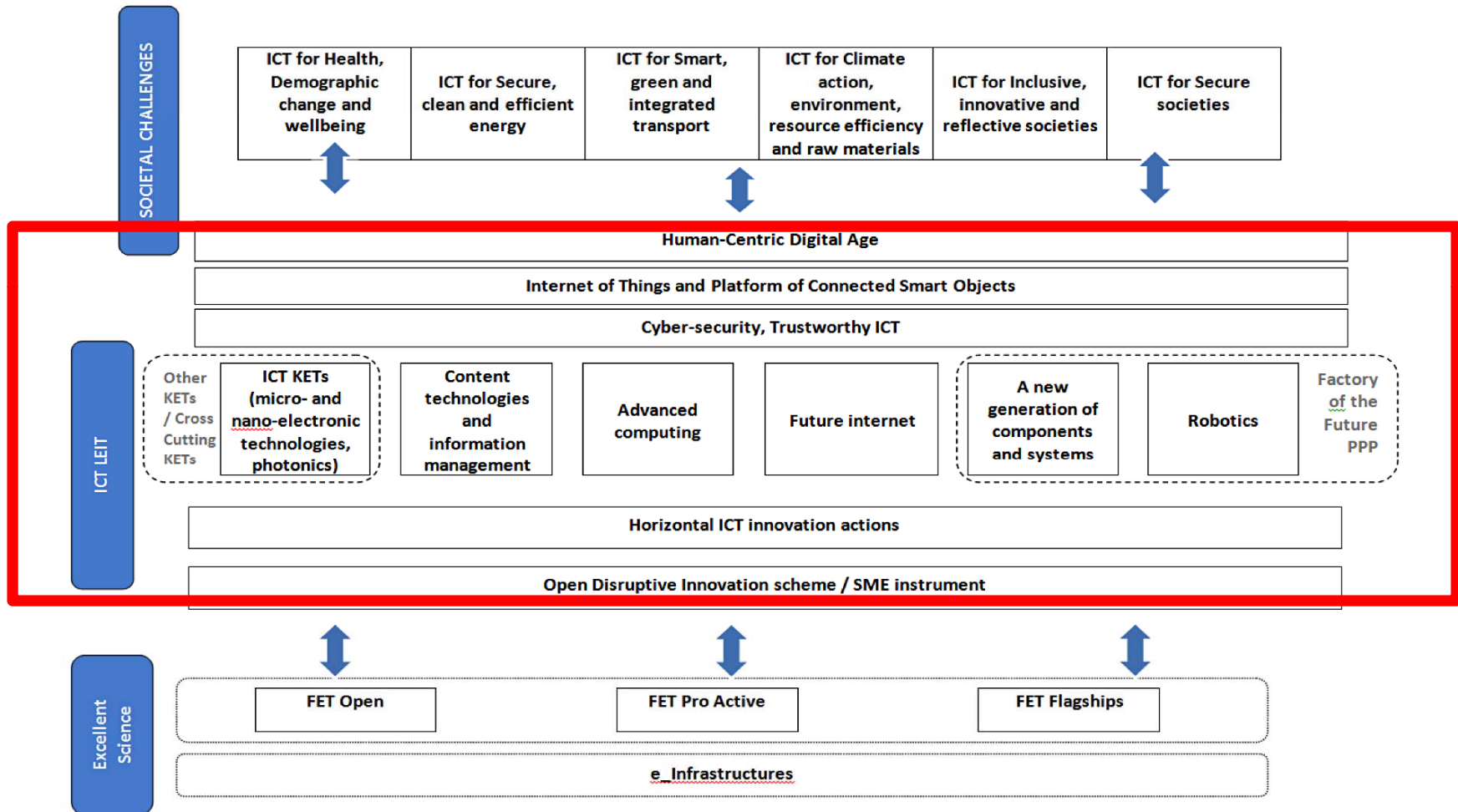

ICT in programul LEIT

Prof. Dr. Dana Petcu

ICT in 3 programe ale H2020



Termene in 2014-2015

- **H2020-ICT-2014 (ICT Call 1)**
 - Publication date: 11 December 2013
 - Deadline: **23 April 2014** (all topics except 5G Future Internet)
 - Deadline for 5G Future Internet: **25 November 2014**
- **H2020-FoF-2014/2015 (Factory of the Future)**
 - Publication date: 11 December 2013
 - Deadlines: **13 March 2014** and **9 December 2014**
- **H2020-EUJ-2014 (EU-Japan Call)**
 - Publication date: 7 January 2014
 - Deadline: **10 April 2014**
- **H2020-ICT-2015 (ICT Call 2)**
 - Publication date: 15 October 2014
 - Deadline: **14 April 2015**
- **H2020-EUB-2015 (EU-Brazil Call)**
 - Publication date: 15 October 2014
 - Deadline: **21 April 2015**

Arii tehnologice in H2020-ICT

Arii tehnologice principale

1. A new generation of components and system
2. Advanced Computing
3. Future Internet
4. Content technologies and information management
5. Robotics
6. Micro- and nano-electronic technologies, Photonics

1. Components & Systems + 2. Advanced Computing

- **A new generation of components and systems**

ICT 1 – 2014: Smart Cyber-Physical Systems

ICT 2 – 2014: Smart System Integration

ICT 3 – 2014: Advanced Thin, Organic and Large Area Electronics (TOLAE) technologies

- **Advanced Computing**

ICT 4 – 2015: Customised and low power computing

3. Future Internet

- ICT 5 – 2014: Smart Networks and novel Internet Architectures
- ICT 6 – 2014: Smart optical and wireless network technologies
- ICT 7 – 2014: Advanced Cloud Infrastructures and Services
- ICT 8 – 2015: Boosting public sector productivity and innovation through cloud computing services
- ICT 9 – 2014: Tools and Methods for Software Development
- ICT 10 – 2015: Collective Awareness Platforms for Sustainability and Social Innovation
