

Welcome / Bem-vindo



**IoT certification
within GCF**

Lars Nielsen
GCF General Manager



Agenda for today

9:00 Opening speech

- Fabio Moraes, Strategic Engagement Director, GSMA

9:10 Welcome, Agenda overview and Introduction to GCF

- Lars Nielsen, General Manager, GCF

9:20 Overview of GCF Certification Processes

- Asif Hamidullah, GCF Program Lead, GCF

9:35 Device quality with GCF certification

- Atila Branco, Network Planning Director, Telefonica

9:55 GCF Certification for newest technologies NB-IoT and 5G

- Camillo Carlini, Mobile Devices Manager, Telecom Italia

10:15–10:30 Networking coffee break

10:30 RSP eSIM standalone certification in GCF

- Asif Hamidullah, GCF Program Lead, GCF

10:45 Chipset Manufacturers' perspective of certification

- Samir Vani, Corporate Sales America & Europe, Mediatek

11:10 IoT Certification within GCF

- Lars Nielsen, General Manager, GCF

11:35 Device Manufacturers perspective of certification

- Roy Church, Senior Compliance Manager, Samsung

Lunch

12:00–13:00

12:00–13:00 Lunch

13:00 Test Industry perspective of certification

- Alejandro Torrecilla, Global Carrier Services Director, DEKRA

13:20 Panel discussion on certification in Brasil and LATAM

- Prabha Aithal, Director, Subscriber Product Engineering, AT&T
- Carlos Pedraz Rodriguez, Head of Future Readiness, CCDO, Telefonica
- Camillo Carlini, Mobile Devices Manager, Telecom Italia
- Jacob John, 3GPP RAN5 Chair, Technologist – Standards & Certification
- Alejandro Torrecilla, Global Carrier Services Director, DEKRA

13:50 Closing remarks

- Lars Nielsen, General Manager, GCF

14:00 Workshop

Meet with Lars and Asif

15:00-19:00 GCF SG Pre-Meetings (Operators, Manufacturers, Observers)

March 27-28 GCF Steering Group meeting #78

Mobile and IoT Device Certification in Latin America



Mobile device interaction & dependencies are evolving...



Smartphones are evolving in their use to cater more and more to services touching users connected and digital lives.

Wearables are becoming increasingly the next frontier for personal wireless connectivity.

The Internet of Things is extending beyond a consumer's immediate personal space, to encapsulate their home and places of work.

Both cloud and localised peer to peer services are becoming the norm in connected living.

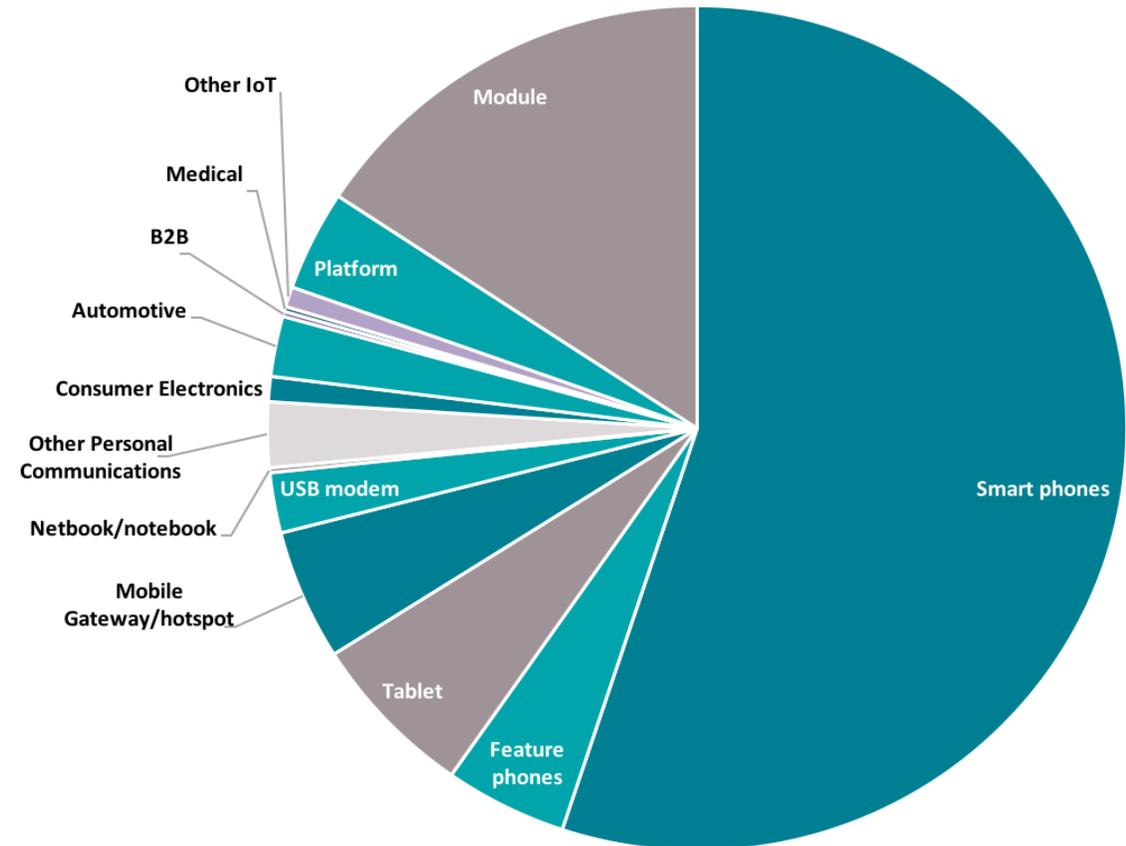
Supporting this vast array of interconnected devices and services requires seamless interoperability of the underlying technologies that are enabling this digital revolution.

