topics:

- Smart Cities
- Transportation
- Smart Building
- Industry X
- Agriculture

Sponsorship Opportunities

Position yourself as a market leader in the Asia-Pacific region by securing prime branding and speaking opportunities to showcase your latest innovative solutions.

For speaker nominations or sponsorship enquiries, please contact Eric Yu eyu@gsma.com (GMT) or Terence Wong twong@gsma.com (GMT+8).



CONNECTED IMPACT

1 to 4 March 2021

MWC21 Themes

 **Connectivity**

 **Customer Experience**

 **Connected Industry**

 **Artificial Intelligence**

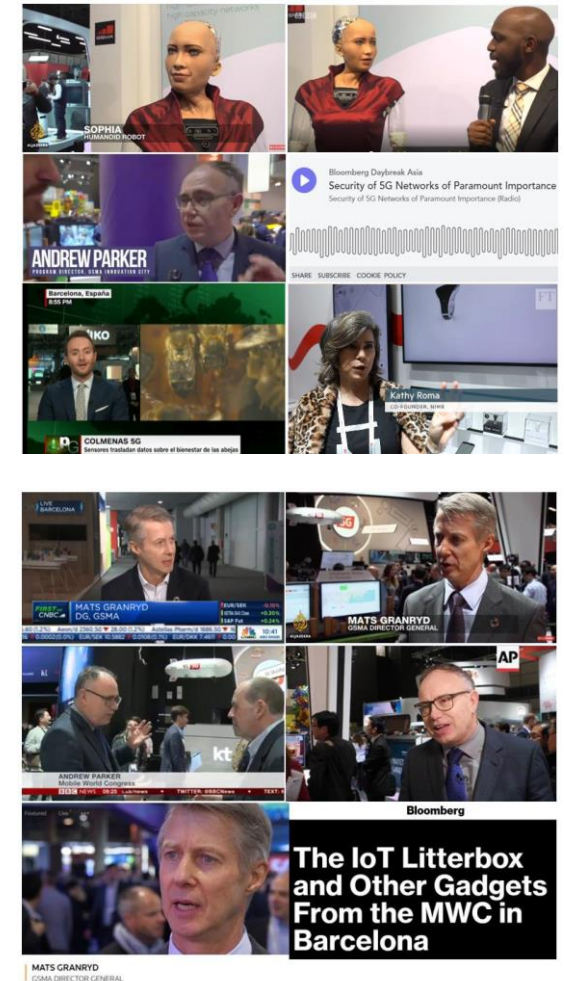
 **Creative Technology**

 **Future Society**

Sunday 28 Feb – Thursday 4 Mar 2021

NEW

- **Mobile IoT Summit** – Hyatt Regency Barcelona Tower
 - Platinum Sponsor: **HUAWEI**
- **IoT Conference Sessions** – Hall 8
 - 5G IoT for Manufacturing and Supply Chain Management
 - Automotive & C-V2X
 - Industrial Applications of Drones
- **GSMA Innovation City** – Technology Showcase – Hall 4
- **Connected Skies**
 - 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.

Call for Demo Proposals in the GSMA Innovation City

- Smart, **Immersive, Interactive** Solutions around some of the hottest technologies, such as Artificial Intelligence, Big Data Analytics, Blockchain, etc. in key industry verticals: **5G IoT for Manufacturing, Automotive & Mobility** and **Drones**
- **Highly visible** and **photogenic** demonstration with great media values
- Preferably on live network including, but not limited to, 5G connectivity or Mobile IoT (LTE-M & NB-IoT) connectivity
- Full support with on-site experts from your organisation

Please complete the [Demo Template](#) and submit to Eric (eyu@gsma.com). Internal discussions will be conducted for qualifying the demonstration based on the theme and overall contents of the GSMA Innovation City.

