

GSMA IoT Marketing Group Quarterly Update

7 May 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

GSMA INTERNET OF THINGS PROGRAMME 3



AGENDA



STRATEGIC VERTICAL MARKETS

2020/21



Andrew Parker, Programme Marketing Director IoT, GSMA

Our vision is to enable the IoT, a world in which consumers and businesses enjoy rich new services, connected by an intelligent and secure mobile network. Achieved by industry collaboration, appropriate regulation, optimising networks as well as developing key enablers to support the growth of the IoT in the longer term. Vertical projects for 2020/21:



Automotive / C-V2X

- Drive C-V2X as the preferred solution on a global basis
- Demonstrate the multi-modal benefits of V2I (Infrastructure) and V2P (Person) for personal safety and improve the city environment reducing congestion and pollution



Private Networks / Manufacturing

- Identify and communicate the advantages of operator-managed networks (private, public or intermediate model) and 5G IoT for Manufacturing
- Help MNOs understand better customer needs and explain the benefits of using 5G IoT to enterprise
- Promote the concepts and use cases of non-public networks to wider manufacturing industry in addition to the regulatory attitudes and availability of spectrum for non-public networks in key markets



Aviation

- Communicate and advocate the advantages of SIM enabled drones and MNO services for the broader aviation sector
- Create new revenue stream for MNOs, new devices and opportunities for providing UTM services
- Represent and provide examples for autonomous BVLOS growth from mobile communications



5G IoT for Manufacturing Forum

Neill Young, IoT Verticals Lead, GSMA

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

To educate, support and advance global adoption of 5G IoT by the manufacturing industry and wider industrial sectors

Manufacturing

- Target 5G investments correctly
- Gain Return on Investment
- Build appropriately skilled workforce
- Knowledge and networks for better decision making

Mobile Operators

- Drive real-world adoption of 5G in manufacturing
- Build trust in 5G
- Communicate clear 5G benefits
- Knowledge and networks for better decision making

5G Ecosystem

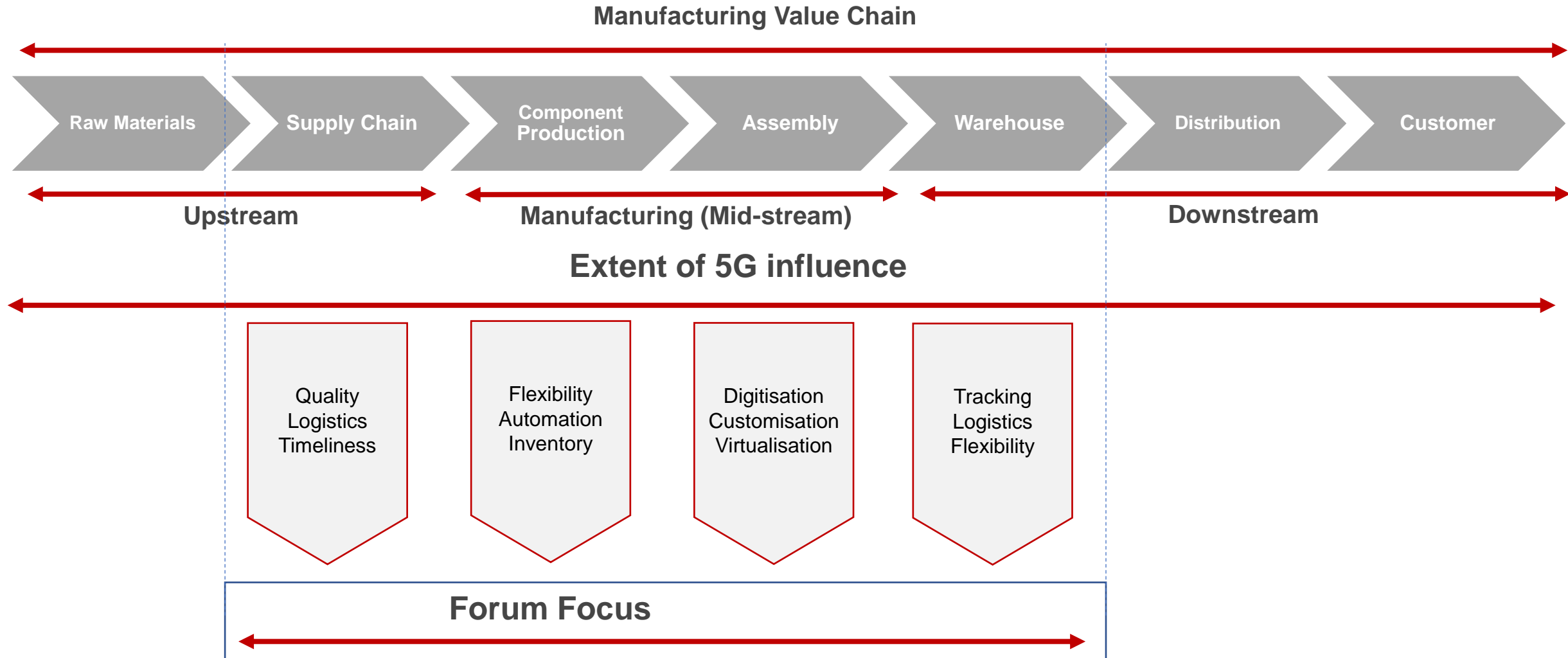
- Drive creation of new ecosystems
- Define roles and resources for 5G adoption
- Build support for new manufacturing use cases
- Provide scale across markets



5G IoT Manufacturing Forum Work Items

- Use case development
- Private Network
- Edge Computing
- Ecosystem and Roles to play
- Spectrum
- Security
- Marketing plan to highlight 5G benefits





Steering Group

Joint Chairs



Andres Escribano
Telefonica



Jacob Groote


Co-Chairs




Patrick Castigliano
Hakim Achouri
AIRBUS



David Allen
 **AT&T**
North America

TBC
Asia-Pacific

The background image is a composite of three scenes: a city skyline at night on the left, a field of crops with wind turbines in the middle ground, and a large drone flying in the sky on the right. A bright sunburst graphic is centered behind the text.