Plans to support these technologies, and develop innovative ways of certification are underway at GCF

Expanding beyond the consumer space

- GCF is focussed on addressing the entire wireless market both in the consumer, enterprise, and IoT space
- Focus is being put on 5G and IoT to address growing market of connected devices
- Flexible certification practices are being put into place that will allow for a cost-effective solution for various IoT verticals

2017 Certified devices by type



Enabling certification for IoT verticals

RSP Certification

Standalone certification program for Remote SIM Provisioning (eSIM) for consumer devices launched in March 2018 & being managed on behalf of GSMA

oneM2M Certification

Standalone certification program for oneM2M compliant devices covering both conformance and interoperability testing currently in development

C-V2X Certification

Leverage existing 3GPP based C-V2X standards to enable C-V2X certification on LTE and ultimately over 5G NR

x-IoT Certification

Define certification criteria for additional IoT verticals based on well defined industry standards and manage the overall program on behalf of partner organisations

GCF IT abstraction layer

GCF certification engine

DCC
database

Member
portal

Public
portal

Certification
criteria

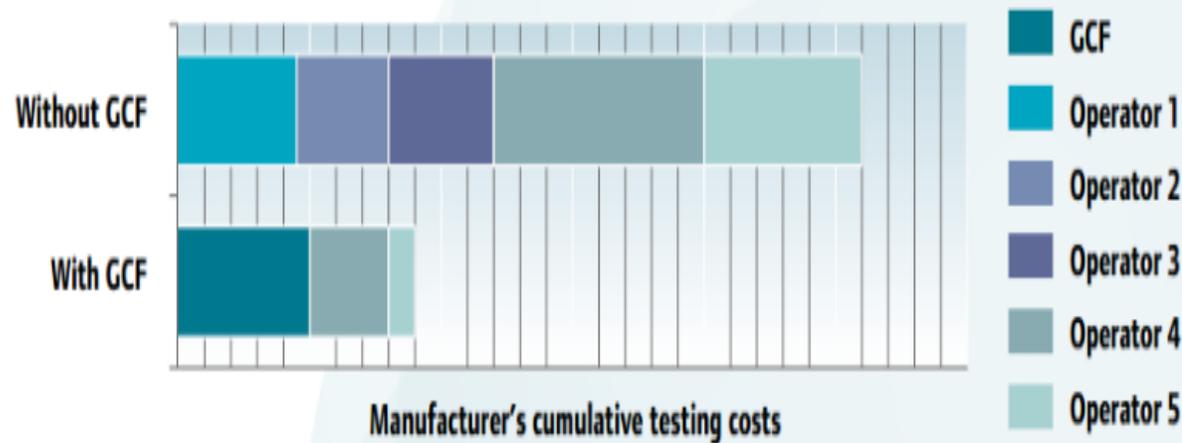
Technology
standards

Agreement
groups

Addressing some of the challenges of IoT

- **Can IoT Certification be cost effective?**

GCF Certification reduces the cumulative testing costs when manufacturers are supplying multiple operators