Deadline of Submission: **Friday, 16 October 2020**

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
 - Start-up Innovation

Deadline for Submission: 5pm (GMT) Friday 2nd October 2020

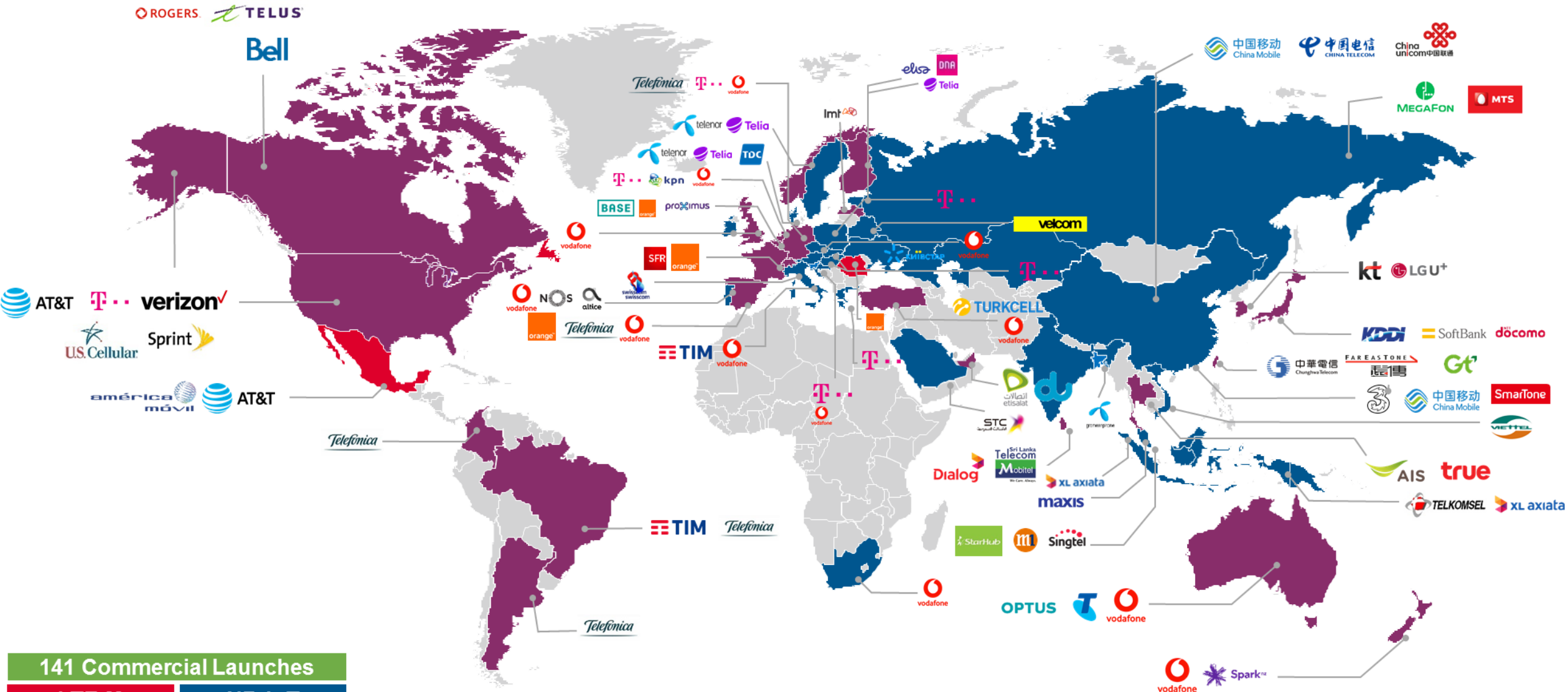
Enquiries – GSMA's Conference Content Team: contentresearch@gsma.com

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

MOBILE IoT AWARENESS CAMPAIGN



MOBILE IoT GLOBAL COVERAGE



141 Commercial Launches

LTE-M **NB-IoT**

Both LTE-M and NB-IoT

As of Sep 2020

Leveraging the success of Mobile IoT digital campaign: [31 Oct 2019 meeting deck – slide 30](#)

Objectives:

- Promote the values and benefits of Mobile IoT (LTE-M and NB-IoT) technologies
- Showcase the innovative IoT solutions in the market
- Generate interests on Mobile IoT technologies

Recommended Spokesperson: End User Customer or Product/Business/Marketing Lead

Format: Pre-recorded Video

Language: English

Promotion Channels:

- GSMA YouTube channel
- GSMA Social Media
- GSMA.com

Launch Date: October 2020



[Interview with Italgas Reti about NB-IoT Gas Metering](#)

