

HORIZON  
2020

# E2E-aware Optimizations and advancements for the Network Edge of 5G New Radio

## Fact Sheet

### Project Information

#### ONE5G

Grant agreement ID: 760809

[Project website](#) 

#### DOI

[10.3030/760809](https://doi.org/10.3030/760809) 

Project closed

#### EC signature date

2 June 2017

#### Start date

1 June 2017

#### End date

30 June 2019

#### Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

#### Total cost

€ 7 977 228,75

#### EU contribution

€ 7 977 228,75

#### Coordinated by

NOKIA SOLUTIONS AND  
NETWORKS GMBH & CO KG  
 Germany

## Objective

ONE5G commits to provide technical investigations and recommendations to evolve '5G' towards '5G advanced' as requested by the work program. Release 15 from 3GPP is about to set up a valuable initial specification for paving the way to reach the ultimate goals for 5G. However, we see major aspects not yet reasonably covered, requiring more research activities to happen: - Means ensuring 5G to be consistently rolled-out not only in agglomerations, but also in less densely populated areas, to

avoid the digital divide to occur as in earlier generations.

- Means ensuring 5G to support all foreseen services efficiently and concurrently in a generic way, to avoid the emergence of a set of specialised solutions lacking synergy effects such as economy of scale and multiplexing gains.
- Means ensuring 5G to efficiently handle all degrees of heterogeneity stemming from the multiplicity of services and environments, network nodes and devices, spectrum bands and access types (licensed, unlicensed and lightly licensed).

In ONE5G, 14 experienced European players of wireless research are gathering to jointly drive forward the vision of 5G by

- 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

## Fields of science (EuroSciVoc)

[engineering and technology](#) > [civil engineering](#) > [urban engineering](#) > **[smart cities](#)**

[natural sciences](#) > [computer and information sciences](#) > [internet](#) > **[internet access](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [information engineering](#) > [telecommunications](#) > [telecommunications networks](#) > [mobile network](#) > **[5G](#)**

[natural sciences](#) > [computer and information sciences](#) > **[software](#)**



## Programme(s)

[H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies \(ICT\)](#)

MAIN PROGRAMME

## Topic(s)

[ICT-07-2017 - 5G PPP Research and Validation of critical technologies and systems](#)

## Call for proposal

[H2020-ICT-2016-2017](#)

[See other projects for this call](#)

## Sub call

H2020-ICT-2016-2

## Funding Scheme

[RIA - Research and Innovation action](#)

## Coordinator



**NOKIA SOLUTIONS AND NETWORKS GMBH &CO KG**

Net EU contribution

**€ 766 888,75**

Total cost

**€ 766 888,75**

Address

**WERINHERSTRASSE 91**

**81541 Munchen**

 **Germany** 

Region

**Bayern > Oberbayern > München, Kreisfreie Stadt**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

# Participants (14)

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## ORANGE SA

 France

Net EU contribution

€ 638 177,50

Address

111 QUAI DU PRESIDENT ROOSEVELT  
92130 Issy Les Moulineaux 

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 638 177,50



## AALBORG UNIVERSITET

 Denmark

Net EU contribution

€ 629 727,50

Address

FREDRIK BAJERS VEJ 7K  
9220 Aalborg 

Region

Danmark > Nordjylland > Nordjylland

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 

Total cost  
**€ 629 727,50**



**B-COM**

 France  
Net EU contribution  
**€ 588 205,00**

Address  
**ZAC DES CHAMPS BLANCS 1219 AVENUE DES CHAMPS BLANCS  
35510 Cesson Sevigne** 

SME   
**Yes**

Region  
**Bretagne > Bretagne > Ille-et-Vilaine**

Activity type  
**Research Organisations**

Links  
[Contact the organisation](#)   
[Participation in EU R&I programmes](#)   
[HORIZON collaboration network](#) 

Total cost  
**€ 588 205,00**



**CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS**

 France  
Net EU contribution  
**€ 133 231,25**

Address  
**RUE MICHEL ANGE 3  
75794 Paris** 

Region  
**Ile-de-France > Ile-de-France > Hauts-de-Seine**

Activity type

Research Organisations

Links

- Contact the organisation Website
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 258 231,25

