LOCalization and analytics on-demand embedded in the 5G ecosystem, for Ubiquitous vertical applicationS

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Infocom World
Athens, 26th November 2019

This project will receive funding from the European Union's Horizon 2020 research and innovation programme

General Information

- **Budget:** *~6 M€*
- **Starting date:** *01/11/2019*
- **Ending date:** *30/04/2022*
- **Duration:** *30 months*
- **Grant Agreement:** *No.871249*
- **Call/Topic:** *5G Long Term Evolution (H2020-ICT-2019-2)*
- **Type of action:** *Research and Innovation Action*

https://www.locus-project.eu/

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Partners

Consorzio Nazionale Interuniversitario per le Telecomunicazioni	IT
Ericsson AB	SE
Ericsson S.p.A.	IT
IBM	IE
NEC	DE
Orange	FR
OTE	GR
Samsung	UK
VIAVI	FR
Incelligent	GR
Nextworks	IT
IMDEA Networks	ES
University of Malaga	ES

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Project Concept

- **Design and develop** a location management infrastructure capable of improving localization accuracy and security, and to **extend it** with physical analytics, and **extract value out of it,** meanwhile guaranteeing the end-users' right to privacy.
- **Make localization and related analytics a first class citizen in the cellular world**: the evolution of 5G, both in the short and in the long term, must address not only communication but also localization functionality
- **Localization, analytics, and their combined provision "as a service" will greatly increase the overall value of the 5G:**
  - Network operators will expand their range of offered services;
  - devices, persons and things are detected, localized, and tracked with high accuracy, minimal implementation cost and maximal privacy preservation (e.g., for crowd counting and flow monitoring);
  - localization of terminals will also be exploited to improve network performance and to better manage and operate networks.

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Feasibility and Impact

- Freedom to act on the 5G system specification and availability of software network paradigms make it possible to radically improve the future 5G network *by endowing it with on-demand localization and dedicated analytics*
- Enabler of new/improved applications for the 5G ecosystem, *boosting EU vertical industries*

The project is a tool and not an aim in itself!

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Scenarios and proof-of-concept

1. Smart network management based on 5G equipment localization
2. Network-assisted self-driving objects
3. People mobility & flow monitoring

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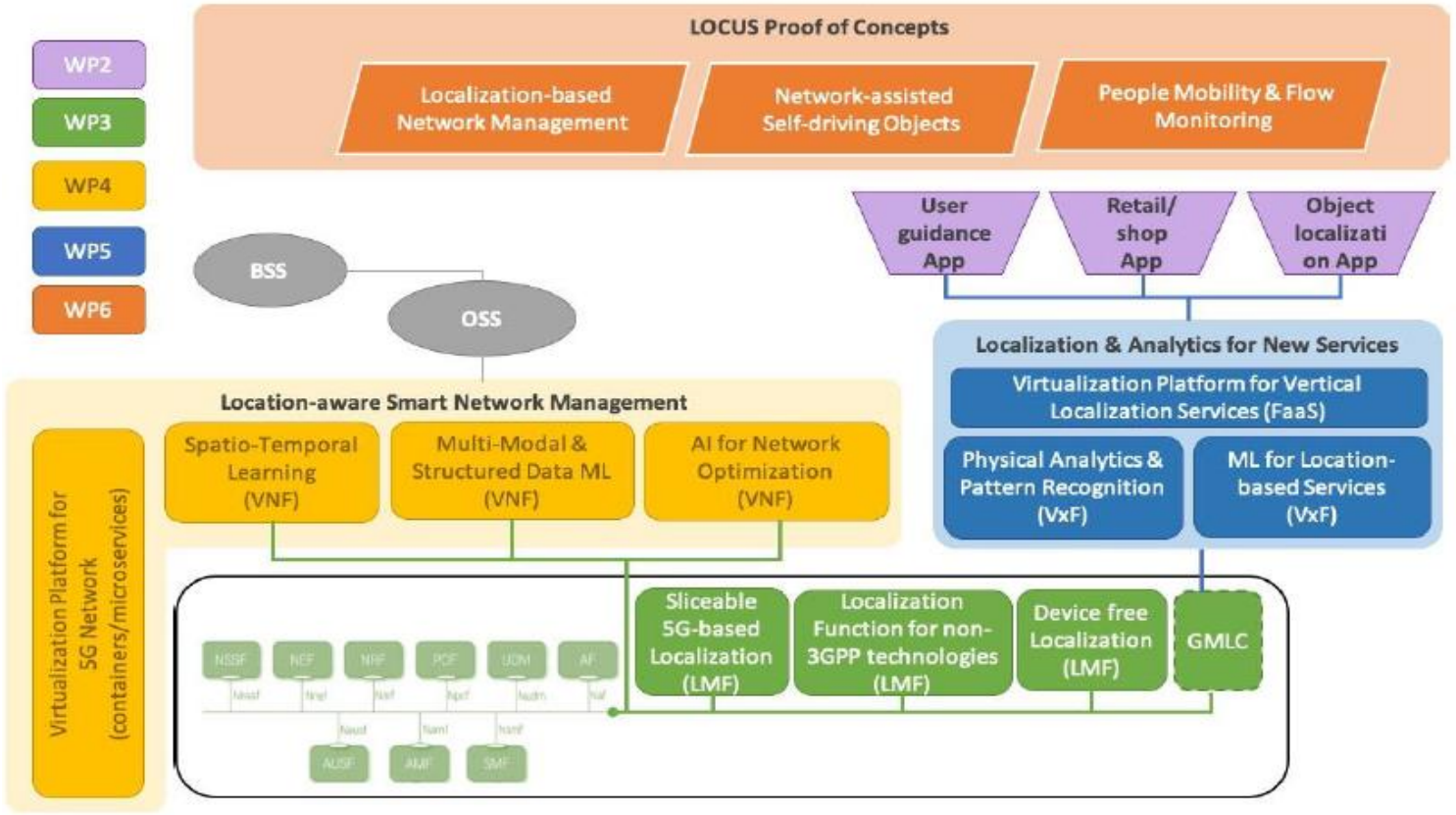
LOCUS Service-based Architecture