- ICT 11 – 2014: FIRE+ (Future Internet Research & Experimentation)
- ICT 12 – 2015: More experimentation for the Future Internet
- ICT 13 – 2014: Web Entrepreneurship
- ICT 14 – 2014: Advanced 5G Network Infrastructure for the Future Internet

4. Content technologies and information management

ICT 15 – 2014: Big data Innovation and take-up

ICT 16 – 2015: Big data - research

ICT 17 – 2014: Cracking the language barrier

ICT 18 – 2014: Support the growth of ICT innovative Creative Industries SMEs

ICT 19 – 2015: Technologies for creative industries, social media and convergence

ICT 20 – 2015: Technologies for better human learning and teaching

ICT 21 – 2014: Advanced digital gaming/gamification technologies

ICT 22 – 2014: Multimodal and Natural computer interaction

5. Robotics + 6. Micro/Nano/Photonics

- **Robotics**
 - ICT 23 – 2014: Robotics
 - ICT 24 – 2015: Robotics
- **Micro- and nano-electronic technologies, Photonics**
 - ICT 25 – 2015: Generic micro- and nano-electronic technologies
 - ICT 26 – 2014: Photonics KET
 - ICT 27 – 2015: Photonics KET
 - ICT 28 – 2015: Cross-cutting ICT KETs
 - ICT 29 – 2014: Development of novel materials and systems for OLED lighting

Cross cutting + Horizontal actions

- **ICT Cross-Cutting Activities**

 - ICT 30 – 2015: Internet of Things and Platforms for Connected Smart Objects

 - ICT 31 – 2014: Human-centric Digital Age

 - ICT 32 – 2014: Cybersecurity, Trustworthy ICT

 - ICT 33 – 2014: Trans-national co-operation among National Contact Points

- **Horizontal ICT Innovation actions**

 - ICT 34 – 2015: Support for access to finance

 - ICT 35 – 2014: Innovation and Entrepreneurship Support

 - ICT 36 – 2015: Pre-commercial procurement open to all areas of public interest requiring new ICT solutions