Certification for Devices using a GCF Certified Module focuses on a subset of overall tests:

- Audio Interface
- OTA Antenna Performance Testing
- Power Supply (if voltage supplied is different)
- SIM Interface
- Radiated Emissions
- User Interface (Supplementary Services, Emergency, USIM, etc)
- Application Enablers (RCS and UICC based NFC)

GCF IoT Priorities

- NB-IoT & LTE CAT-M
- oneM2M Certification
- C-V2X Certification



LTE-M

NB-IoT



Status of LTE CAT-M Work Items

WI Number	WI-Name	Status
WI-81-xxM	EUTRA Protocol Rel-8 for CAT-M	Active in Certification. Additional bands are in development.
WI-82-xxM	EPC Protocol Rel-8 for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-125M	USIM interworking with EUTRA/EPC Rel 8 CAT M	Active in Certification
WI-137M	USAT interworking with EUTRA/EPC Rel 8 CAT M	Active in Certification
WI-150-xxM	Rel 9 Enhancements for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-177-xxM	Rel 10 Enhancements for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-179-xxM	NIMTC for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-210-xxM	SIMTC for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-230M	USAT Enhancements for EUTRA CAT-M	Active in Certification.
WI-242-xxM	UE Power Save Mode for EUTRA CAT-M	Active in Certification. Additional bands are in development.
WI-254_A-xxM	Further LTE Physical Layer Enhanced for MTC (eMTC), CE Mode A (Rel-13)	ACTIVE in certification. Additional bands in development
WI-254_B-01M	Further LTE Physical Layer Enhanced for MTC (eMTC), CE Mode B (Rel-13)	In development. Target was Q3-2018.
WI-254_C-xxM	Further LTE Physical Layer Enhanced for MTC (eMTC), CloT Optimization (Rel-13) Band FDD 01M	INACTIVE (CEC target was Q2 / Q3-2018).