LOCUS service-based architecture (5G Core standard functionalities are taken as is, thus depicted in small green boxes.
LOCUS extensions are attached to the 5G Core service-bus)

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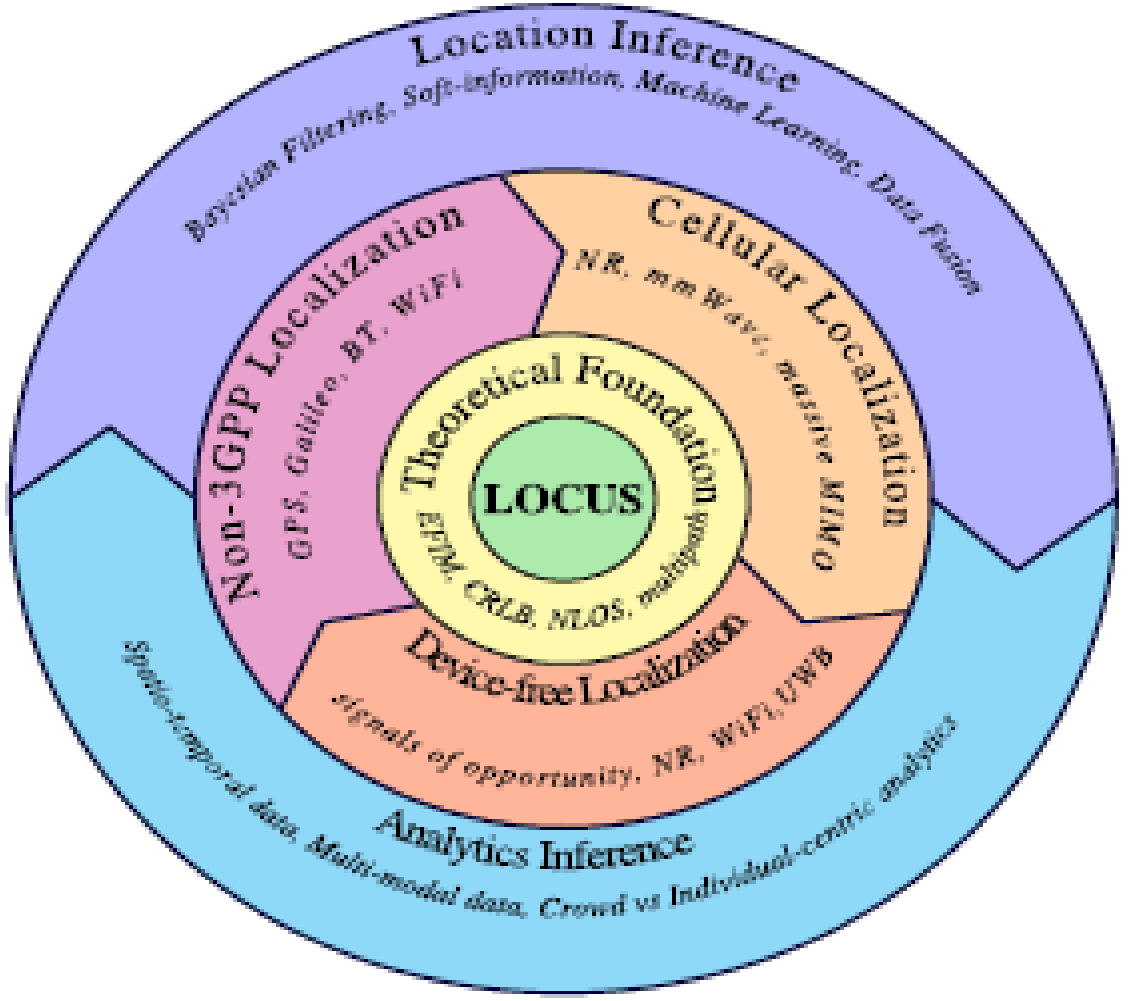
LOCUS: Technical Areas and their Inter-relationships