 - ICT 37 - 2014-15: Open Disruptive Innovation Scheme
(implemented through the SME instrument)

International collaboration

- **International Cooperation actions**

 - ICT 38 – 2015: International partnership building and support to dialogues with high income countries

 - ICT 39 – 2015: International partnership building in low and middle income countries

- **EU-Brazil Research and Development Cooperation in Advanced Cyber Infrastructure**

 - EUB 1 – 2015: Cloud Computing, including security aspects

 - EUB 2 – 2015: High Performance Computing (HPC)

 - EUB 3 – 2015: Experimental Platforms

- **EU-Japan Research and Development Cooperation in Net Futures**

 - EUJ 1 – 2014: Technologies combining big data, internet of things in the cloud

 - EUJ 2 – 2014: Optical communications

 - EUJ 3 – 2014: Access networks for densely located users

 - EUJ 4 – 2014: Experimentation and development on federated Japan – EU testbeds

Factories of the Future + Innovation

- **Factories of the Future**

 - **FoF 1 – 2014:** Process optimisation of manufacturing assets

 - **FoF 8 – 2015:** ICT-enabled modelling, simulation, analytics and forecasting technologies

 - **FoF 9 – 2015:** ICT Innovation for Manufacturing SMEs (I4MS)

- **Fast track to Innovation – pilot**

 - Fast track to Innovation – ICT topic

Apelurile deschise pentru 2014 (Call 1)

H2020-ICT-2014-1

H2020-ICT-2014-2

H2020-FoF-2014/2015

Unde se gasesc informatiile

[http://
ec.europa.eu/
research/
participants/
portal/](http://ec.europa.eu/research/participants/portal/)

H2020-ICT-2014-1
Termen: 23 Apr 2014

Buget: 658,5 M€

H2020-ICT-2014-2
Termen: 25 Noi 2014

Buget: 125 Mil €

H2020-FoF-2014
Termen: 20 Mar 2014

H2020-FoF-2015

Termen: 9 Dec 2014

Buget/ICT: 102 Mil €

The screenshot shows the 'RESEARCH & INNOVATION Participant Portal' interface. The main content area displays search results for 'Horizon 2020' calls. The search criteria include 'Excellent Science' and 'Industrial Leadership'. The results are sorted by 'Publication Date'. Two specific calls are highlighted: 'ICT 2014 - Information and Communications Technologies H2020-ICT-2014-1' and 'ICT 2014 - Information and Communications Technologies H2020-ICT-2014-2'. The interface includes navigation menus, a search bar, and a filter button.

Informatii H2020-ICT-2014-1

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ict-2014-1.html>

The screenshot shows the Horizon 2020 funding opportunities page for ICT 2014. The page is titled "ICT 2014 - INFORMATION AND COMMUNICATIONS TECHNOLOGIES" and is a sub-call of "H2020-ICT-2014". The main details are as follows:

Publication date	2013-12-11	Deadline Date	2014-04-23 +17:00:00 (Brussels local time)
Budget	€658,500,000	Main Pillar	Industrial Leadership
Status	Open	OJ reference	OJ C361 of 11.12.2013

The page also features a sidebar with navigation options: Horizon 2020 (Calls, Search Topics, Call Updates), FP7 & CIP Programmes (Calls, Call Updates), COSME, and Other Funding Opportunities. At the bottom of the page, there are links for "RESEARCH ON EUROPA", "CORDIS", and "OJ".