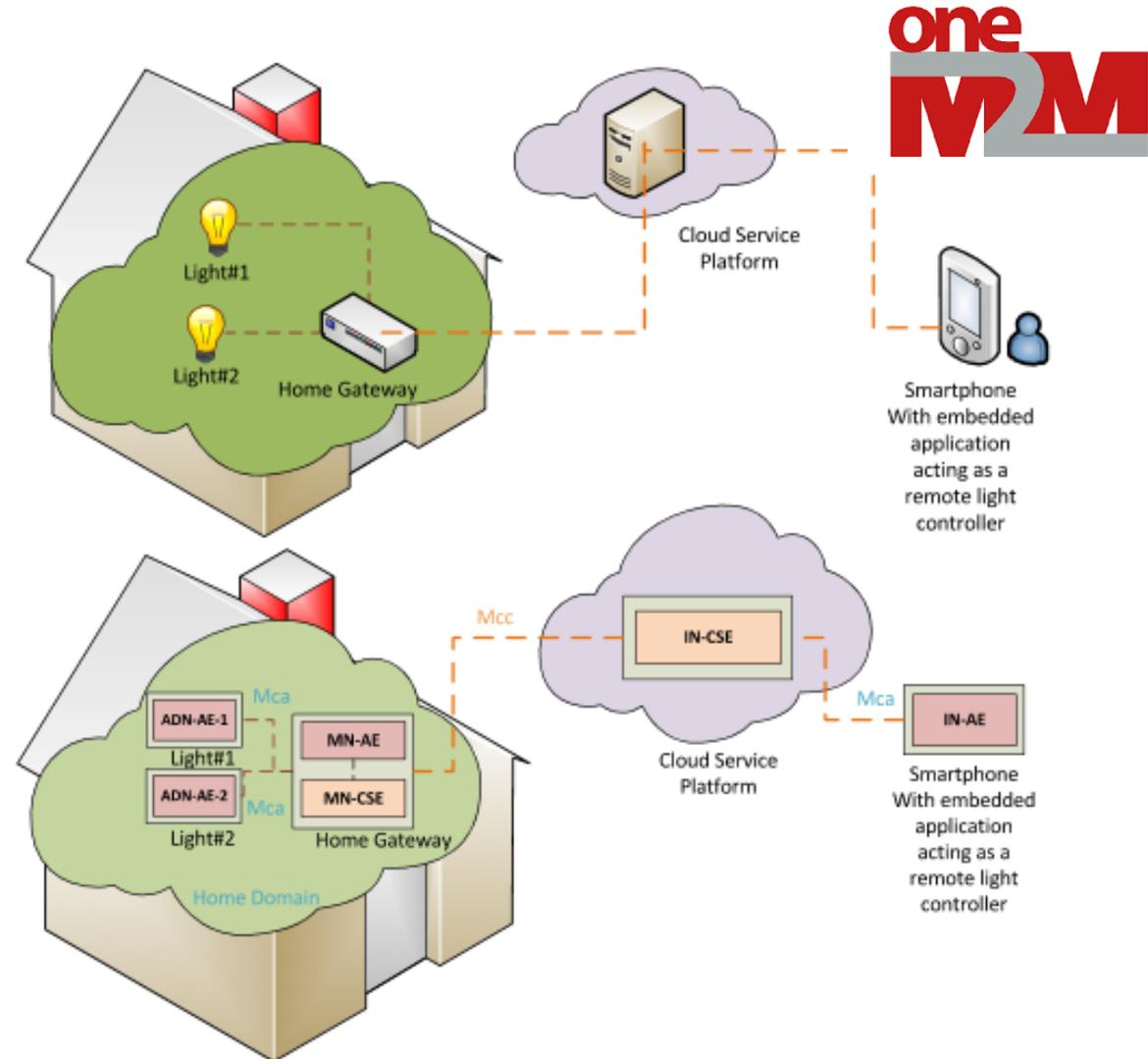
Status of NB-IoT Work Items



WI Number	WI-Name	Status
WI-257-xx	NB-IoT Protocol Conformance Testing	Active in Certification. Additional bands are in development.
WI-258-xx	NB-IoT RRM Testing	Active in Certification
WI-259-xx	NB-IoT RF Conformance Testing	Active in Certification.
WI-266-xx	USIM/USAT interworking with NB-IoT Rel-13	Active in Certification
WI-293-xx	NB-IoT RF Conformance Testing Enhancements	In development. Target Q4/2018 – Q2/2019
WI-295-xx	eNB-IoT Protocol Testing	In development. Target Q4/2018.
WI-301-xx	UICC deactivation and UICC suspension when terminal in PSM or eDRX (Rel-14) for LTE CAT M1 and/or NB-IoT	Active in Certification

oneM2M Application Layer Certification

- GCF is currently engaged in establishing a oneM2M certification program
 - Planned start is **Q2 of 2019**
- Focus will be certifying the application and service layer functionality of oneM2M
- Target devices include:
 - Application entities (AE)
 - Common service entities (CSE)
- Products cover both application nodes, middle nodes, and infrastructure nodes covering both HW and SW components



Status of Automotive Work Items



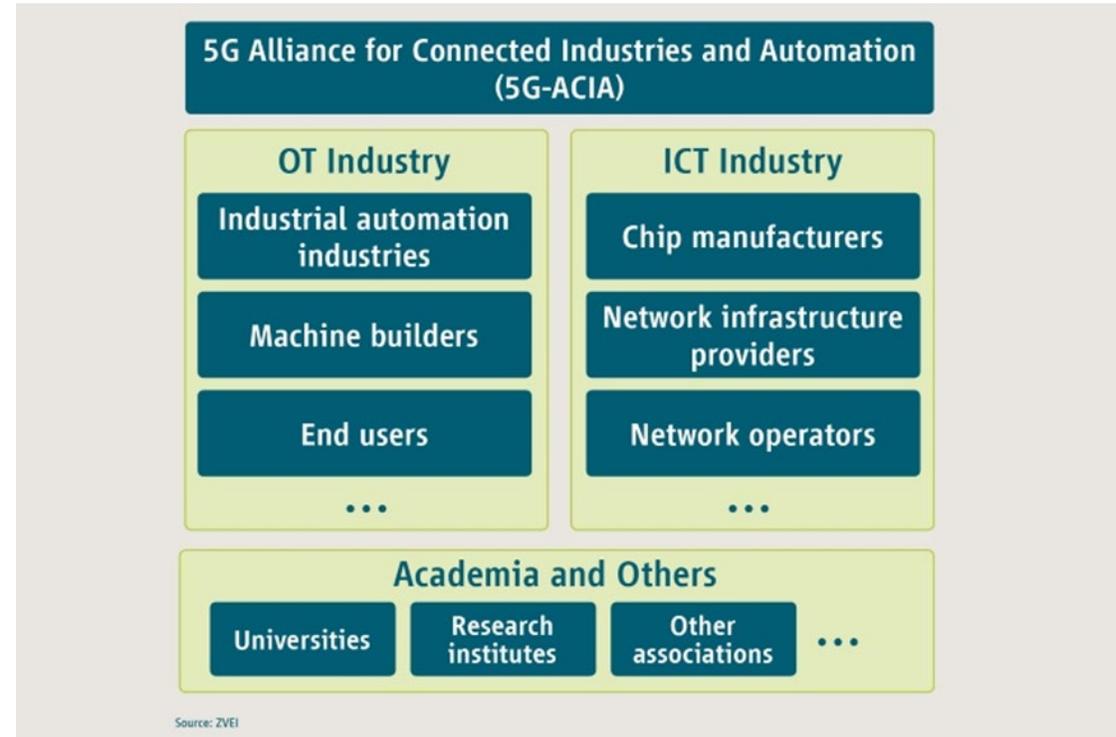
- 2 Work Items on V2X are currently underway:

