The 5G EVE End-to-End Facility
EMPOWER/PAWR Workshop

29th of April 2019 – Paris, France

Website: www.5g-eve.eu

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5G EVE

5G EVE partners and sites facilities

5G EVE: Helicopter view

Industries' Digitalization

5G
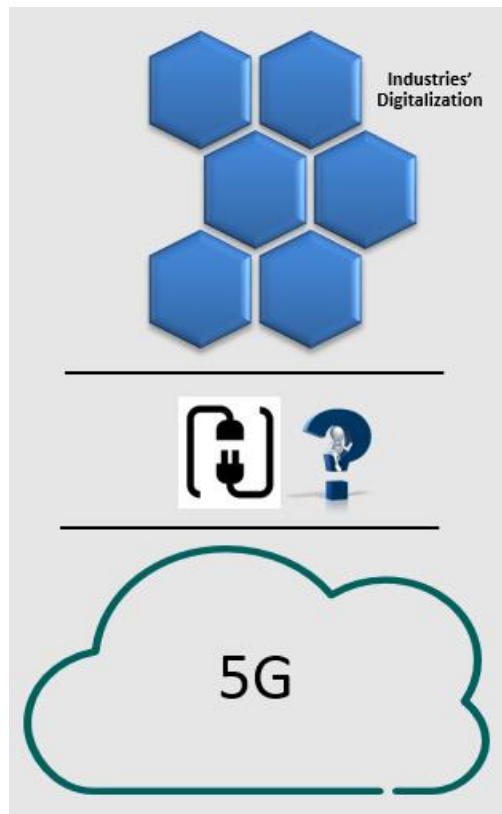
5GEVE Participant Verticals

- Industry 4.0
- Tourism
- Utilities
- Media
- Transport
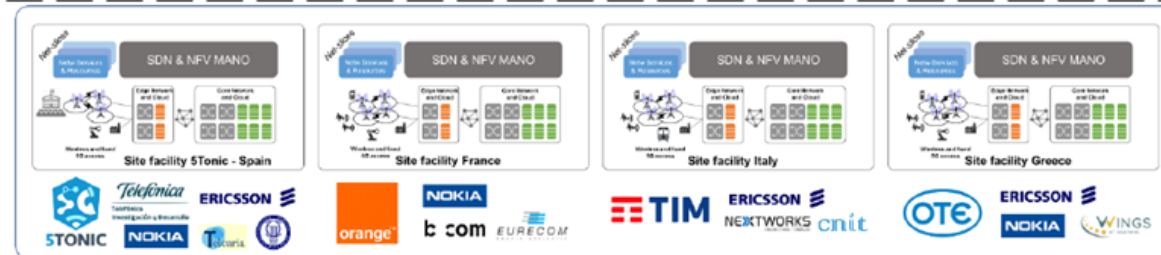- Smart Cities

ICT-19 Proposers

- Vertical Apps
- Vertical Apps
- Vertical Apps
- Vertical Apps

5G EVE's Integrated Portal for 5G Experimentation and Validation, with interworking capabilities among trial sites

Site facility 5Tonic - Spain
Site facility France
Site facility Italy
Site facility Greece

BACKGROUND

Pre-commercial products | 5G-PPP Phase 1 & Phase 2 projects | Advanced 5G Labs (e.g. Ericsson @ Kista) | 5G testbeds in EU

5G EVE

What is 5G EVE innovating at

1 **Intent-based interface towards verticals**

A disruptive intent-based interface to simplify the access to the 5G end to end facility, specifying "what" is asked without details on "how" it is provided.

2 **Multi-domain slicing and orchestration**

A new orchestration framework with the necessary features able to manage effectively multiple site facilities, dramatically improve efficiency, prevent overload, and easily manage migration of networks components, while meeting performance requirements.

3 **Performance Diagnostics (KPI Framework)**

A completely new performance diagnosis mechanism and a new monitoring framework enabling the capturing of service and slice performance indicators, providing insight on performance.