TRANSFORMATIVE IoT BEYOND CONNECTIVITY

Christelle Riviere, Senior Marketing Manager IoT, GSMA

WHAT IS BEYOND CONNECTIVITY?

The **global Internet of Things market** will be worth **\$1.1 trillion in revenue by 2025** as market value shifts from connectivity to **platforms, applications and services**, according to new data from GSMA Intelligence.

Beyond Connectivity describes how mobile operators are delivering innovation and **transformative IoT solutions** to customers across:

IoT
Big Data

Data
Analytics

Machine
Learning, AI

Edge
Computing

Distributed
Ledgers

Leading IoT **operators** and their **partners** are delivering substantial benefits to their customers, driving innovative new products and services, delivering more business opportunities - and creating a more sustainable and productive world.



CAMPAIGN OBJECTIVES

To raise awareness that operators are already **active in IoT**, that they can be **leaders in the future of IoT** and a **trusted partner** for IoT product and services

- We can demonstrate this expertise with a range of market leading case studies in a range of industries

To show how operators are delivering **value added solutions** beyond connectivity and how they are uniquely positioned

- For example, big data, machine learning, analytics, edge computing and enablement platforms. These span a number of verticals, sectors and geographies

To show how operators are **working with partners** to deliver the best services for their customers

- A range of IoT opportunities are open to operators by building on their strengths and moving along the value chain and into vertical markets

To demonstrate how operator IoT solutions beyond connectivity deliver **substantial benefits to customers**

- For example, increased productivity, reduced costs and automated business processes

AUDIENCE: Leading vertical markets (e.g. agriculture, industrial, transportation and utilities) and MNOs planning to stretch their IoT Platform.



MARKETING CAMPAIGN ASSETS AND TIMELINE

LAUNCH

September - December 2019

DELIVERY

January – April 2020

ASSETS/PUBLICATIONS

- 20 case studies, 3 reports, 3 PoC across 8 verticals
- [Campaign video release](#), QuickFire videos (x2)

PR

- PR and official launch of Beyond Connectivity website (25th Sept)
- [Corporate blog](#)

EMAIL MARKETING

External advertising through targeted Email and GSMA newsletter promotion (x4)

SOCIAL MEDIA

Regular Promotion of operator case studies and spotlight features through LinkedIn (13k followers) and Twitter

EVENTS:

- M360 Digital Societies KL 24th-26th Sept
- MWC19 LA 22nd – 24th Oct
- **BC Webinar** 10th Dec: Telefonica, Sunrise, Bell CA, BT
- **BC Webinar** 7th May: China Mobile, Huawei, KPN, Telia

CAMPAIGN MAIN DELIVERABLES – CASE STUDIES



Spotlight Feature



Case Study: Connected In-Home Care For Vulnerable Patients

Connected healthcare solutions can help society's most vulnerable patients, such as the disabled and elderly, cope with chronic illnesses. A prerequisite for this is that the connectivity has to be highly robust and reliable, as well as be available throughout the patient's ...

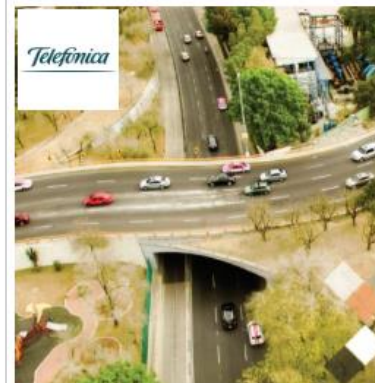
Discover ground-breaking initiatives from operators and their partners. Filter by:

Industry

Organisation

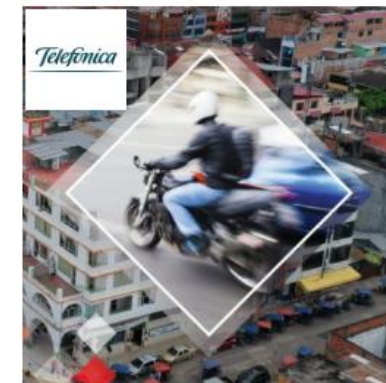
Region

UN's Sustainable Development Goals



TRANSPORTATION & LOGISTICS

Case Study: Telefónica's Kite platform is delivering a wide range of IoT services to GM vehicles in Mexico