Topicuri

H2020-

ICT-

2014-

1

[Call description](#)

[Call documents](#)

[Get support](#)

[Subscribe to Notifications](#)

Topics and submission service

- [ICT-01-2014: Smart Cyber-Physical Systems](#)
- [ICT-02-2014: Smart System Integration](#)
- [ICT-03-2014: Advanced Thin, Organic and Large Area Electronics \(TOLAE\) technologies](#)
- [ICT-05-2014: Smart Networks and novel Internet Architectures](#)
- [ICT-06-2014: Smart optical and wireless network technologies](#)
- [ICT-07-2014: Advanced Cloud Infrastructures and Services](#)
- [ICT-09-2014: Tools and Methods for Software Development](#)
- [ICT-11-2014: FIRE+ \(Future Internet Research & Experimentation\)](#)
- [ICT-13-2014: Web Entrepreneurship](#)
- [ICT-15-2014: Big data and Open Data Innovation and take-up](#)
- [ICT-17-2014: Cracking the language barrier](#)
- [ICT-18-2014: Support the growth of ICT innovative Creative Industries SMEs](#)
- [ICT-21-2014: Advanced digital gaming/gamification technologies](#)
- [ICT-22-2014: Multimodal and Natural computer interaction](#)
- [ICT-23-2014: Robotics](#)
- [ICT-26-2014: Photonics KET](#)
- [ICT-29-2014: Development of novel materials and systems for OLED lighting](#)
- [ICT-31-2014: Human-centric Digital Age](#)
- [ICT-32-2014: Cybersecurity, Trustworthy ICT](#)
- [ICT-33-2014: Trans-national co-operation among National Contact Points](#)
- [ICT-35-2014: Innovation and Entrepreneurship Support](#)

Exemplu de topic: Gaming techs

Topic: Advanced digital gaming/gamification technologies

ICT-21-2014

Topic Description

Topic Conditions & Documents

Submission Service

Specific Challenge: Digital games and gamification mechanics applied in non-leisure contexts is an important but scattered industry that can bring high pay-offs and lead to the emergence of a prospering market. Digital games can also make a real change in the life of a large number of targeted excluded groups, enhancing their better integration in society. This requires however the development of new methodologies and tools to produce, apply and use digital games and gamification techniques in non-leisure contexts, as well as building scientific evidence on their benefits - for governments, enterprises and individuals.

Scope:

a. Research & Innovation actions: Multidisciplinary research experimentations and collaboration on advanced digital gaming technologies and components (including game engines, emergent narrative, virtual characters, interaction systems and alternative human-machine interfaces, 3D, textures, models for simulations, game design, learner profiles, emotional models, etc.) produced by and for the traditional digital game industry but applied into wider scenario of use in non-leisure contexts. Activities must lead to the creation of a repository of core reusable, open components to enable publishers and game producers as well as user organisations and individual programmers to build specific games applications in non-leisure contexts. Application scenarios will focus on learning and skills acquisition in formal and informal education, in workplace learning and in policy making and collective social and public processes.

b. Innovation actions: Stimulate technology transfer and new non-leisure applications by SMEs traditionally working on digital games through coordinating and incubating small scale experiments, thus underpinning new market developments on digital games for learning and skills acquisition, and for empowerment and social inclusion. The activities should also allow the accumulation of scientific evidence of the effectiveness of such approaches for specific target groups or problems.

Expected impact:

- Increase the number of collaborations between traditional digital game industry players and a broader research community (neurosciences, educational physiology, pedagogy, etc.), intermediaries (teachers, trainers) and users from a wide area of application contexts.
- Increase the effectiveness of digital games for professionals and researchers, intermediaries and social actors dealing with people with disabilities or at risk of exclusion (socially, physically or technologically disadvantaged groups) and of those who consider themselves unsuited for education.