4 **5G VNF's (Openness Framework)**

A new framework to provide a modular, reusable set of different SFs enabling the coexistence of proprietary and open source technologies; this will allow the modular replacement and chaining of components implemented with open and novel performance acceleration techniques.
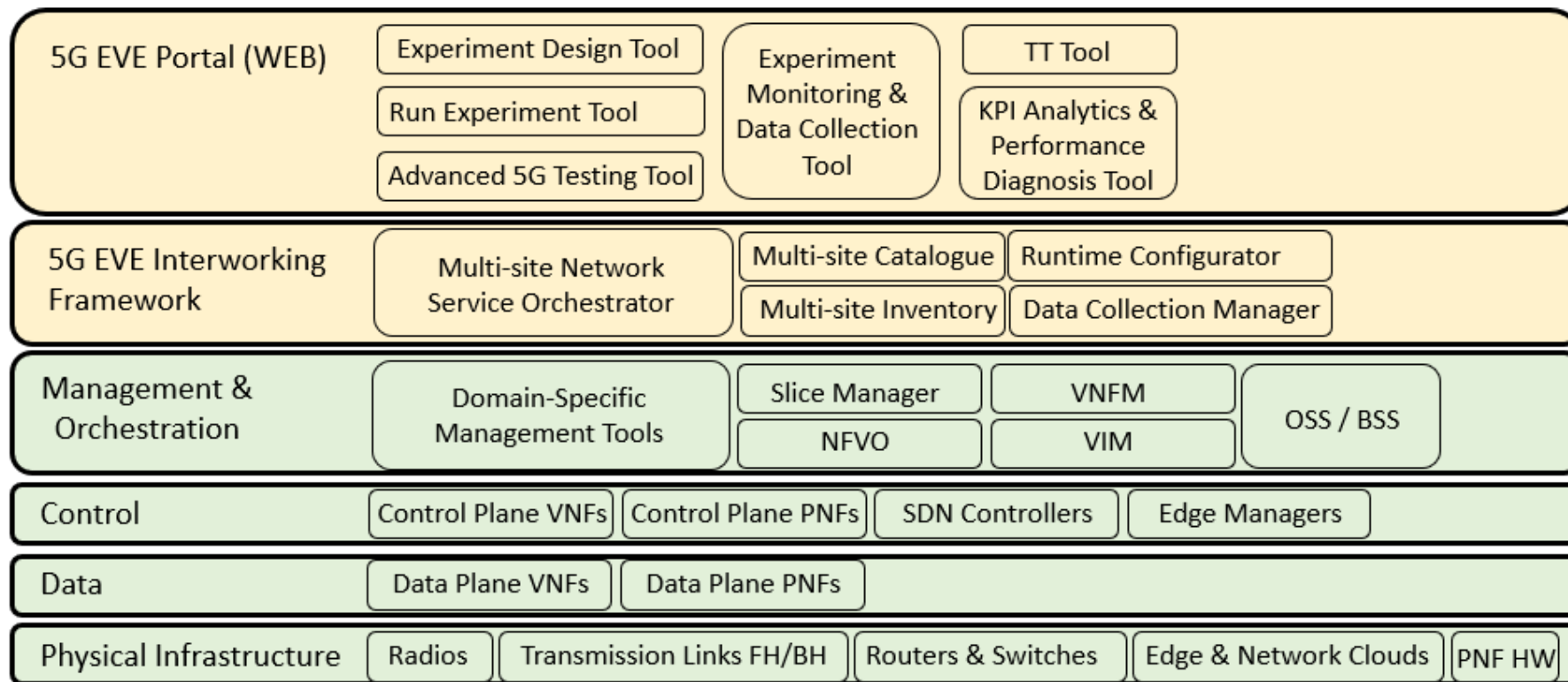
5G EVE

5G EVE Platform Architecture
Implementation View

Common 5G EVE functional blocks
Common to all sites; secure homogeneous platform services to Verticals