SECURITY & SURVEILLANCE

Case Study: Telefónica's IoT Solution Fights Motorbike Theft



TRANSPORTATION & LOGISTICS

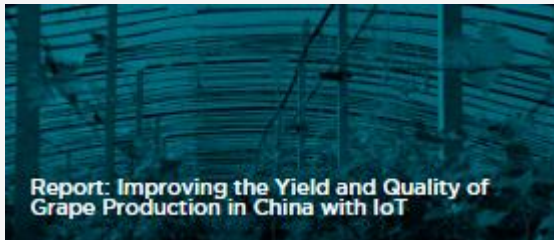
Case Study: Making Field Operations Nimble and More Efficient with Digital Technologies



www.gsma.com/BeyondConnectivity

MARKET OPPORTUNITIES DELIVERABLES – POC AND REPORTS

Big Data, Machine Learning and Artificial Intelligence



IoT Edge Computing



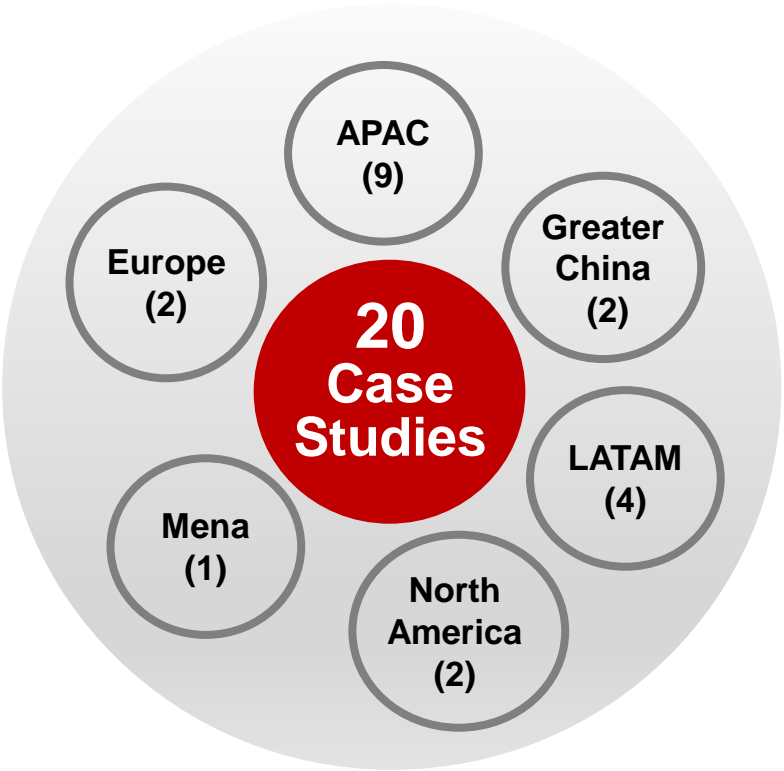
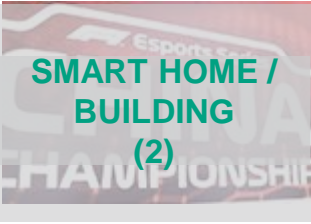
Distributed Ledgers, Blockchain for the IoT



<https://www.gsma.com/iot/beyond-connectivity-iot-market-opportunities/>



20 CASE STUDIES – VERTICALS AND OPERATORS



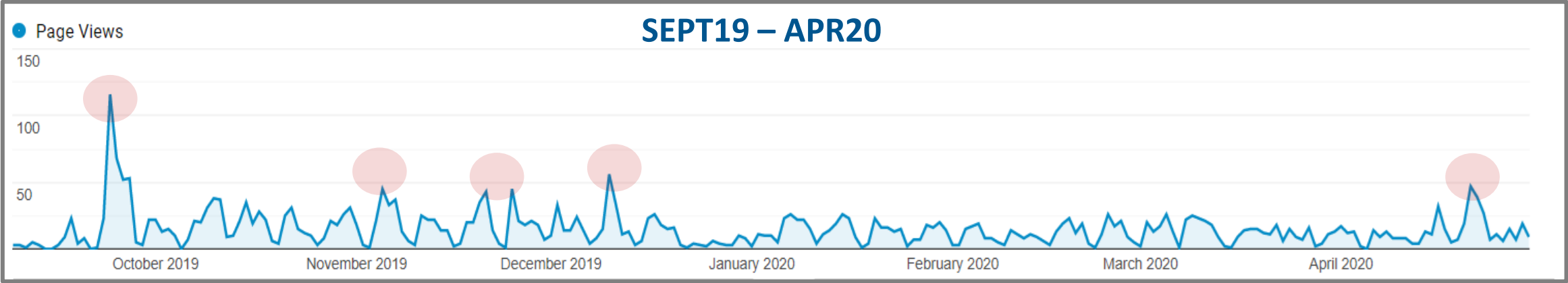
BEYOND CONNECTIVITY CASE STUDIES AND REPORTS

- **20** Case Studies
- **3** PoCs
- **3** Reports
- **14** Operators
- **8** Verticals
- **30%** Asset Tracking, **20%** Agriculture
- **6 SDGs** covered
- Top SDGs: #9, #11, #13





BEYOND CONNECTIVITY PAGES RESULTS



Main page PVs: 3,465
Total PVs: 5,156
Main Page UPVs: 2,554
Total UPVs: 3,725



Avg. Time on Main Page: 10m26
Avg. Time on Sec. Page: 04m40
Avg. Time on Blog Page: 14m38



UK: 31%



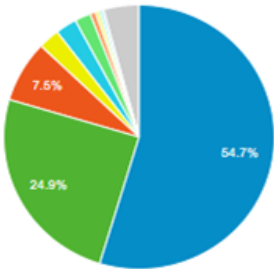
US: 11%



Malaysia: 5.41%



India: 4.9%



Google Organic: 55%
Direct: 25%
Email: 7.5%
LinkedIn: 2.5%

BEYOND CONNECTIVITY RESULTS – ASSET PERFORMANCE

Written Case Studies

Downloads (Not Views):

