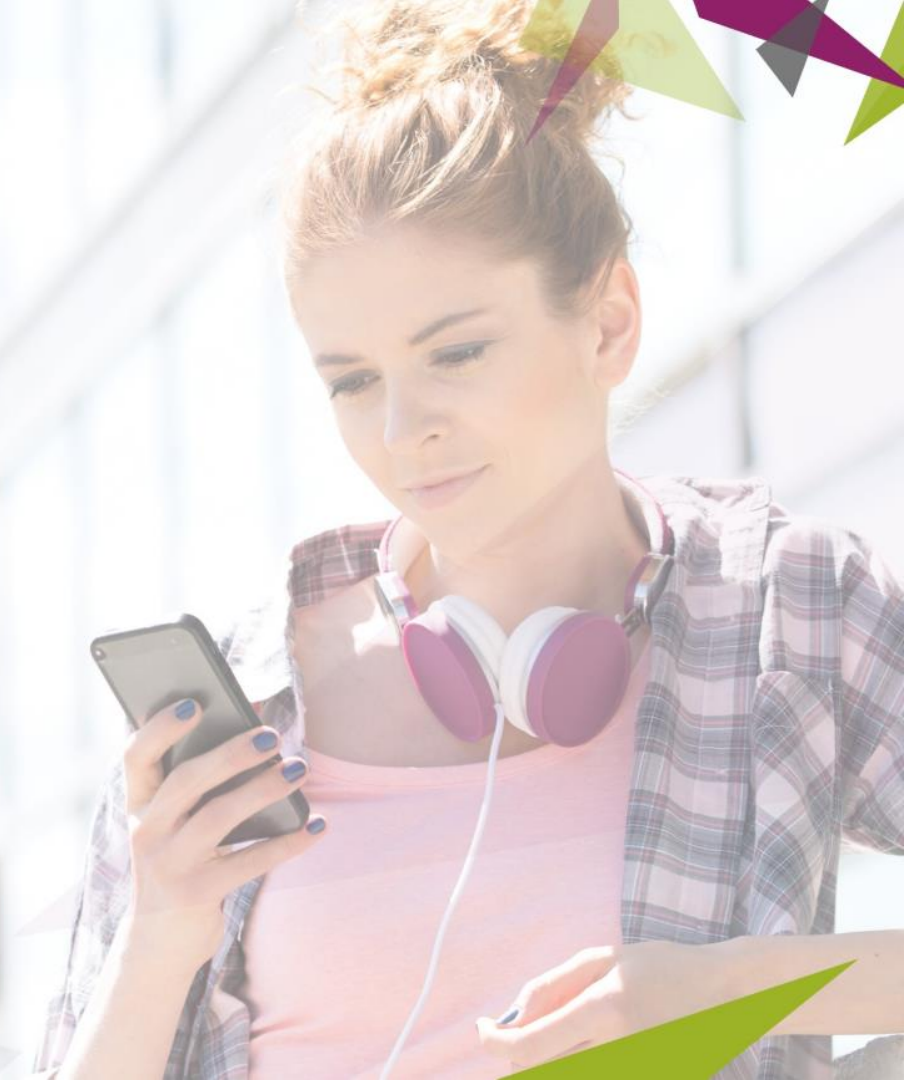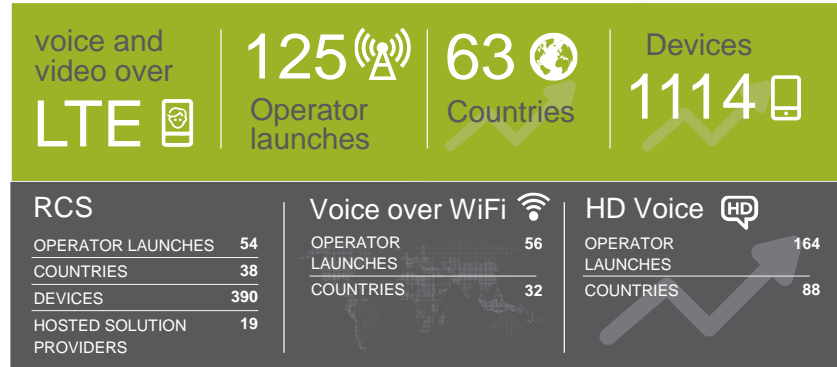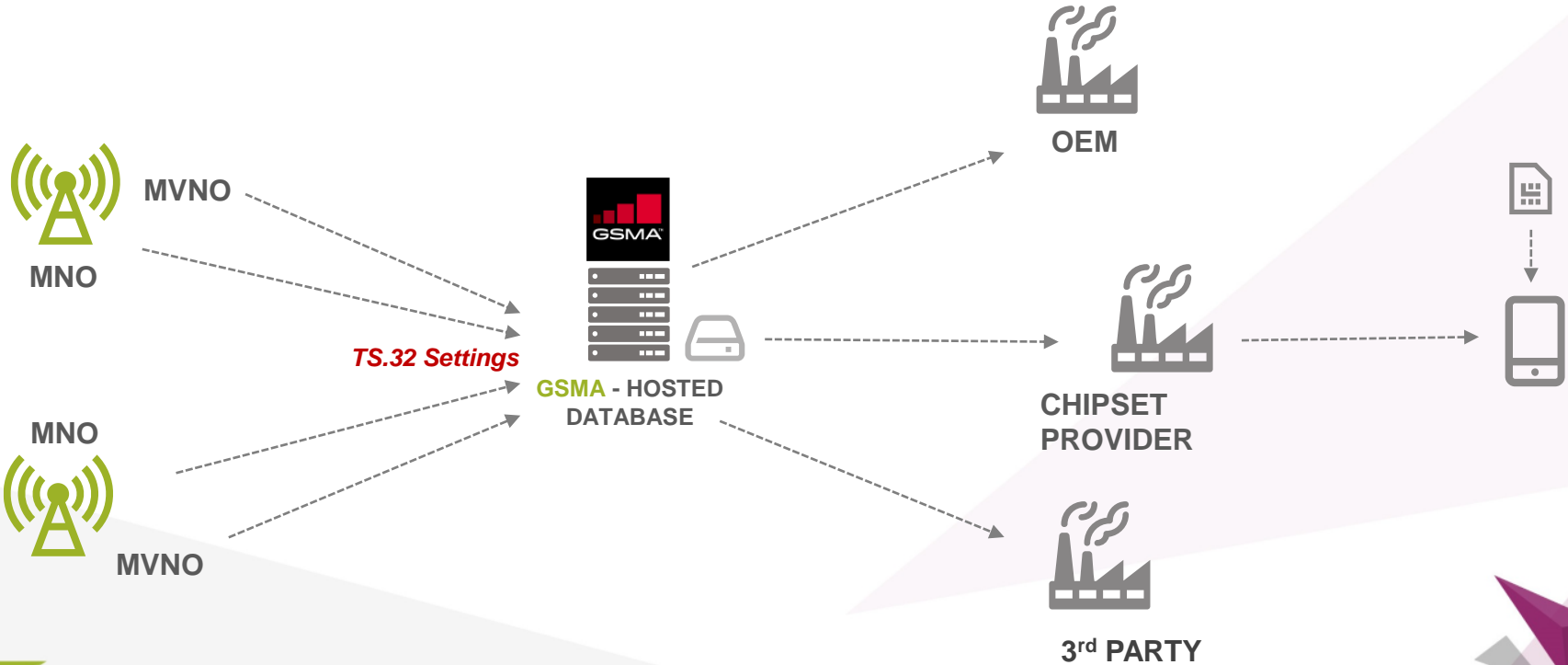# Device Settings Database