THIRD-PARTY

CENTRALESUPELEC

France

Net EU contribution

€ 125 000,00

Address

PLATEAU DE MOULON 3 RUE JOLIOT CURIE  
91192 Gif Sur Yvette

Region

Ile-de-France > Ile-de-France > Essonne

Activity type

Higher or Secondary Education Establishments

Links

- Contact the organisation
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 125 000,00



FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

Germany

Net EU contribution

€ 726 812,50

Address

HANSASTRASSE 27C  
80686 Munchen

Region  
**Bayern > Oberbayern > München, Kreisfreie Stadt**

Activity type  
**Research Organisations**

Links  
[Contact the organisation](#) [Website](#)  
[Participation in EU R&I programmes](#)  
[HORIZON collaboration network](#)

Total cost  
**€ 726 812,50**



**FREIE UNIVERSITAET BERLIN**

Germany  
Net EU contribution  
**€ 392 455,00**

Address  
**KAISERSWERTHER STRASSE 16-18**  
**14195 Berlin**

Region  
**Berlin > Berlin > Berlin**

Activity type  
**Higher or Secondary Education Establishments**

Links  
[Contact the organisation](#) [Website](#)  
[Participation in EU R&I programmes](#)  
[HORIZON collaboration network](#)

Total cost  
**€ 392 455,00**



**HUAWEI TECHNOLOGIES DUESSELDORF GMBH**

Germany  
Net EU contribution  
**€ 632 500,00**

Address

HANSAALLEE 205  
40549 Dusseldorf 

Region  
**Nordrhein-Westfalen > Düsseldorf > Düsseldorf, Kreisfreie Stadt**

Activity type  
**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links  
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[Participation in EU R&I programmes](#)   
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Total cost  
**€ 632 500,00**

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**INTEL DEUTSCHLAND GMBH**

 Germany  
Net EU contribution  
**€ 625 000,00**

Address  
**AM CAMPEON 10**  
**85579 Neubiberg**   
Region  
**Bayern > Oberbayern > München, Landkreis**

Activity type  
**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links  
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Total cost  
**€ 625 000,00**

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**NOKIA DENMARK AS**

 Denmark  
Net EU contribution

€ 686 172,50

Address

**ORESTADS BOULEVARD 73**  
**2300 Copenhagen** 

Region

**Danmark > Hovedstaden > Byen København**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 686 172,50



## **SAMSUNG ELECTRONICS (UK) LIMITED**

 United Kingdom

Net EU contribution

€ 785 250,00

Address

**SAMSUNG HOUSE 2000 HILLSWOOD DRIVE**  
**KT16 0RS CHERTSEY - SURREY** 

Region

**South East (England) > Surrey, East and West Sussex > West Surrey**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 785 250,00



## **TELEFONICA INVESTIGACION Y DESARROLLO SA**

 Spain

Net EU contribution

€ 345 308,75

Address

**RONDA DE LA COMUNICACION S/N DISTRITO C EDIFICIO OESTE I**  
**28050 Madrid** 

Region

**Comunidad de Madrid > Comunidad de Madrid > Madrid**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 345 308,75



## UNIVERSIDAD DE MALAGA

 Spain

Net EU contribution

€ 341 250,00

Address

**AVDA CERVANTES, NUM. 2**  
**29016 Malaga** 

Region

**Sur > Andalucía > Málaga**

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 341 250,00



**WINGS ICT SOLUTIONS TECHNOLOGIES PLIROFORIKIS KAI EPIKOINONION  
ANONYMI ETAIREIA**

 Greece

Net EU contribution

**€ 561 250,00**

Address

**189 SYGGROU AVENUE  
171 21 NEA SMYRNI** 

SME 

**Yes**

Region

**Αττική > Αττική > Νότιος Τομέας Αθηνών**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 561 250,00**

**Last update:** 6 September 2024

**Permalink:** <https://cordis.europa.eu/project/id/760809>

European Union, 2025