- Total : **1,369**
- Avg. per CS: 106

Top 5 Case Studies (60%):

- China Mobile: Strawberry prod.
- TM ONE STARS
- Telstra Track & Monitor
- Tele2 IoT Connected Healthcare
- Airtel Work



Reports & PoCs

- Total Views: **1,869**
- Avg. Views per report: 374
- Total DL: **677**
- Avg. DL per report: 135

Top 3 Report (78%):

- Big Data Rev. Opportunity: **662 PV**
- KPN Smart Farming: 410 PV
- Haier Proof of Concept: 393 PV



Videos

- Total Case Studies Views: **938**
- Avg. Case Studies views: 234
- Campaign Video Views: **366**
- Quick Fire video Views: **2,946**





WHAT'S NEXT

Bell

TURKCELL

TELUS

 INTERNET OF THINGS CASE STUDY



**TRANSFORMATIVE IoT
BEYOND CONNECTIVITY**

Refuelling Made Simple

BELL AND OTODATA ENABLE MAJOR PROVIDER OF PROPANE TO CONTINUALLY TRACK FUEL LEVELS IN TANKS ACROSS CANADA

To be
shared/confirmed

 INTERNET OF THINGS CASE STUDY



**TRANSFORMATIVE IoT
BEYOND CONNECTIVITY**

Telus' Vehicle Tracking Improves Urban Life

END-TO-END IOT SOLUTION IS HELPING CANADIAN CITIES DELIVER SERVICES FASTER AND MORE EFFICIENTLY



IoT WebTalk

TRANSFORMATIVE IoT BEYOND CONNECTIVITY

The Power of Partnership

Thursday, 7 May 2020 | 10:00 BST | 11:00 CEST | 17:00 CST

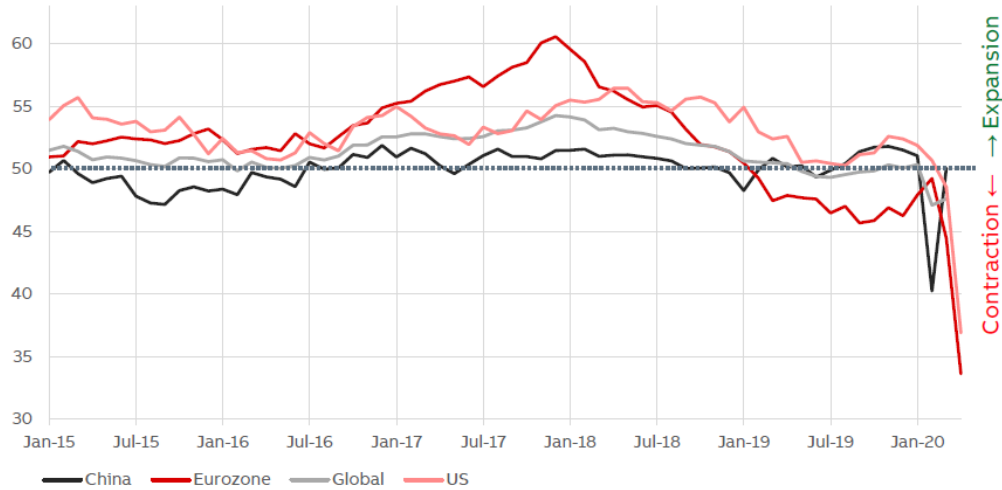
View On-Demand: <https://www.gsma.com/iot/resources/on-demand-iot-webtalk-transformative-iot-beyond-connectivity-the-power-of-partnership/>

IoT connections: COVID19 impact

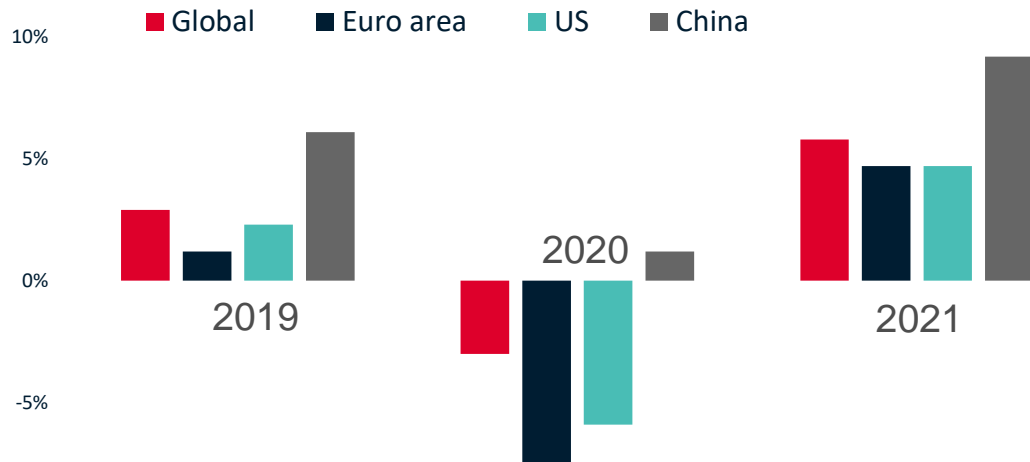
Sylvia Kechiche
Principal IoT Analyst, GSMA Intelligence

Extraordinary macro-environment as a result of COVID-19

Manufacturing PMI (% yoy)