5G EVE Site functional blocks
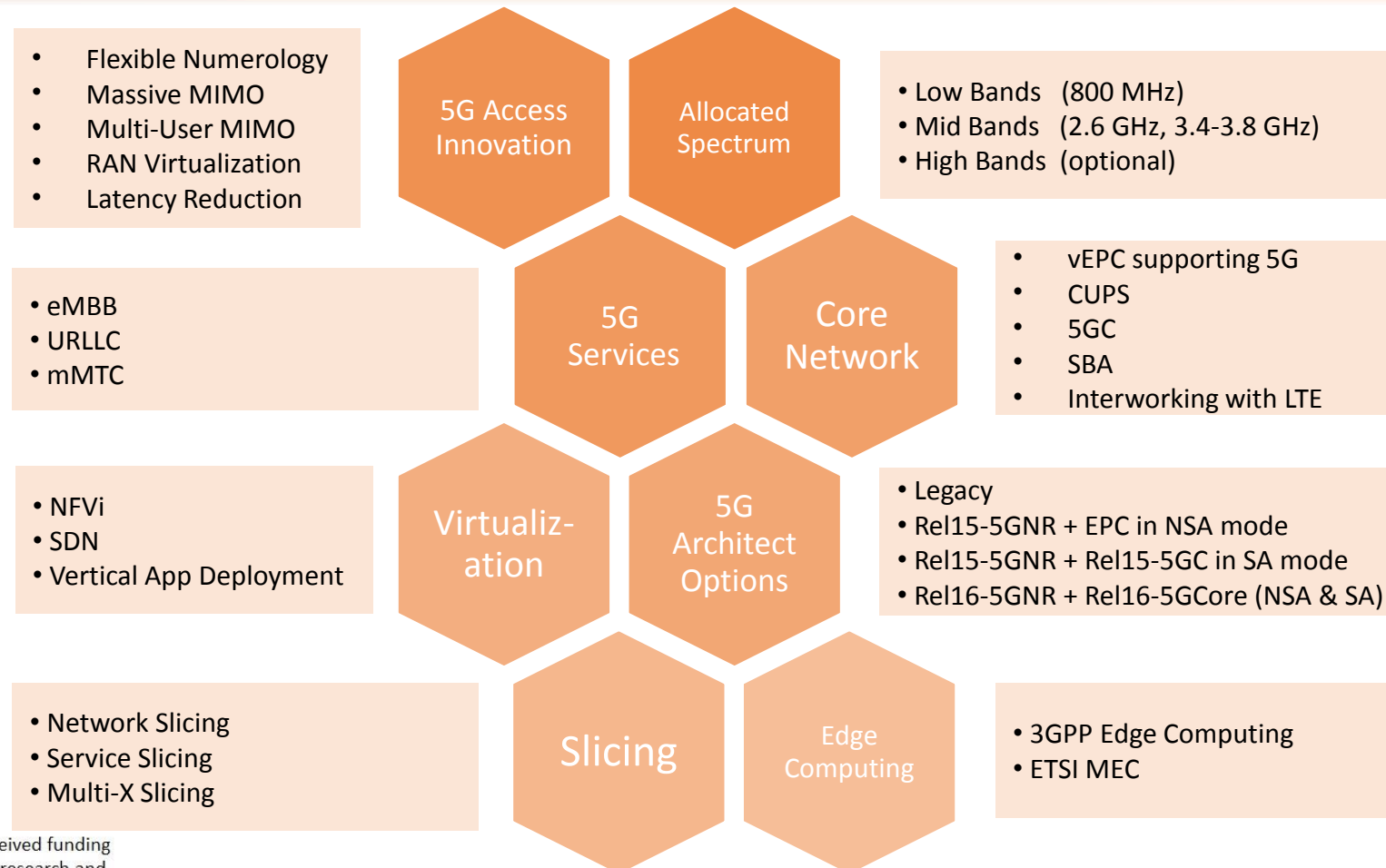Based on different technologies and implementations for different sites; enable richer tests

5G EVE

5G EVE Platform Architecture
Involved 5G Technologies & Standards

- Flexible Numerology
- Massive MIMO
- Multi-User MIMO
- RAN Virtualization
- Latency Reduction

5G Access Innovation

Allocated Spectrum

- Low Bands (800 MHz)
- Mid Bands (2.6 GHz, 3.4-3.8 GHz)
- High Bands (optional)

- eMBB
- URLLC
- mMTC

5G Services

Core Network

- vEPC supporting 5G
- CUPS
- 5GC
- SBA
- Interworking with LTE

- NFVi
- SDN
- Vertical App Deployment

Virtualiz-ation

5G Architect Options

- Legacy
- Rel15-5GNR + EPC in NSA mode
- Rel15-5GNR + Rel15-5GC in SA mode
- Rel16-5GNR + Rel16-5GCore (NSA & SA)