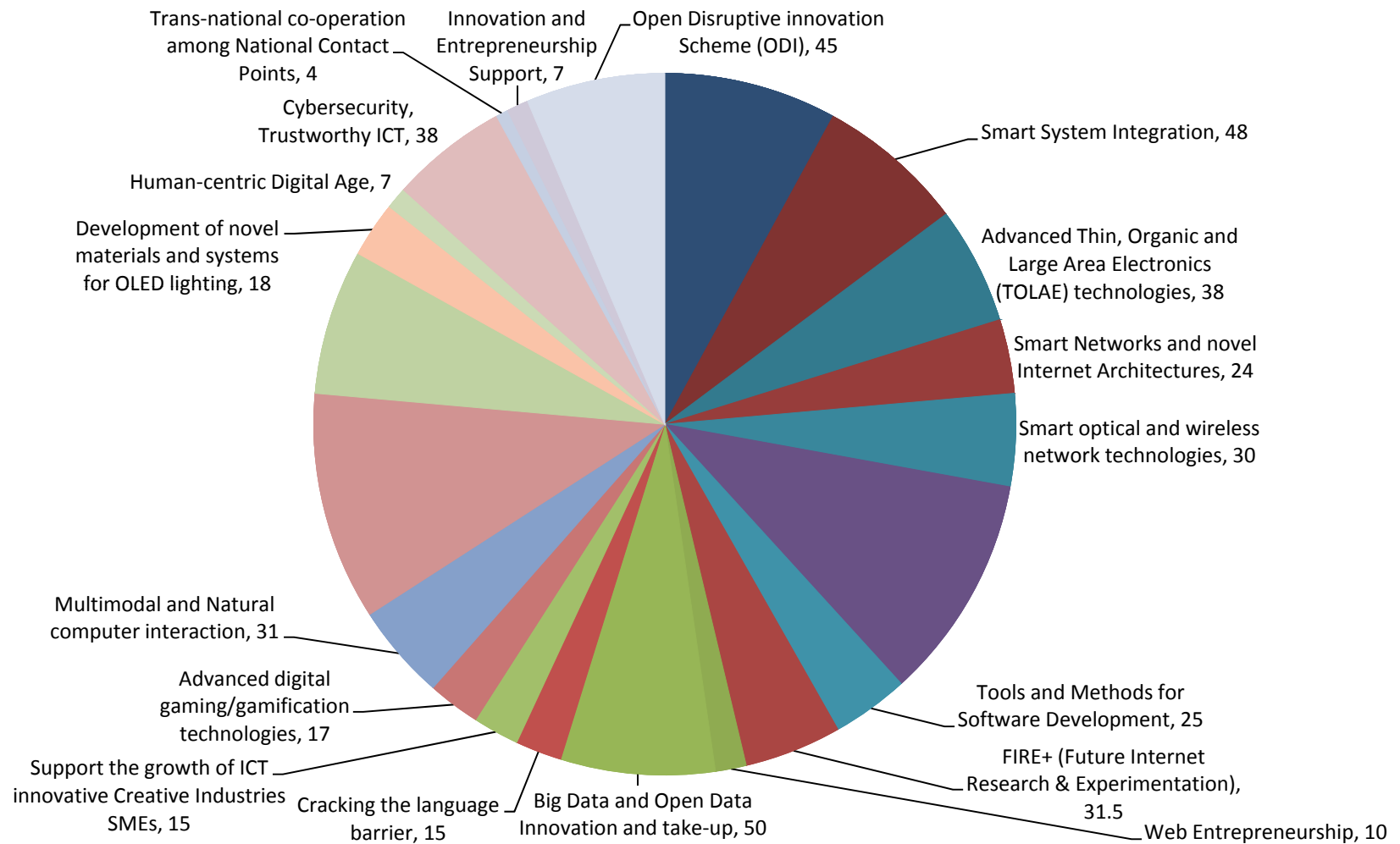
Types of action:

- Research & Innovation Actions – Proposals requesting a *Large contribution* are expected
- Innovation Actions – Proposals requesting a *Small contribution* are expected

Fonduri H2020-ICT-2014-1(1)

Robotics	74
Advanced Cloud Infrastructures and Services	73
Smart Cyber-Physical Systems	56
Big Data and Open Data Innovation and take-up	50
Smart System Integration	48
Photonics KET	47
Open Disruptive innovation Scheme (ODI)	45
Advanced Thin, Organic and Large Area Electronics (TOLAE) technologies	38
Cybersecurity, Trustworthy ICT	38
FIRE+ (Future Internet Research & Experimentation)	31.5
Multimodal and Natural computer interaction	31
Smart optical and wireless network technologies	30
Tools and Methods for Software Development	25
Smart Networks and novel Internet Architectures	24
Development of novel materials and systems for OLED lighting	18
Advanced digital gaming/gamification technologies	17
Cracking the language barrier	15
Support the growth of ICT innovative Creative Industries SMEs	15
Web Entrepreneurship	10
Human-centric Digital Age	7
Innovation and Entrepreneurship Support	7
Trans-national co-operation among National Contact Points	4

