



CELTIC-NEXT eurogia 2020  
Next Generation Communications for the Digital Society



# EUREKA CELTIC Innovation winning project NOTTS

Business Impact from CELTIC and Eurogia Projects

Antonio Cuadra-Sanchez

November 15<sup>th</sup> 2020

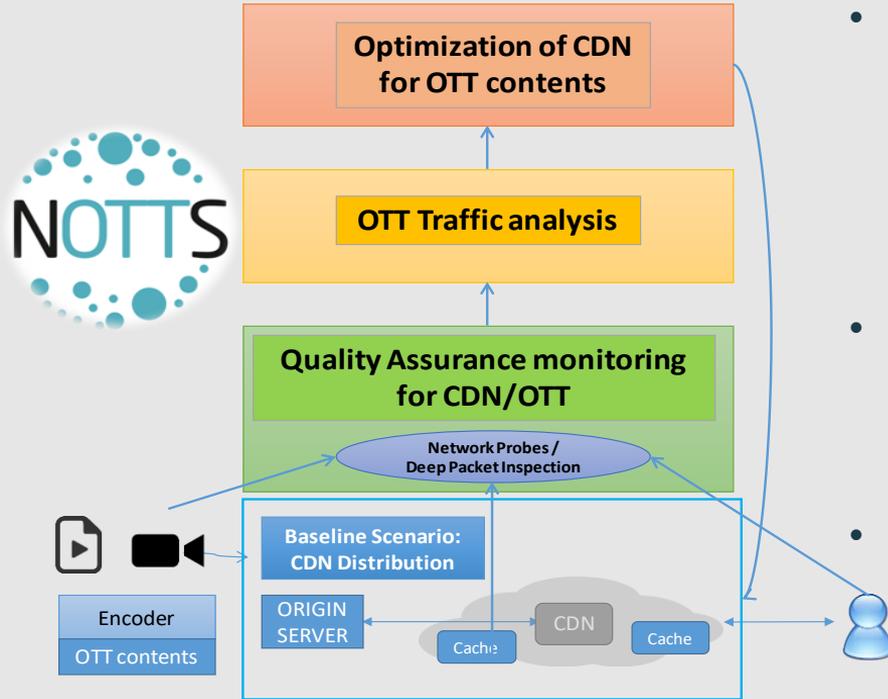


indra | minsait



# NOTTS: Next generation OTT multimedia Services

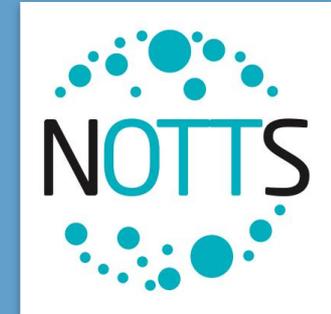
Ecosystem for assuring OTT content delivery



- New media distribution architectures, including peer-assisted solutions and local caching, validated using real traffic from our partners
- User demand patterns analyzed & impact of new consumption patterns investigated
- Methods for QoE estimation and monitoring tools developed

**EUREKA**  $\Sigma$   
innovation across borders

**C**  $\rightarrow$  **CELTIC-NEXT**



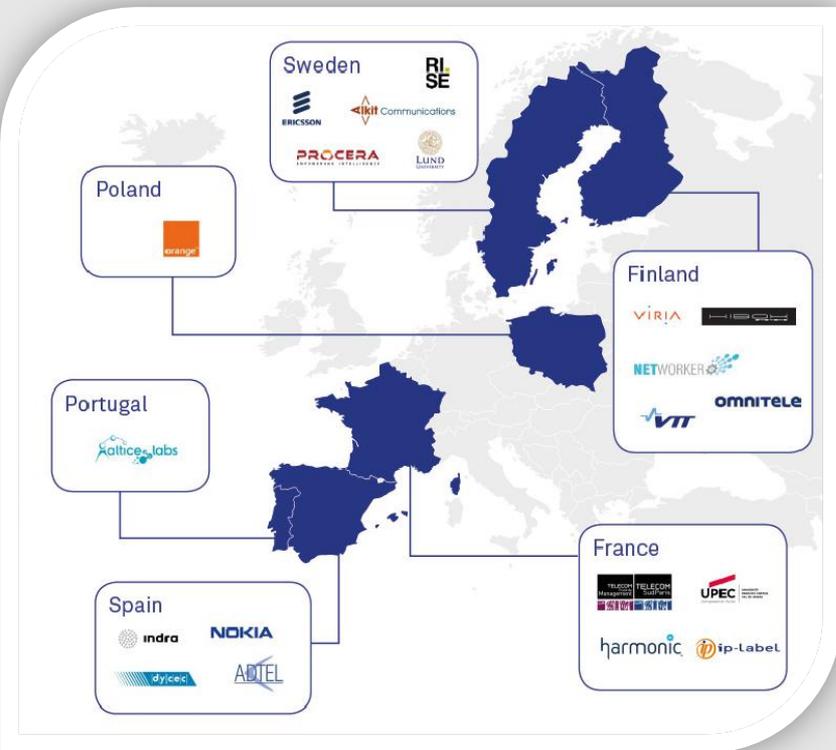
Project coordinator:

**indra**  
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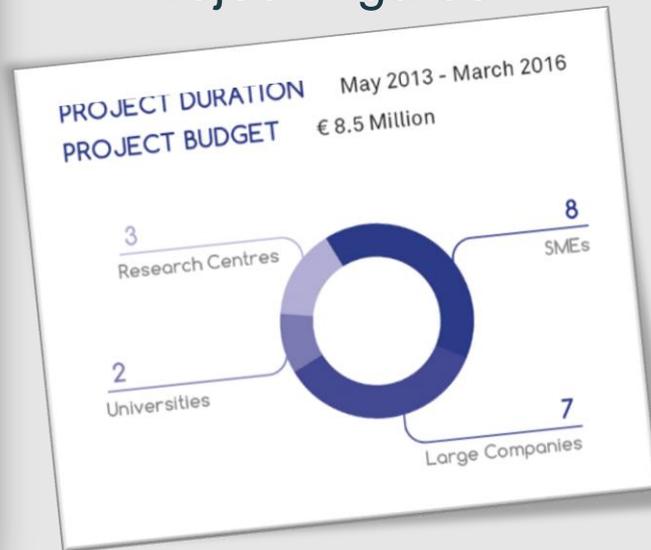
“NOTTS has developed new technology to guarantee the OTT content delivery from the customer’s perspective”



# NOTTS: Next generation OTT multimedia Services Consortium

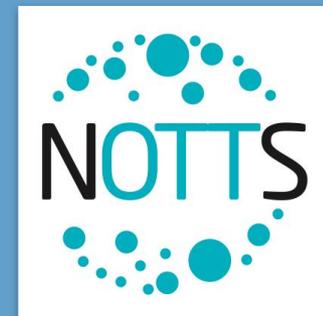


## Project Figures



**EUREKA**   
 innovation across borders

**CELTIC-NEXT**



Project coordinator:

**indra**  
**minsait**

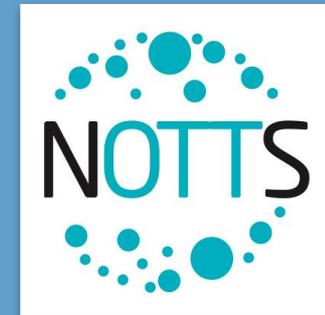


# NOTTS: Next generation OTT multimedia Services

Industrial Exploitation	Publications and MSc/PhD Theses	Dissemination in events
<ul style="list-style-type: none"><li>• <b>27 products:</b><ul style="list-style-type: none"><li>• 6 new products</li><li>• 21 improved</li></ul></li><li>• <b>7 standards:</b><ul style="list-style-type: none"><li>• ISO MPEG DASH</li><li>• DASH Industry Forum</li><li>• VQEG (Video Quality Experts Group) &amp; ITU</li><li>• TM Forum CEM</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>77 publications:</b><ul style="list-style-type: none"><li>• IEEE Journal on communication</li><li>• IEEE Transactions of Computers</li><li>• Annals of Telecom.</li><li>• IEEE ICC, IEEE WCNC</li><li>• IEEE SaCoNeT</li><li>• Etc.</li></ul></li><li>• <b>17 MSc and PhD theses</b></li></ul>	<ul style="list-style-type: none"><li>• <b>24 events:</b><ul style="list-style-type: none"><li>• Celtic Plus Event 2014/5/6/7</li><li>• IWQM 2014</li><li>• QUALINET Summer School and regular meetings</li><li>• Streamingkollen</li><li>• Etc.</li></ul></li></ul> 