GDP contraction



Demand

- Weaker short cycle demand led by automotive and consumer facing sectors
- China stabilised through March, rest of world deteriorating
- Rise in unemployment, reduced consumer purchasing power

Supply

- Production impacted – sector dependent
- Supply chain, logistics constraints
- Travel and site restrictions hold back services and project installations

Consumer IoT stalling this year



Mario time: The lockdown has seen a surge in Nintendo Switch gamers, as a way of escaping reality

Short term

Medium term

Long term



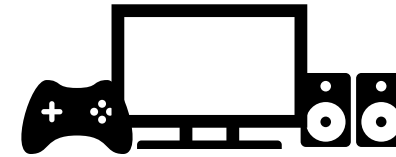
Supply chain
issues

Government
measures

Reduced
consumer
purchasing power

Longer
replacement cycles

Impact differs by applications



Consumer Electronics



Smart home



Smart vehicles



Wearables

Digital transformation was on enterprises' agenda

Digital transformation is on!

65% 35%



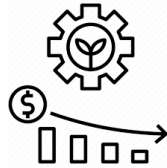
Part of transformation
agenda



Standalone
initiative

Cost saving still key

56% 44%



Save costs



Generate new
revenue

HQ lead the way

60% 40%



Mandated by
HQ



Driven by local
champions

Benefits & compliance equal

50% 50%



Business
benefit



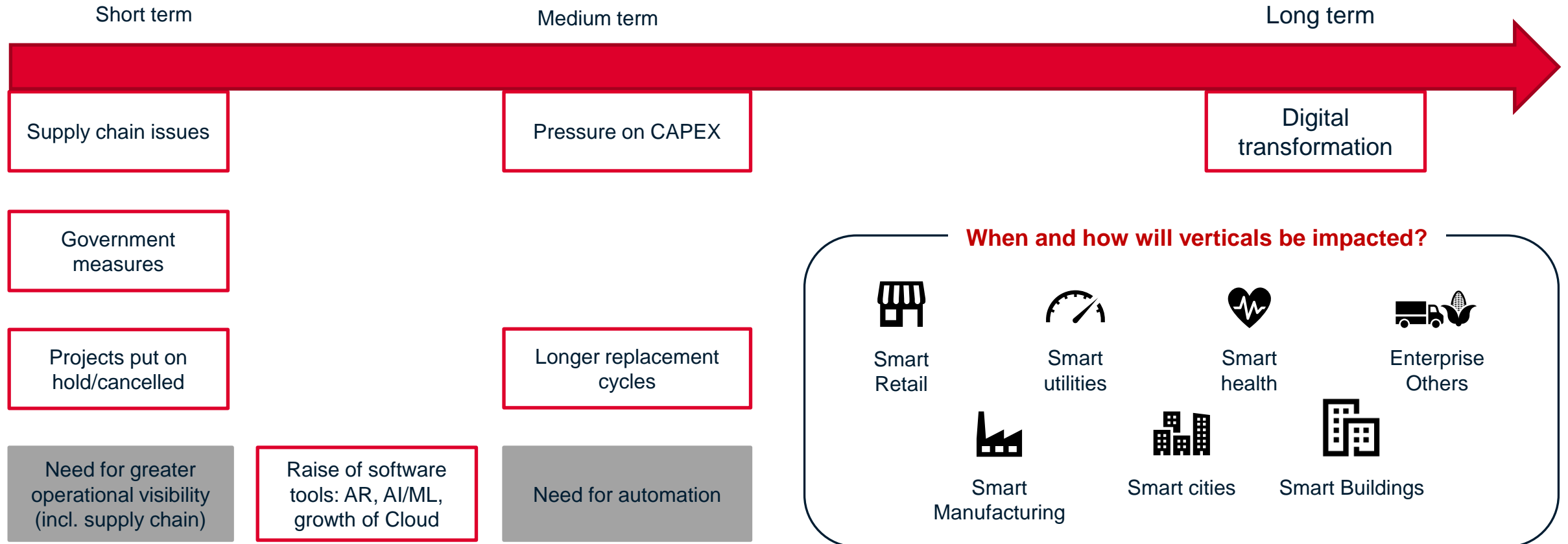
Comply with regulation

**Short term
(2020)**

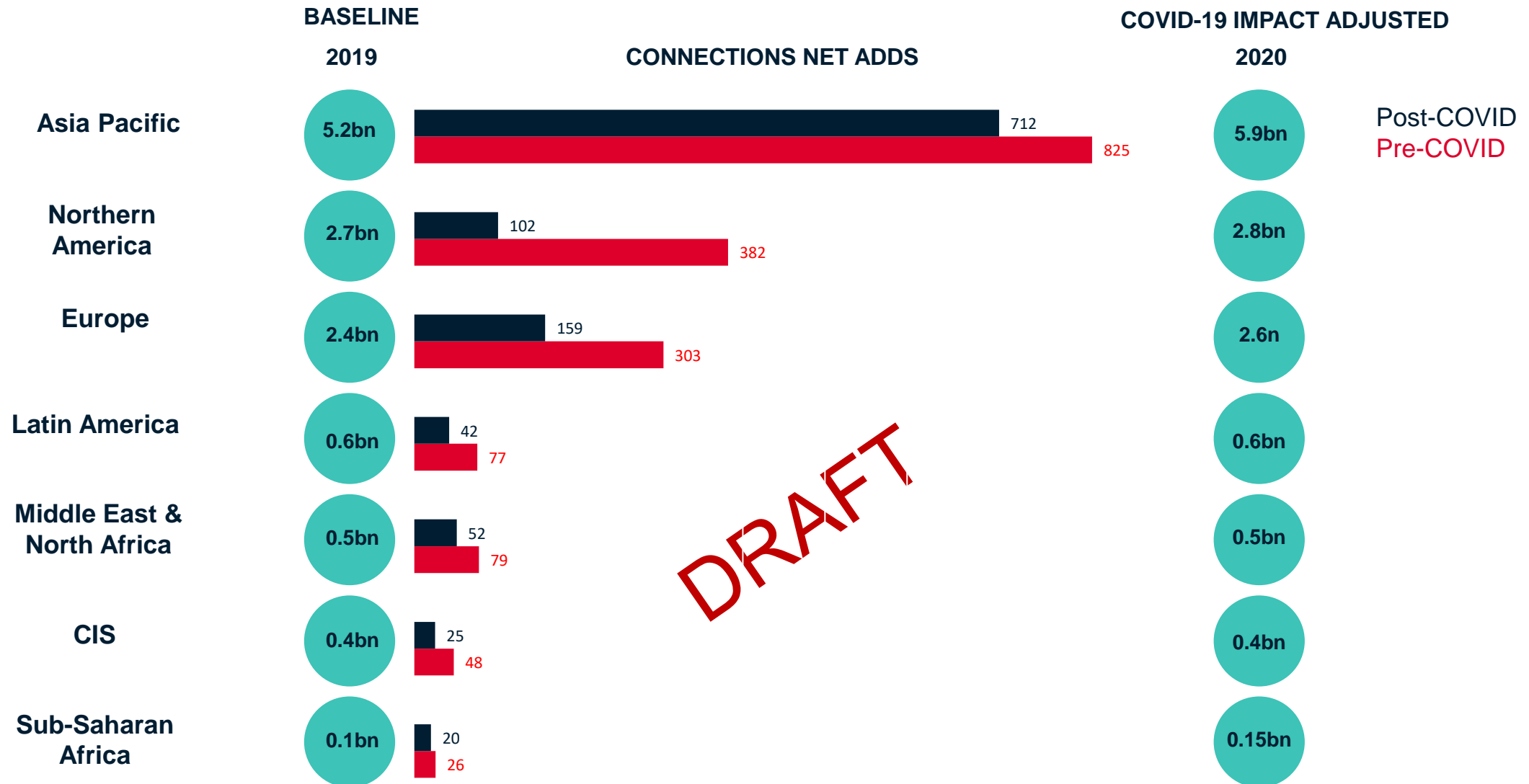
Medium term

**Long term
(beyond 2025)**

But timelines might be impacted



IoT connections by region, 2019 – 2020 (pre and post COVID-19)



Operators' perspective on COVID-19 impact on IoT

Business activities



Value chain disruption



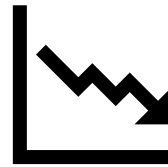
Increased demand from
enterprise customers

Ability to timely deliver services & solutions



Inability to field test
(cannot send
engineers out to
locations)

Customers' commitment to new IoT projects



Delays of 3-6 months



Acceleration

5G?

Expectation on customers deploying 5G to serve existing IoT use cases

1 to 2 years
(2021-2022)

Within a year
(2020)

https://gsma.co1.qualtrics.com/jfe/form/SV_0k1fR30foMQhSIJ