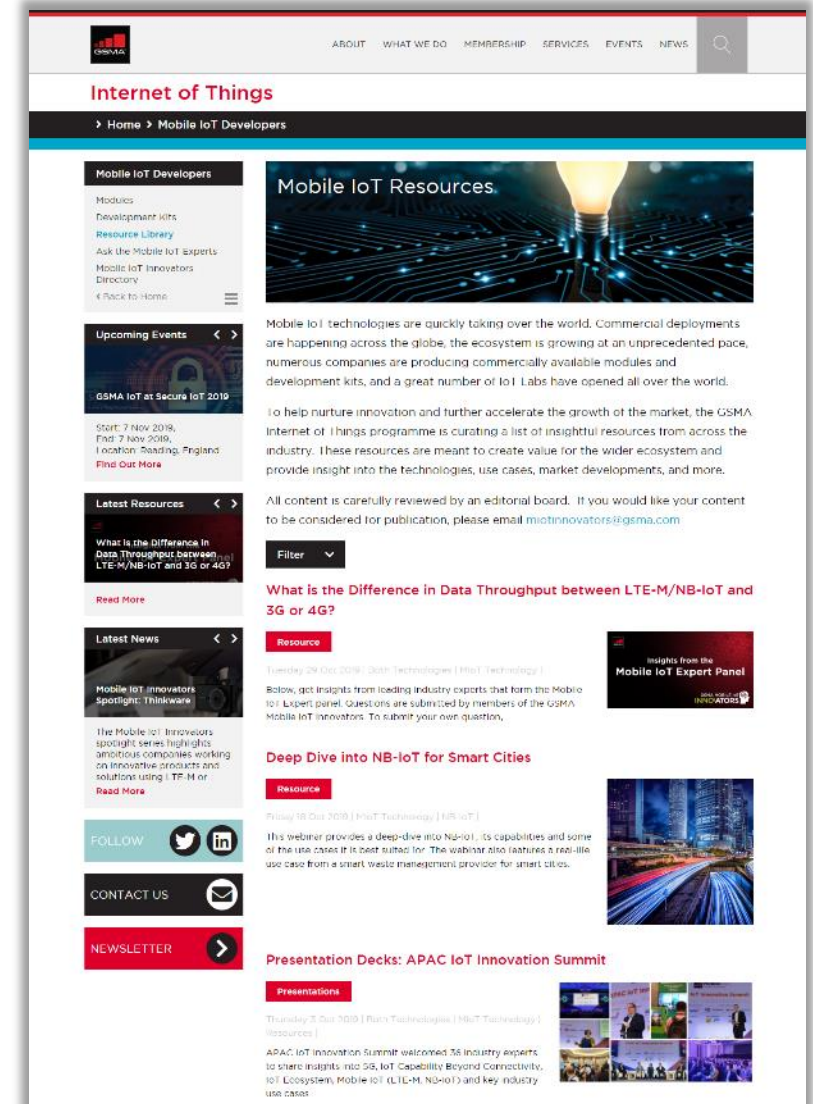


LATEST GSMA IoT RESOURCES

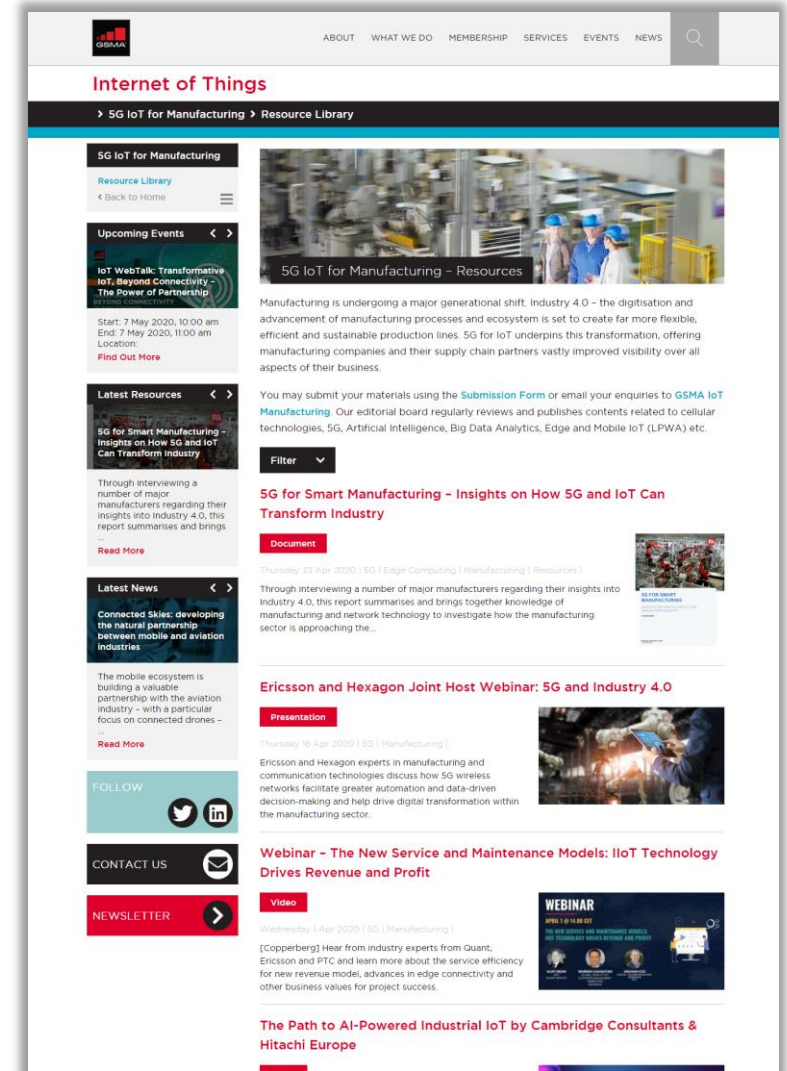


Title	Technology Area	Asset Type	Link
Q&A: How Can C-V2X Create an Environment that Improves Quality of Life for Everyone? (Sep 2020)	Automotive & Mobility	Blog	Here
GSMA Intelligence Spotlight: 5G Grants Operators an Opportunity to Address Manufacturing (Sep 2020)	Manufacturing & Private Networks	Report	Here
Q&A: Utilising Mobile Connectivity for Drones Remote Identification (Aug 2020)	Aviation & Drones	Blog	Here
IoT Revenue: State of the Market 2020 (Aug 2020) – <i>GSMA Intelligence subscription required</i>	IoT General	Report	Here
Digital Transformation of Manufacturing and the Role of Operators in the 5G Era (Aug 2020) – <i>GSMA Intelligence subscription required</i>	Manufacturing & Private Networks	Report	Here
5G IoT for Smart Manufacturing – FAQs (Jul 2020)	Manufacturing & Private Networks	Blog	Here
Roads are already safer for pedestrians thanks to mobile networks – and with 5G will only become more so (Jul 2020)	Automotive & Mobility	Blog	Here
How the emergence of connected drones is helping the fight against COVID-19 (Jul 2020)	Aviation & Drones	Blog	Here
Operator Strategies for Verticals in the 5G Era (Jul 2020) – <i>GSMA Intelligence subscription required</i>	IoT General	Report	Here
On-Demand IoT WebTalk: Utilising Mobile Connectivity for Drones Remote Identification (Jul 2020)	Aviation & Drones	Video	Here
On-Demand Webinar: GSMA IoT at Navigating APAC’s Fragmented IoT Landscape by Bridge Alliance (Jul 2020)	IoT General	Video	Here
On-Demand IoT WebTalk: How Can C-V2X Create an Environment that Improves Quality of Life for Everyone? (Jul 2020)	Automotive & Mobility	Video	Here
