

ONE5G presentation

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ONE5G project

- ONE5G : E2E-aware Optimizations and advancements for the Network Edge of 5G New Radio
- Consortium



Objectives

- Delivering advanced link enhancements beyond Release 15, including efficient multi-service access schemes, advanced massive MIMO enablers and link management mechanisms
- Researching and proposing highly generic performance optimization schemes for 5G, to achieve successful deployment and operation, including optimizations for both the network operator and the E2E user-experienced performance
- Identifying the cost driving elements for the roll-out and operation and to propose adaptations to allow sustainable provision of wireless services everywhere
- Validating the developed extensions and modifications through different approaches: analytically, by means of extensive simulations and with selected proof-of-concepts
- Producing a high number of valuable publications, IPR and standardization contributions.

Scenarios

The project targets delivering an optimized air interface covering two extreme scenarios : **megacities** and **underserved areas**.












Technical areas

- Future proof multi-service access solutions
- Massive MIMO enablers
- Advanced link management based on multi-cell processing
- Optimized multi-link management for improved E2E performance
- Network and user-experienced E2E performance optimization and context awareness

Develop advanced link enhancements beyond Release 15, moving 5G to “5G advanced”, and performance optimization schemes for 5G, to achieve successful deployment and operation

Proof of Concept (PoC) : 7 testbeds, integrated into 5 PoCs

PoC	Focus	Vertical scenario	Partners
Cell-less Megacity	E2E performance optimization techniques in combination with cell-less technologies	Industrial area with large factories	  AALBORG UNIVERSITY DENMARK
Smart-Megacity	E2E performance optimization and multi-node/multi-link techniques, assessment of E2E and context-aware KPIs	Smart-megacity with a large number of users, services and cell densities	   AALBORG UNIVERSITY DENMARK UNIVERSIDAD DE MÁLAGA
Enhanced massive MIMO	Massive MIMO technology in a multi-user and multi-cell environment	Smart-megacity with a large number of users, services and cell densities	
Underserved Areas	Low cost network for underserved areas use cases	large underserved areas with agricultural applications	 
Automotive	Ultra reliable low latency communications in the context of smart city scenario, in particular for V2X services	mainly automotive vertical applications and secondly factory applications	 HUAWEI

Thanks!

Questions?