26.10.2017

- Open Market Devices > 60% of devices shipped.

- VoLTE / ViLTE launches are increasing
  - making device configuration a major issue
  - driving up OPEX / CAPEX costs due to non-centralised individual approaches

- IR.92 v11 and regional profiles:
  - Reduce fragmentation
  - Align operators to facilitate interoperability
  - Reduce optionality
  - But late customisation of devices required to provide flexibility

LTE Launched by
636 Operators

In **199** Countries

Reaching **72%** Of Population

voice and video over **LTE**

125 Operator launches

63 Countries

Devices **1114**

RCS		Voice over WiFi		HD Voice	
OPERATOR LAUNCHES	54	OPERATOR LAUNCHES	56	OPERATOR LAUNCHES	164
COUNTRIES	38				
DEVICES	390	COUNTRIES	32	COUNTRIES	88
HOSTED SOLUTION PROVIDERS	19				

06 October 2017, GSMA

Future Networks

IP comms device configuration ecosystem

MVNO

MNO

MNO

MVNO

TS.32 Settings

GSMA - HOSTED DATABASE

OEM

CHIPSET PROVIDER

3rd PARTY

TS.32 and IMS settings

| TS.32 v3 sections	# of parameters
GSM	16
UTRA	8
HSPA	24
LTE	50
LTE FGI bits	57
APN	27
IMS	48
Others	23
TOTAL	253

- Link: TS.32 v3.0 "Technical Adaptation of Devices via Late Customization"

- TS.32 (mostly) includes suggested default values – thereby implying the settings on an Open Market Device.

- IMS settings reflect the RILTE PRDs and the updates are reflected subsequently.

- Additional operator settings that aren't included in TS.32 can also be to the database as "MNO Supplementary Settings".

