5G-SOLUTIONS – 5G Solutions for European Citizens

Andrea Di Giglio, (TIM)
Online, October 14th 2020
Who we are

- **Topic:** ICT-19-2019
- **Type of Action:** RIA
- **Proposal No:** 856691
- **Duration:** 36 months
- **Budget:** €14,293,850
- **Consortium members:** 26 partners from 9 EU member states and associated countries (Israel, Norway)
- **Project coordinator:** Andrea Di Giglio (TIM)
- **Technical Manager:** Håkon Lønsethagen (Telenor)
- **13 partners in existing 5G-PPP Phase 1-3 projects**
- **3 Telecom Operators:** TIM, Telenor and Forthnet
- **2 Telecom Vendors:** Ericsson, Nokia
- **7 Large Industries:** ENEL, GLANBIA, IBM, IREN, P&G, YARA
- **2 Research Centers:** CTTC, PIUU
- **3 Universities:** NTNU, Patra, TSSG (WIT)
- **10 SMEs:** ARES2T, APP-ART, CyberEthicsLab, EBOS, INLECOM, IRIS, IRT, LIVE-U, NUROGAMES, ORBIS
- **Website:** [https://5gsolutionsproject.eu](https://5gsolutionsproject.eu)
5G-SOLUTIONS delivering Impact from Objectives

**Innovation**
- To develop novel, realistic and business relevant use cases in 5 key verticals

**Technical**
- Demonstration of the potential and value of advanced 5G solutions through extensive technological validation in Living Lab field trials

**Business**
- Develop and validate viable business models for each use case scenario within the 5 vertical industries whilst protecting IP and ensuring long-term sustainability

**Dissemination**
- Contribution to 5G standardisation bodies
- To maximise project’s visibility and facilitate dissemination and communication activities; create new knowledge; contribute to 5G-PPP

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreement No. 856691

14 October 2020
What services and use cases do you see for 5G?

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5G-SOLUTIONS aims to prove and validate that the 5G capabilities provide prominent industry verticals with ubiquitous access to a wide range of forward-looking services with orders of magnitude of improvement over 4G, thus bringing the 5G vision closer to realisation.

- Factories of the Future
- Smart Energy
- Smart Cities
- Smart Ports
- Media & Entertainment

- Technical Validation
- Business Validation

**Mission**

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14 October 2020
What are the benefits of 5G?

Expected Impact Indicators | Target values with respect to 4G
---|---
Network slicing | Meet target KPI values during infrastructure, spectrum and RAN sharing and network slicing.
Multi tenancy & flexibility | 
Traffic type | 
User data rate | Guaranteed user data rates >50Mbps
Latency | 10-fold less (<1ms) with less than 10% jitter
Reliability | >99.999%
Positioning accuracy | <1m for outdoor devices

- Reducing environmental pollution
- Providing a wider approach to smart city
- Reducing both CAPEX and OPEX of energy consumption
- Improving safety and reducing crime
- Productivity gains in the manufacturing sector thanks to process optimisation inside digital factories

<table>
<thead>
<tr>
<th>Living Lab title</th>
<th>Technological KPIs</th>
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<tbody>
<tr>
<td></td>
<td>Data Rate (Mbps)</td>
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<tr>
<td>LL1: Factories of the Future</td>
<td>&gt;100</td>
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<td>LL2: Smart Energy</td>
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<td>LL3: Smart Cities &amp; Ports</td>
<td>&gt;100</td>
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<td>LL4: Media &amp; Entertainment</td>
<td>&lt;1000</td>
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Next steps

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tr>
<td>Calendar Month</td>
<td>APR</td>
<td>MAY</td>
<td>JUN</td>
<td>JUL</td>
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<tr>
<td>M# from project start</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>5G-SOLUTIONS implementation phases</td>
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<td>5G-EVE Turin facility 3GPP rel.</td>
<td>Rel. 15 ASN.1</td>
<td>Rel. 16 ASN.1</td>
<td>Beyond Rel. 16</td>
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<td>ITU</td>
<td>IMT-2020 Specifications</td>
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<td>SDN/NFV ecosystem</td>
<td>ETSI NFV/ZSM, IETF, ONF, MEF, TMF/OSM, ONAP, OPNFV, ODL...</td>
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<td>&amp; fora</td>
<td>5G-IA, 5G-AA, NGMN, GSMA, BBF, CPRI, ESA 5GTF...</td>
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<td>EU-wide 5G networks</td>
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**Phase 2 gate: Readiness of the 5G ecosystem to conduct Living Lab trials (M12), related to MS2**

**Phase 3 – Validation, demonstration & impact maximisation**

Iterative execution of 20 use cases in LLs over 3 consequential and iterative cycles of testing, at least once per 3GPP release. **Iteration** is necessary to ensure that potential feedback improvements are applied to all solution components thus enabling regression testing to ensure baseline target KPIs are met. This phase also includes dissemination, innovation, commercialisation, capacity building and data management activities in WP8 and WP9.
thank you!

Contact Details

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