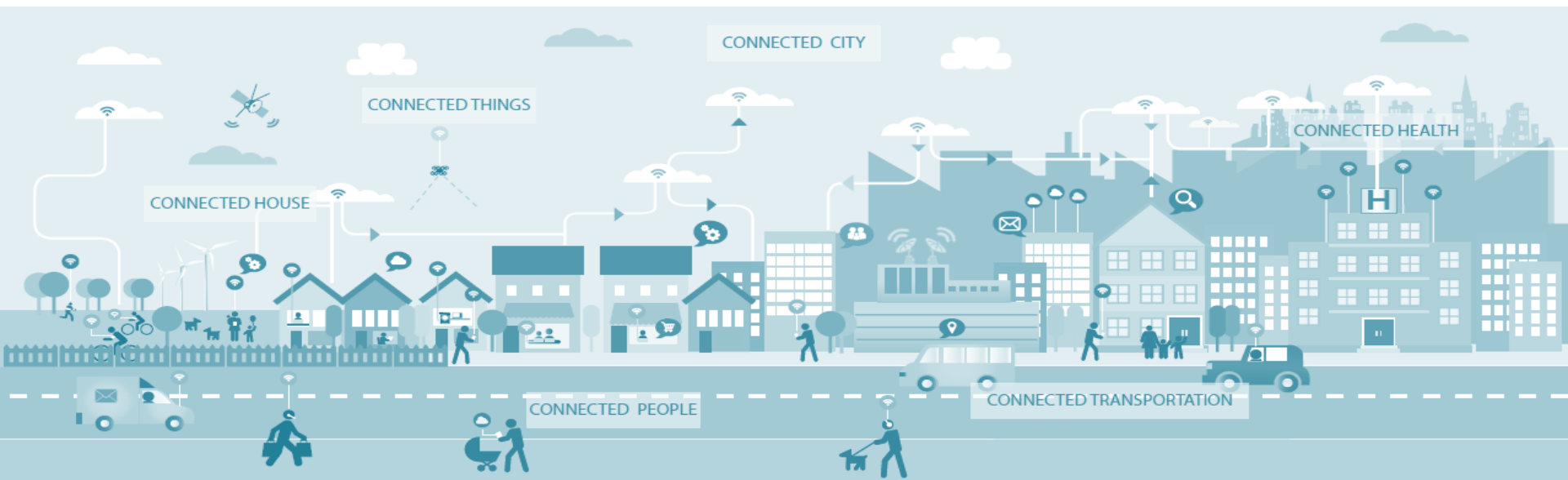


Test, Measurement, and KPIs Validation (TMV) WG – Status, lessons learned & path to completion



- Quick overview
- Highlights
- Lessons learned
- Path to completion

Quick overview – TMV WG History and Structure

- History
 - 5G-PPP Test, Measurement, and KPIs Validation (TMV) WG established in Feb. 2019 (active more than 4 years)
 - Initial idea from Maurizio Cecchi (PIIU), Mauro Boldi (TIM) and Manuel Lorenzo (Ericsson)
 - Started as a joint activity of 5G EVE and 5G-VINNI (ICT-17 projects)
 - Quickly extended to many projects addressing 5G / B5G / 6G KPIs, monitoring, trial results
- Structure
 - Co-chaired by Evangelos Kosmatos (WINGS ICT Solutions) and Michael Dieudonné (Keysight)
 - Core team of about 15 partners (active participation and bi-weekly telcos for synch)
 - A larger team of contributors (ad hoc based) from projects
 - Support from 6G-IA (Kostas and Alex)
 - Close collaboration with TB (Mikael)

Quick overview – TMV WG Vision

- Promote commonalities across projects that have strong interest in Testing, Monitoring and Validation methodologies
- Provide insights from the analysis of trial results from 5G-PPP projects
- Research areas and technology domains
 - KPI definition, KPI sources, collection procedures and analysis
 - Testing frameworks (requirements, environment, scenarios, expectations, limitation) and tools
 - Testing methodologies and procedures
 - KPI validation methodologies
 - Testing lifecycle (i.e., testing execution, monitoring, evaluation and reporting)
 - Common information models for T&M

Highlights

- Publication of 8 whitepapers
- Contribution to ETSI INT
- Contribution to ITU Working Party 5D (WP5D)
- Organization of two workshops
- Establishment of two Task Forces (TFs)
- Realisation of around 60 telcos + TF telcos