## AWARDS:

“CELTIC-NEXT Innovation Award 2019”  
“EUREKA Innovation Award 2018”



Project coordinator:



# Thank you!

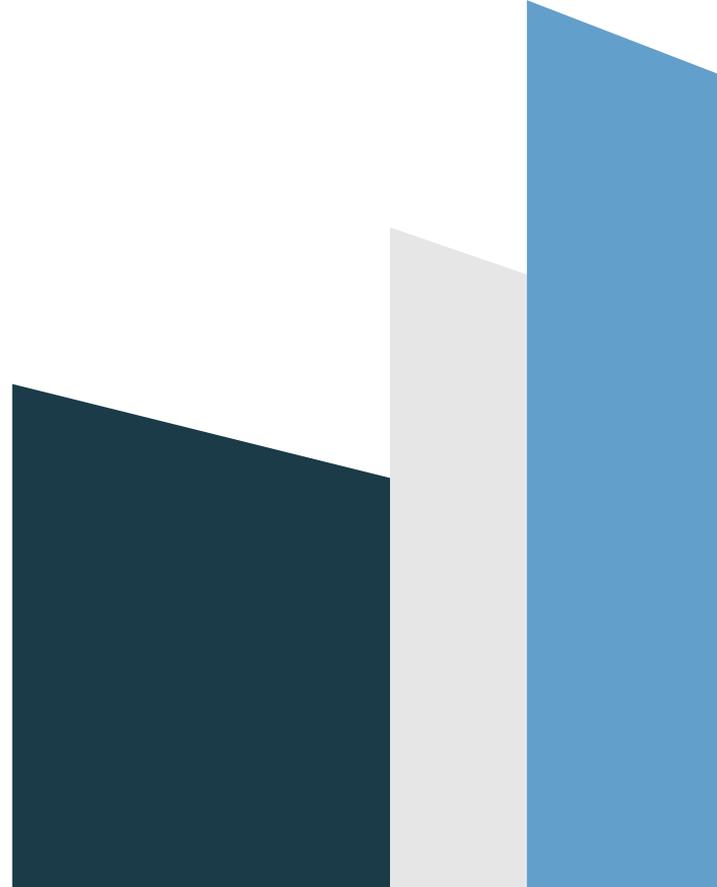
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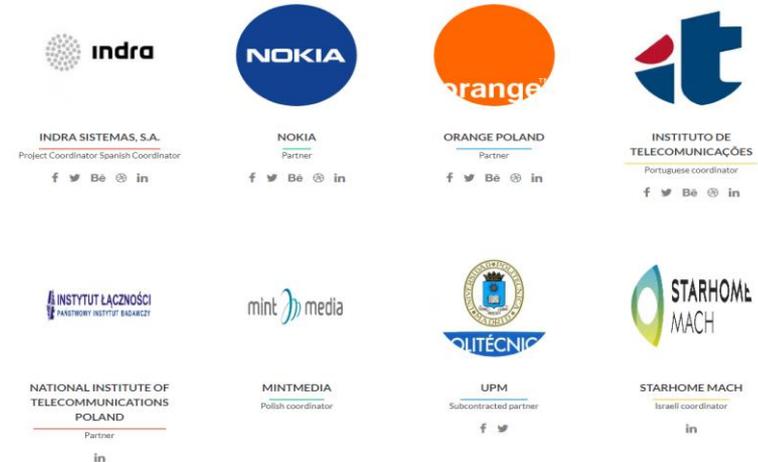


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# MONALIS Overview



- Celtic call: C2015/4-5
- Celtic label obtained: 27-10-2015
- Coordinator: Indra Sistemas, S.A.(IND)
- Start date: 10/2016
- Completion Date: 01/2019
- Scheduled duration: 28 months
- Project Budget: 2,923 k€
- Consortium: 7 partners from 4 countries
  - Telco (Orange Labs)
  - Industry & Telco (Indra, Nokia)
  - Research & Academia (Instituto de Telecomunicações, National Institute of Telecommunications, Universidad Politécnica de Madrid - subcontracted)
  - SMEs (Starhome, Mint Media)