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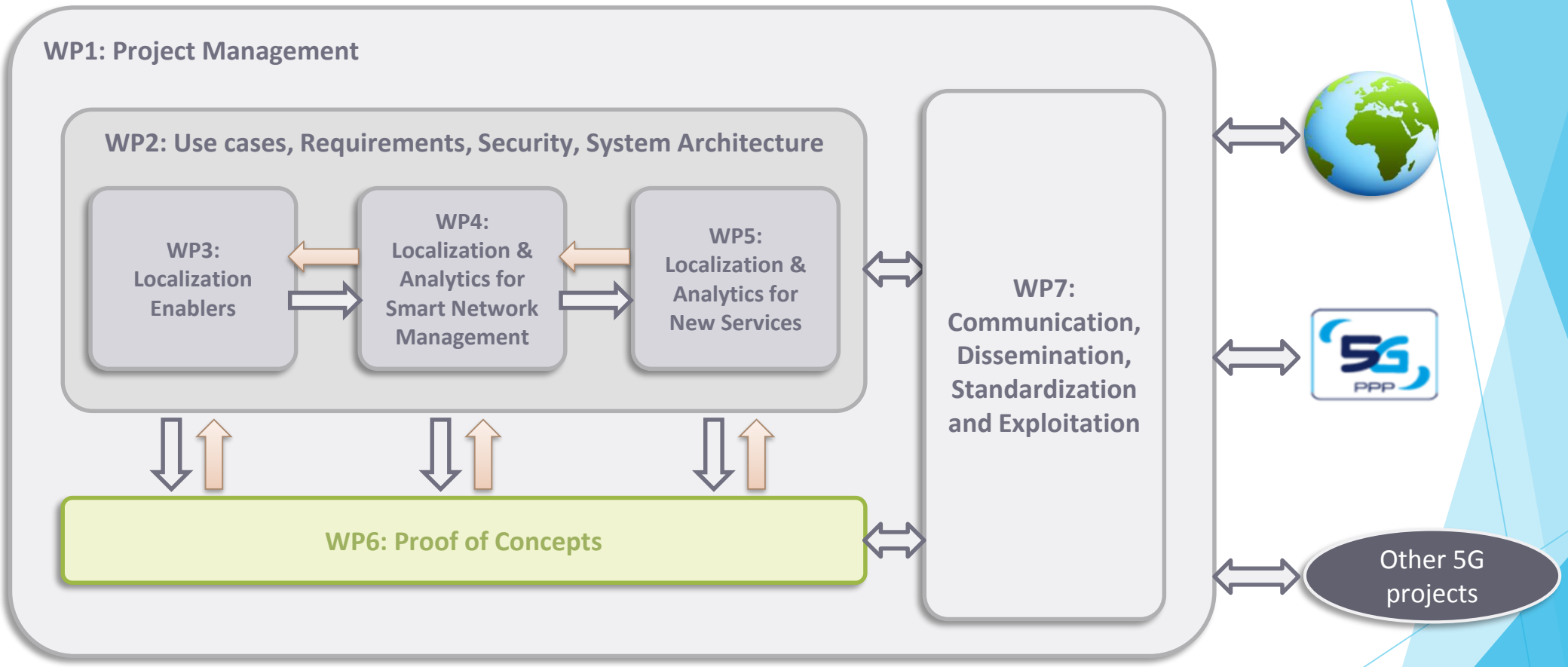
Work Packages



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Thank you for your attention!!!

For more info:

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