WI Number	WI-Name	Status
WI-281	LTE Vehicle to Vehicle (V2V) for EUTRA Rel 14	Completed. Test Equipment Validation underway. Target Q4/18 Activation
WI-282	LTE Vehicle to Everything (V2X) for EUTRA Rel 14	Completed. Test Equipment Validation underway. Target Q4/18 Activation

- 2 Work Items on eCall are active and/or underway:

WI Number	WI-Name	Status
WI-147	Release 8 Non-modem procedures of eCall	Active in Certification
WI-298	EIEI (eCall with IMS) Rel 14	Ongoing. Target Q1/19 Activation

New Verticals



- Talks between 5G ACIA is in the early stages

IoT Security

- Copper Horse has developed an online tool on behalf of DCMS to help the general public understand the various requirements mapping of Security & Privacy for IoT in the industry today:
 - <https://iotsecuritymapping.uk/>
- Purpose of this mapping is to show what organisations and bodies of work are available today and what they are referencing. This includes individual academic papers, to think tanks, to government organisations, to SDOs.
- Each Code of Practice can be individually selected to see which organisations are referencing / promoting this practice and which document it is located on
- GCF IAG is investigating if the IoT security certification can be added to the scheme

Promotion of IoT Certified IoT Modules

- New public listing of modules is to be launched in Q2
- <https://www.globalcertificationforum.org/iot-modules.html>
- Operators are invited to link to this website in the IoT material

Keyword... X Q Filter(s) 0

25 results

ID	Manufacturer	Model	Technology	Application(s)	Markets	More Details
7618	Quectel Wireless Solutions Co., Ltd.	Quectel BC26	NB-IoT	All	Asia, Global	View
7581	Quectel Wireless Solutions Co., Ltd.	Quectel BC66	NB-IoT	All	Global	View
7556	Telit Communications S.p.A	ME910C1-AU	NB-IoT, 4G LTE FDD, 4G LTE-M FDD	Grid	Australia	View
7546	Telit Communications S.p.A	NE910C1-E1	NB-IoT, 4G LTE FDD	Grid	Europe	View
7545	Telit Communications S.p.A	ME910C1-E1	4G LTE FDD, 4G LTE-M FDD, NB-IoT	Grid	Europe	View
7537	Telit Communications S.p.A	ME910C1-WW	NB-IoT, 4G LTE-M FDD, GSM, 4G LTE FDD	Grid	Global	View
7516	Fibocom Wireless Inc	M910-GL	NB-IoT, 4G LTE-M FDD, GSM	City, Wearables, Home, Consumer Electronics, Other, Farming, Industrial, Grid	Global	View
7510	Telit Communications S.p.A	ME910C1-E2	4G LTE-M FDD, GSM, 4G LTE FDD, NB-IoT	Grid	Europe	View
7505	Quectel Wireless Solutions Co., Ltd.	Quectel BC28	NB-IoT	All	Asia, Global	View

IoT Summary

- Massive IoT is a phenomenon that is already underway
- GCF is fully prepared to handle the certification of these unique device types in a cost effective manner
- Participation from Industry and the GCF Membership will be key in identifying and prioritizing IoT Verticals that will require certification
- Promotion of usage of GCF Certified modules
- IoT chipset certification work has started

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