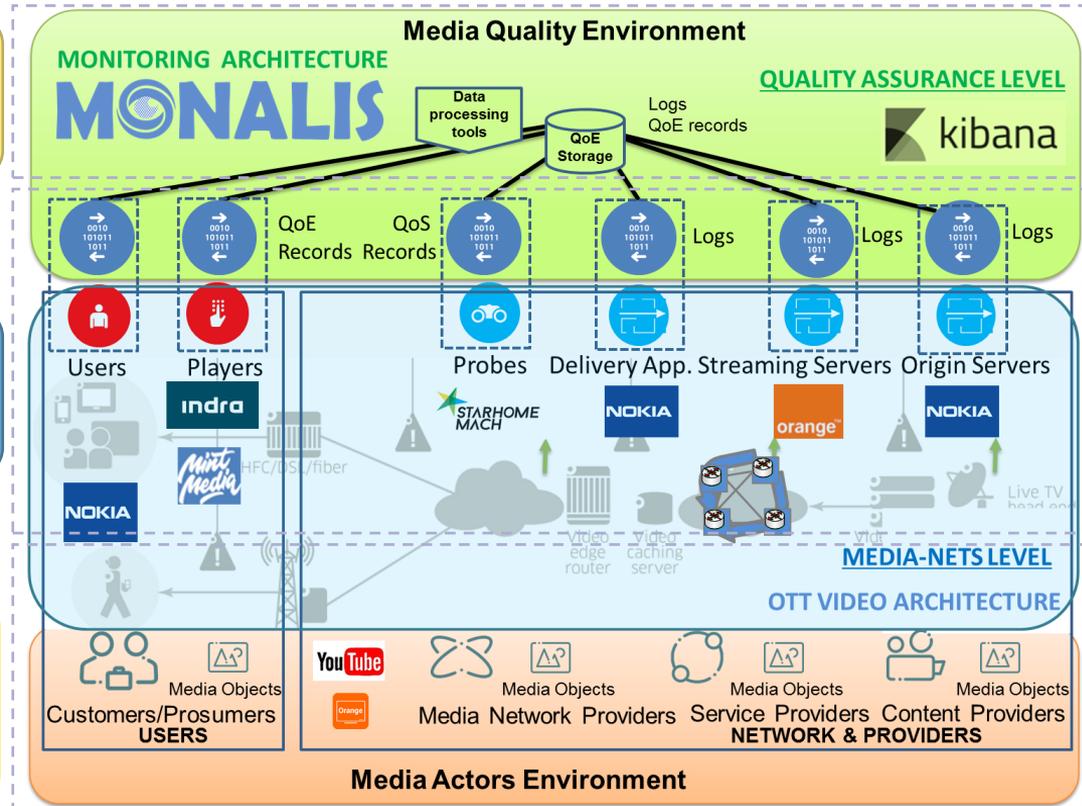
# Achievements and Innovations

Monitoring and control of the QoE in large scale multimedia distribution architectures

Measurement platforms making data flow from all levels

Monitoring techniques and tools for QoE evaluation

Experimental evaluation of OTT VoD distribution system with QoE monitoring



# Final Status



- The project has concluded according to the PD
  - The last PCR was approved on 15/11/2017
  - Indra and Starhome joined the consortium with an extensive experience on monitoring. Indra became the project coordinator
- The main achievements include **25 deliverables**
  - 12 deliverables documents and 13 milestones documents
- **44 dissemination activities** carried out and **12 products**
  - 16 papers accepted in journals, conferences, workshops and posters
  - 6 Exhibitions and events
  - 5 contribution to standards
  - 2 PhD theses and 5 Master theses (5) completed
  - 10 other dissemination events (commercial presentations, website, twitter, etc.)

# Results and achievements

## Industrial Exploitation and academia

- TM Forum
  - TR271
  - TMF423
  - GB962D
- VQEG / ITU
  - ITU-T G.QoE-VR
  - ITU-T P.360-VR
- 2 PhD theses
- 5 Master theses

5 standards + 7 theses

## Scientific Publications

- IEEE Communications magazine
- Journal on Wireless Personal Communications
- IEEE Access
- ACM Transactions TOMM
- Springer Media Tools and Apps
- IEEE ISCC 2017
- IEEE/IFIP WONS 2018
- Etc.

Total: 16 scientific publications

## Dissemination in events

- Celtic Plus Event at Eureka Week 2017 / 2018
- TM Forum Action Week 2018
- VR/AR Observatory 2017
- VQEG Meeting 2017
- Nokia Video Day 2016

Total: 6 events