About GSMA Intelligence



**3 Global
Offices**

📍 Delhi 📍 Barcelona 📍 London



Serves over
800
organisations



40,000
users worldwide



**Extensive
Datasets**

Over 30 million data
points, updated daily.



**Topical and
Timely
Research**

Over 100 reports and
exclusive analyses
published annually.



**Pinpoint
Accuracy**

Five-year forecasts
consistently accurate
within +/- 2.5 % of
reported data,
updated quarterly.



**Industry
Trusted**

Serving businesses across
the mobile ecosystem and
many other vertical
industries.

A photograph of a nuclear power plant at dusk. Two large, cylindrical cooling towers are on the left, with steam rising from them. In the center, a smaller building with a smokestack is visible. To the right, a large electrical substation with multiple high-voltage pylons and power lines stands prominently. The entire scene is reflected in a body of water in the foreground. The sky is a deep blue with some clouds.

Activity Updates



IoT WebTalk

5G IoT FOR MANUFACTURING

Transforming Industry with Mobile

Tuesday, 12 May 2020 | 09:00 EDT | 14:00 BST | 15:00 CEST

Join this interactive online session and hear from industry experts about:

- How manufacturing companies are partnering with mobile operators to deploy 5G IoT solutions
- The impact of 5G IoT on new manufacturing use cases
- How 5G IoT can link together the entire manufacturing value chain

View On-Demand: <https://www.gsma.com/iot/resources/on-demand-iot-webtalk-5g-iot-for-manufacturing-transforming-industry-with-mobile/>





Kuala Lumpur 20-22 Oct 2020



#MOBILE360

<https://www.gsma.com/iot/events/m360ds20-apac-iot-summit/>



- 35 industry expert speakers from 29 companies in 12 countries
- 271 attendees (more than doubled from [IoT/AI/Blockchain Summit](#) in 2018)
- Full-day contents covered in 9 industry verticals: agriculture, aviation, healthcare, logistics, manufacturing, smart home, smart city and utility
- Key topics: 5G, AI, Big Data, Blockchain, C-V2X, Edge & NB-IoT
- **Live streamed** on YouTube with Mobile World Live