Project roadmap

Phase 1: Interim Stage

- Objective is to prove the demand by registering 50+ operators
- Settings are stored and distributed in InfoCentre2 which is GSMA's member portal
- Manual operation managed by GSMA staff

Q1 2017
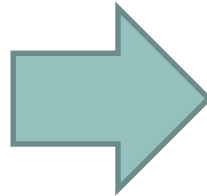
Phase 2: Real-time Database

- The real-time database fully compliant with TS.36
- Web user interfaces for operators and OEMs
- APIs for OEM device config servers

Registered operators

MNOs:
- A1 Telekom (Austria)
- AT&T
- China Unicom
- DT Czech Republic
- DT Germany
- DT Greece
- DT Hungary
- DT Netherlands
- DT Poland
- DT Romania
- DT Group (+6 MNOs, +5 MVNOs)
- IDC (Moldova)
- IT&E
- MTN Nigeria
- ntel (Nigeria)
- Orange Belgium
- Orange France
- Orange Moldova
- Orange Poland
- Orange Romania
- Orange Slovakia
- Orange Spain
- Orange Group (MEA operators)

MNOs:
- Proximus
- SFR
- Smart (Cambodia)
- Swisscom
- Telecom Italia
- Telecom Personal (Argentina)
- Telefonica Argentina
- Telefonica UK
- Telefonica Group (+ 16 MNOs)
- Three (UK + 17 MNOs)
- Turkcell
- Turk Telekom
- Velcom (Belarus)
- Verizon Wireless
- Viva Kuwait
- Vodafone (Germany + others)
- Zain Kuwait

MVNOs:
- Cricket (AT&T)
- Voiceworks MVNOs (2)
- Now PAYG (Now Mobile)
- Talk Home Mobile
- Transatel
- Liberty Global MVNOs (3)

Settings submitted: 33 MNO, 1 MVNO
Settings in progress: 50+ MNOs, 30+ MVNOs

Red colour indicates that the settings are not delivered yet

OEMs and Chipset Providers

Phase 1: Interim Stage

+ Phase 2: Real-time Database

Key questions

Q. *Which settings are included in the scope?*

A. The device settings include VoLTE, ViLTE, VoWiFi and radio parameters.
Please refer to TS.32 v3 document for further details.

Q. *Can operators see each others settings?*

A. No, settings are isolated between the operators.

Q. *Can all OEMs see all operator settings?*

A. No, operators provide the list of OEMs that their setting can be shared. Ideally the settings should be available for all OEMs.

Q. *How can operators and OEMs join the project?*

A. To find out more and to participate in this initiative visit
www.gsma.com/futurenetworks/digest/dsd/

TERMINAL STEERING GROUP

TSG is a members only GSMA working group that facilitates operator and vendor alignment to drive terminal related matters for the benefit of the entire mobile ecosystem. It manages/coordinates terminal capability requirements activities within GSMA and beyond. TSG also provides a first contact point for operators or vendors or industry organisations who would like to:

- Start, update on and discuss terminal related matters, terminal capability requirements activities
- Update one of the testing specifications TSG provides a coordinated activity for operators and vendors
- Ensure feasibility, consistency, vendor engagement, no overlap with other industry bodies activities
- Align work between terminal capability requirements and terminal testing activities
- Please see the group page at:

  https://infocentre2.gsma.com/gp/wg/TS/Pages/Default.aspx

TECHNICAL ADAPTATION OF DEVICES

- ► Task Force under TSG that defined a set of configuration parameters for Late Customisation for OMD.

- ► Covered all aspects of late configuration (e.g. LTE, 2G/3G, RAN, IMS and others).

- ► The IMS aspects were defined in co-operation with RILTE and were also reflected in updates to latest versions of RILTE PRDs (IR.92 etc.) via addition of annexes with parameters and default values and (continuing) interaction with 3GPP to maintain alignment.

- ► Published "TS.32 v3 Technical Adaptation of Devices Through Late Customisation" in 20 Sep 2017, please download from the link below:

  https://www.gsma.com/newsroom/all-documents/technical-adaptation-of-devices-through-late-customisation/

- ► Please see the group page at:

  https://infocentre2.gsma.com/gp/wg/TS/WI/TAD/Pages/Default.aspx

DEVICE SETTINGS DATABASE

- ▶ Task Force under TSG that provides a central repository for operator-specific settings,
- ▶ These settings will be made available to device manufacturers, to bring improved ease-of-use to end customers and improved performance of devices, while reducing the need for bilateral communications between OEMs and carriers.
- ▶ The reference document specifies the "requirements for a database enabling the efficient transfer of settings from mobile network operators (including mobile virtual network operators) to device manufacturers in order to allow for the appropriate customization of devices ".
- ▶ Published "TS.36 v3 Devices Settings Database" in 20 Sep 2017, please download from the link below: https://www.gsma.com/newsroom/all-documents/devices-setting-database/
- ▶ Please see the group page at: https://infocentre2.gsma.com/gp/wg/TS/WI/SET/Pages/Default.aspx