Fonduri H2020-ICT-2014-1 (2)



H2020-ICT-2014-2

ICT 2014 - Information and Communications Technologies

H2020-ICT-2014-2

Sub call of: [H2020-ICT-2014](#)

Publication date	2013-12-11	Deadline Date	2014-11-25 17:00:00 (Brussels local time)
Budget	€125,000,000	Main Pillar	Industrial Leadership
Status	Open	OJ reference	OJ C361 of 11.12.2013

**Topic: Advanced 5G Network Infrastructure for the Future
Internet**

ICT-14-2014

+
SME Instrument
ICT 37 - 2014-15
45MEuros

Topic Description

Topic Conditions & Documents

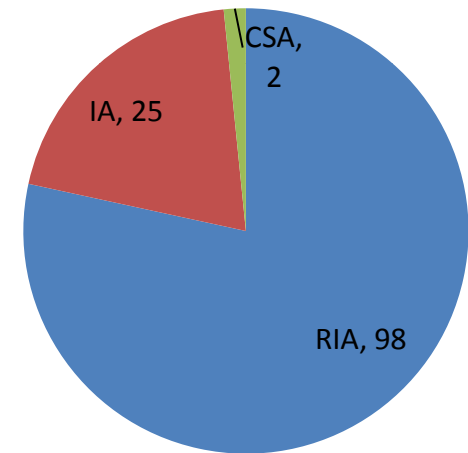
Submission Service

Specific Challenge:

As Internet usages are proliferating communications networks are faced with new shortcomings. Future networks will have to support in 2020 mobile traffic volumes 1000 times larger than today and a spectrum crunch is anticipated. Wireless access rates are today significantly lower than those of fixed access, which prevents the emergence of ubiquitous low cost integrated access continuum with context independent operational characteristics. Communication networks energy consumption is growing rapidly, especially in the radio part of mobile networks. The proliferation of connected devices makes it very difficult to maintain similar performance characteristics over an ever larger portfolio of technologies and requirements (e.g. Ultra High Definition TV vs. M2M, IoT). Heterogeneity of access technologies entails unsustainable cost with increasing difficulties to integrate an ever larger set of resources with reduced opex. Network infrastructure openness is still limited. It prevents the emergence of integrated OTT (cloud)-network integration with predictable end to end performance characteristics, and limits the possibility for networks to become programmable infrastructures for innovation with functionalities exposed to developers' communities. These are key issues for the competitiveness of the communication industry world-wide are globally researched in the context of future 5G integrated, ubiquitous and ultra-high capacity networks.

ICT 14: Advanced 5G Network Infrastructure for the Future Internet

- **Research & Innovation Actions (98 ME):**
 - Strand Radio network architecture and technologies
 - Strand convergence beyond last mile
 - Strand network management
- **Innovation Actions (25 ME):**
 - Strand Network virtualisation and Software Networks
- **Support Actions (2 ME)**



Fonduri FoF-2014/2015 (102 Mil E)

Call for Factories of the Future

H2020-FoF-2014

Sub call of: H2020-FoF-2014-2015

Publication date	2013-12-11	Deadline Date	2014-03-20 17:00:00 (Brussels local time)
Budget	€116,000,000	Main Pillar	Industrial Leadership
Status	Open	OJ reference	OJ C 361 of 11 December 2013

Topic: Process optimisation of manufacturing assets

FoF-01-2014

- FoF 1 – 2014:** Process optimisation of manufacturing assets
- FoF 8 – 2015:** ICT-enabled modelling, simulation, analytics and forecasting technologies
- FoF 9 – 2015:** ICT Innovation for Manufacturing SMEs (I4MS)