[Detailed Agenda](#)
[Presentation Deck](#)
[Watch On-Demand](#)
[Summary Blog](#)
[Post-event Summary](#)
[Event Pictures](#)

[Demo Details](#)
[Event Pictures](#)
[Demo Interviews](#)

- 12 demonstrations from 6 countries facilitated by 8 mobile operators
- Live 4G LTE and NB-IoT connectivity sponsored by **maxis**
- 8 NB-IoT and 9 Beyond Connectivity demos
- Covered contents in 8 industry verticals: Agriculture, Aviation, Smart Health, Smart Home, Logistics, Smart City, Manufacturing and Utility
- Other IoT demos: **Quectel** (5G, LTE, LTE-M & NB-IoT modules), **Eachmile Technologies** (Fishcoin) & **Prodigy Electronics** (Smart Parking)



Mobile360
Digital Societies

Kuala Lumpur 20-22 Oct 2020

APAC IoT Summit & IoT Expo

CALL FOR SPEAKER & SPONSOR

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

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



NEW GSMA IoT RESOURCES

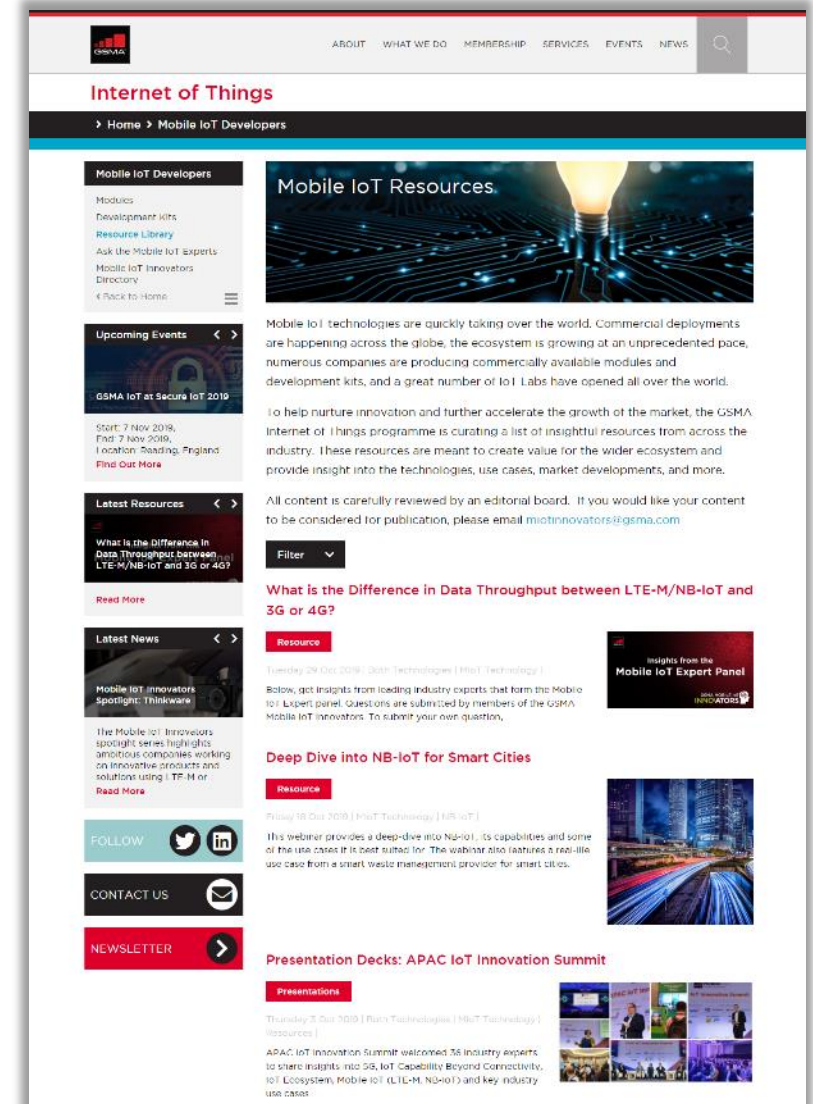


GSMA IoT Resources (Feb – Apr 2020)