NB-IoT now exceeds 100 million connections, and will prove an essential tool in adapting to COVID-19 (Jun 2020)	Mobile IoT	Blog	Here
5G in IoT and the Impact of COVID-19 (Jun 2020)	IoT General	Video	Here
IoT Connections Forecast: The Impact of COVID-19 (Jun 2020) – <i>GSMA Intelligence subscription required</i>	IoT General	Report	Here
TELUS’ Vehicle Tracking Improves Urban Life (May 2020)	Beyond Connectivity	Case Study	Here
Proof of Concept by Telefonica: Drones for Road Hazard Warning System Using C-V2X (May 2020)	Beyond Connectivity	Case Study	Here
On-Demand IoT WebTalk: 5G IoT for Manufacturing – Transforming Industry with Mobile (May 2020)	Manufacturing & Private Networks	Video	Here
On-Demand IoT WebTalk: Transformative IoT Beyond Connectivity, The Power of Partnership (May 2020)	Beyond Connectivity	Video	Here

- We welcome third-party LTE-M and NB-IoT resources to be hosted on Mobile IoT Resources Library for IoT developers and solutions as reference materials
- Filtered by *Both Technologies, LTE-M and NB-IoT*
- Please fill in the [Submission Form](#):
 - Content in PDF format, if applicable
 - The source URL of the resources
 - A short blurb of less than 100 words



- Centralised library for industry resources related to 5G IoT for Manufacturing
- Covering key subjects including AR/VR, Assembly Line, Asset Tracking, Factory Automation, Drones, Predictive Maintenance/Analytics, Private Networks, Process Monitoring, Robotics, Warehouse Management
- Please submit your resources using the [Submission Form](#):
 - Contact details
 - Content Type & Technology
 - Short description
 - The URL source for download/view (content in PDF format, if applicable)





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/>