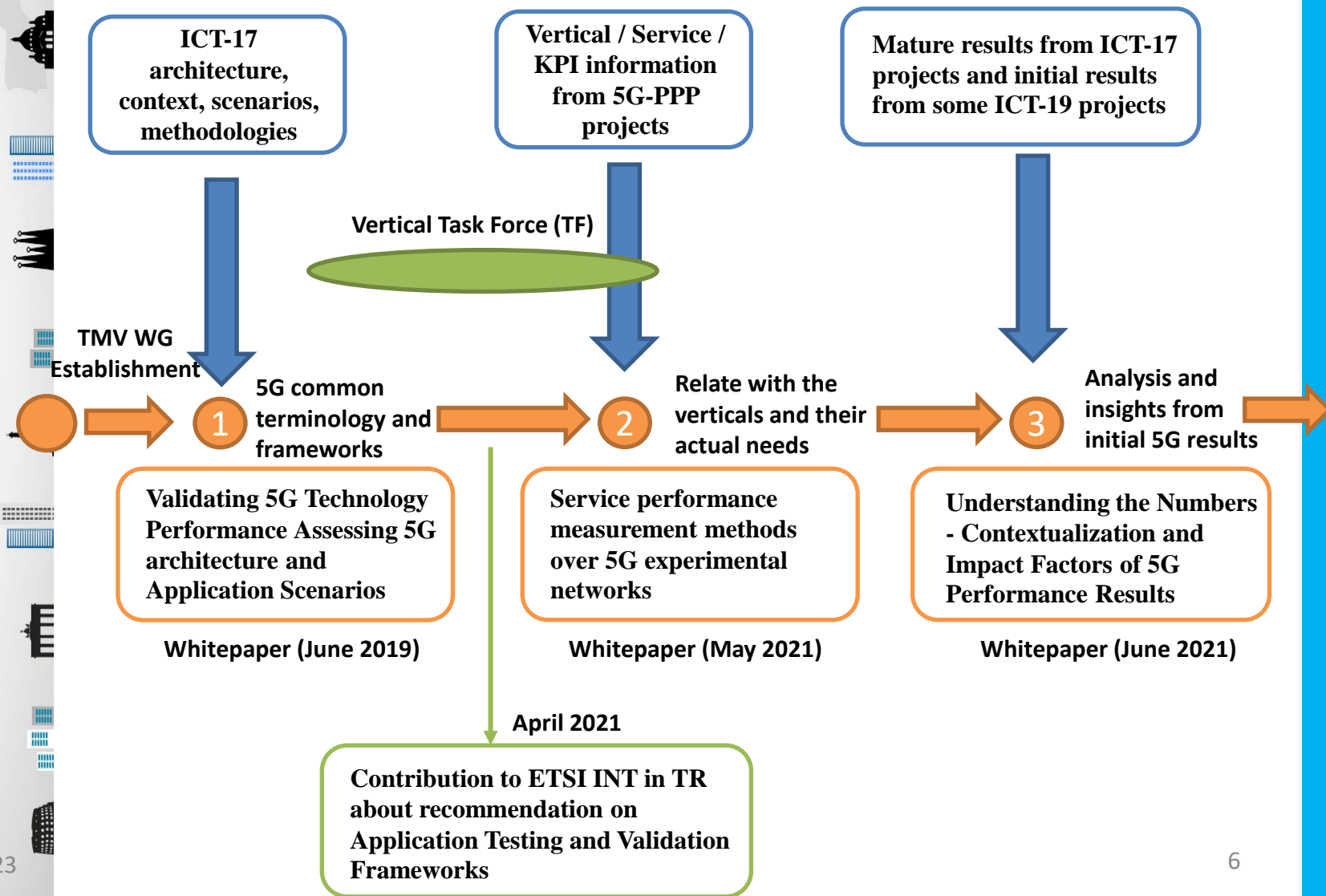
ETSI TR 103 761 V0.0.5 (2021-04)



**Core Network and Interoperability Testing (INT) Methodologies
for E2E Testing & Validation of Vertical Applications over 5G &
Beyond networks**