- Network Slicing
- Service Slicing
- Multi-X Slicing

Slicing

Edge Computing

- 3GPP Edge Computing
- ETSI MEC

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Roadmap
General Timeline
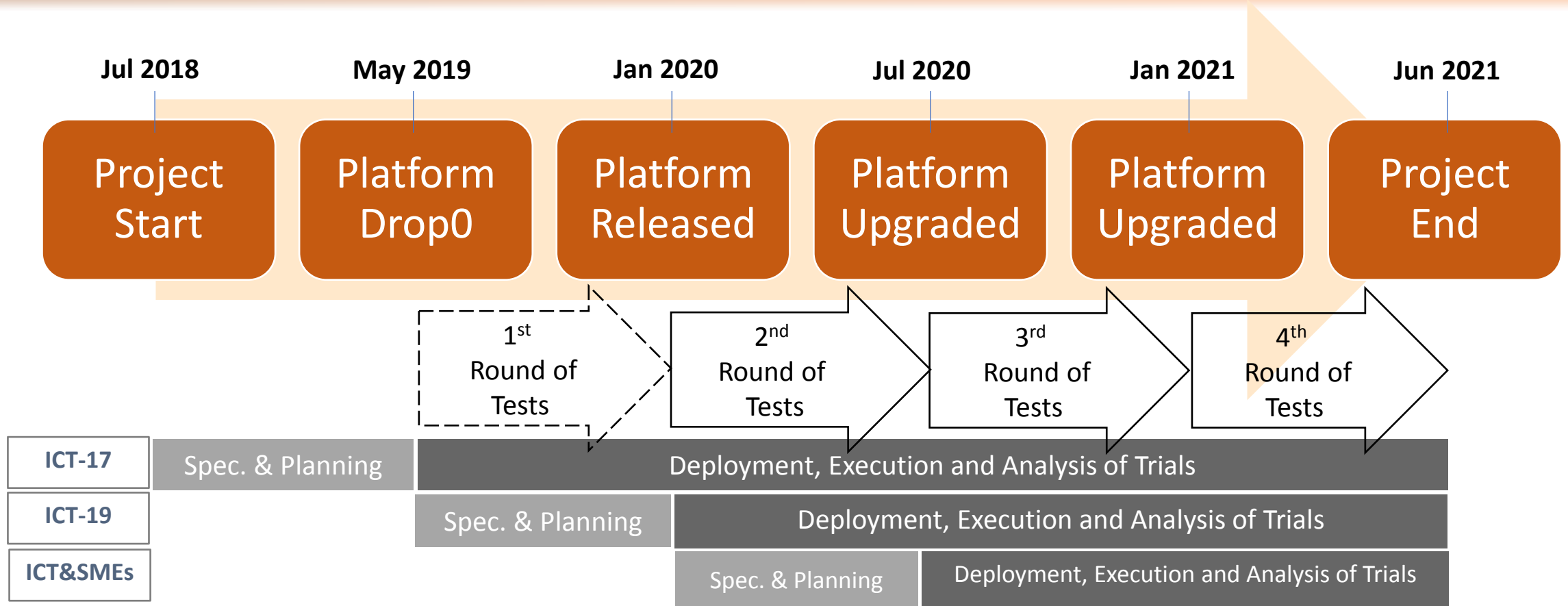
Jul 2018	May 2019	Jan 2020	Jul 2020	Jan 2021	Jun 2021
Project Start	Platform Drop0	Platform Released	Platform Upgraded	Platform Upgraded	Project End

1st Round of Tests → 2nd Round of Tests → 3rd Round of Tests → 4th Round of Tests

ICT-17	Spec. & Planning	Deployment, Execution and Analysis of Trials
ICT-19	Spec. & Planning	Deployment, Execution and Analysis of Trials
ICT&SMEs	Spec. & Planning	Deployment, Execution and Analysis of Trials

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If you want to know more …

- Participate to the 1H webinar the 9th of May @2:30pm

https://www.5g-eve.eu/event/webinar-the-5g-eve-end-to-end-facility-for-vertical-industry-trials/

Registration in the webpage

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Thank you!

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