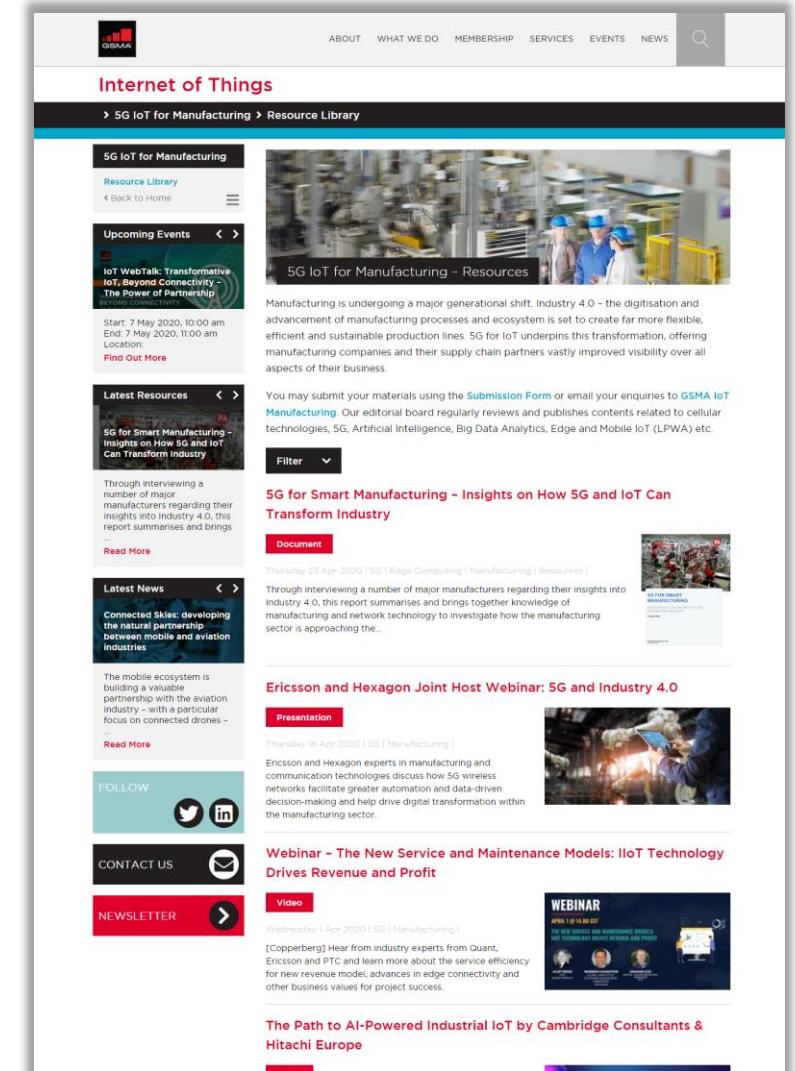
GSMA INTERNET OF THINGS PROGRAMME **38**

| Title | Programme Area | Asset Type | Link |
|---|----------------------------------|--------------|----------------------|
| GSMA and GUTMA launch new joint initiative to align mobile and aviation industries (May 2020) | Beyond Connectivity | Blog | Here |
| Sri Lanka Takes First Step Towards Smart Grid by Dialog Axiata (Apr 2020) | Beyond Connectivity | Case Study | Here |
| How China Mobile Is Harnessing IoT Big Data Solutions to Create Value in Strawberry Production (Apr 2020) | Beyond Connectivity | Case Study | Here |
| Advancing Smart Manufacturing with 5G IoT – The Global Adoption (Apr 2020) | Private Networks / Manufacturing | Blog | Here |
| TM ONE Transforms The Way Cities Move (Apr 2020) | Beyond Connectivity | Case Study | Here |
| 5G for Smart Manufacturing – Insights on How 5G and IoT Can Transform Industry (Apr 2020) | Private Networks / Manufacturing | Report | Here |
| Keeping Cars Safe and Secure by Telefonica (Apr 2020) | Beyond Connectivity | Case Study | Here |
| Enabling a Marketplace for Authenticated IoT Data by China Mobile (Apr 2020) | Beyond Connectivity | Case Study | Here |
| Telefónica's IoT Solution Fights Motorbike Theft (Apr 2020) | Beyond Connectivity | Case Study | Here |
| Making Field Operations Nimbler and More Efficient with Digital Technologies by Airtel (Mar 2020) | Beyond Connectivity | Case Study | Here |
| Improving Urban Life In Argentina by Telefonica (Mar 2020) | Beyond Connectivity | Case Study | Here |
| Leveraging the SIM for Secure E2E IP Connections: IoT Security Part 1 & 2 (Mar 2020) | Mobile IoT Innovators | Video | Here |
| Connected In-Home Care for Vulnerable Patients by Tele2 IoT (Mar 2020) | Beyond Connectivity | Case Study | Here |
| Peace of Mind at Your Fingertips with Mobile IoT by Nimb (Mar 2020) | Mobile IoT | Video | Here |
| Mobile IoT Innovators Spotlight: MSD Innovation (Mar 2020) | Mobile IoT Innovators | Blog | Here |
| Getting Starter with NB-IoT: Part 2 (Mar 2020) | Mobile IoT Innovators | Video | Here |
| Leading the World of Innovation in Asia-Pacific (Feb 2020) | Programme General | Case Studies | Here |
| Tracking assets to deliver cost savings and customer experience improvements by Telstra (Feb 2020) | Beyond Connectivity | Case Study | Here |
| IoT SAFE – Speaker Presentations (Feb 2020) | IoT Security | Presentation | Here |
| Make, Break, Innovate with Mobile IoT – Speaker Presentations (Feb 2020) | Mobile IoT Innovators | Presentation | Here |
| IoT – The Rise of Enterprise (Feb 2020) | GSMA Intelligence | Infographic | Here |
| Distributed Ledger Technologies for IoT: Learnings & Operator Role (Feb 2020) | Distributed Ledger Technology | Report | Here |
| Smart Farming: Weed Elimination with 5G Autonomous Robots, by KPN (Feb 2020) | Beyond Connectivity | Case Study | Here |
| Beyond Visual Line Of Sight Platform by KPN and TEOCO (Feb 2020) | Drones | Case Study | Here |
| Haier: Optimising Manufacturing performance through 5G, Edge Computing and Machine Vision (Feb 2020) | 5G Edge Computing | Case Study | Here |
| Improving the Yield and Quality of Grape Production in China with IoT (Jan 2020) | Beyond Connectivity | Report | 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](https://www.gsma.com/iot/manufacturing/resources/#/submit):
 - Contact details
 - Content Type & Technology
 - Short description
 - The URL source for download/view (content in PDF format, if applicable)



GSMA IoT

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

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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/>