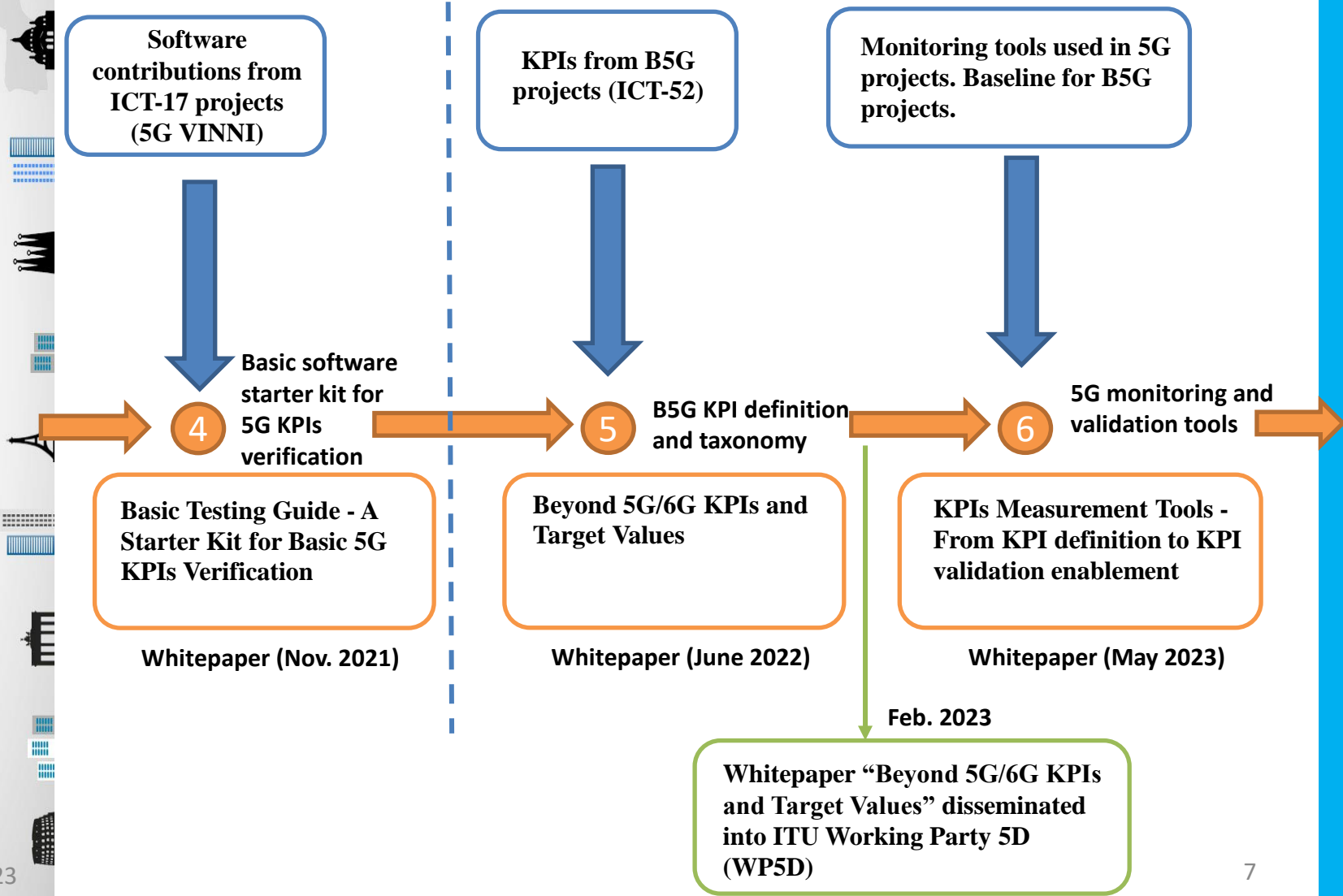
Highlights

5G PPP
The European path towards global next generation communication network

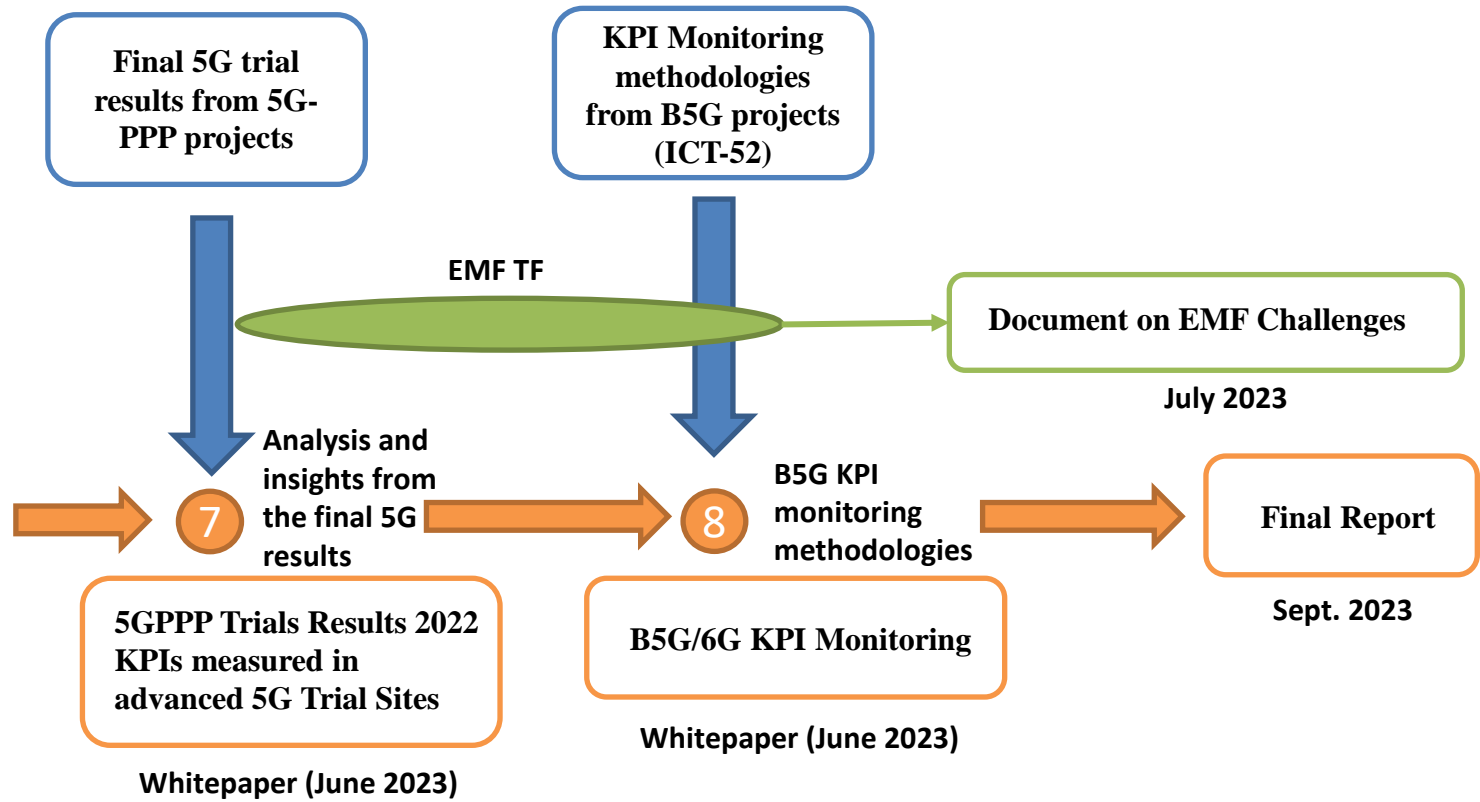


Highlights

Start of B5G/6G projects



Highlights



Lessons learned

- Lesson 1: “In order to collect meaningful data from the projects you need a meaningful template”
 - Well defined templates with specific questions helped us to analyse data in a structured and efficient way.
- Lesson 2: “You need at least two rounds of interactions for collecting data”
 - First round collect data and then second round for specific feedback and clarifications
- Lesson 3: “The insights are hidden in the context”
 - In order to provide meaningful insights, we dig in and analyse the context. In case of trial results, we analysed the trial scenarios (technologies, applications, environment, tools)

Lessons learned

- Lesson 4: “In order to progress quickly the first thing you need is a common terminology and framework”
 - This was our first step both in 5G and B5G. Define terminology and framework, define common KPIs, define methodologies and tools.
- Lesson 5: “The evolution of KPI definition and monitoring should follow closely the evolution of technologies”
 - We tried to address B5G KPI definition and monitoring very early in order to identify gaps and identify the evolution of the tools.
- Lesson 6: “The synergies among projects (although underrated) and the generation of references (e.g. architectures, methodologies) avoid the overlapping of activities and speed up the overall progress”
 - We try to find commonalities (e.g. generate KPI families, common tools) and generate reference (architectures, methodologies, basic tools) when possible.

Path to completion

- Two whitepapers under review by SB/TB, to be published on 2nd June 2023 -> Total 8 whitepapers
- Document on EMF Challenges to be published by July 2023
- TMW WG Final report generation is ongoing, to be finalised by end July 2023

5G PPP

The European path towards global next generation communication network

Thank You!!!