

# **IKT v nových výzvach Horizon 2020**

**- výzvy v ktorých by sa FRI mohla „nájsť“...**

FRI fórum, piatok 23. 10. 2015

# Horizon 2020 – WP 2016-2017

## Excellent Science

Frontier Research (ERC)

Future & Emerging Technologies (FET) **ICT**

Skills & career development (Marie Skłodowska-Curie)

Research Infrastructures **ICT**

## Industrial Leadership

Leadership in enabling  
& industrial technologies

ICT **ICT**

Nanotech., Materials, Manuf. & Processing **ICT**

Biotechnology

Space

Access to risk finance

Innovation in SMEs **ICT**

## Societal Challenges

Health, demographic change & wellbeing **ICT**

Food security, sustainable agriculture,  
& the bio-based economy **ICT**

Secure, clean & efficient energy **ICT**

Smart, green & integrated transport **ICT**

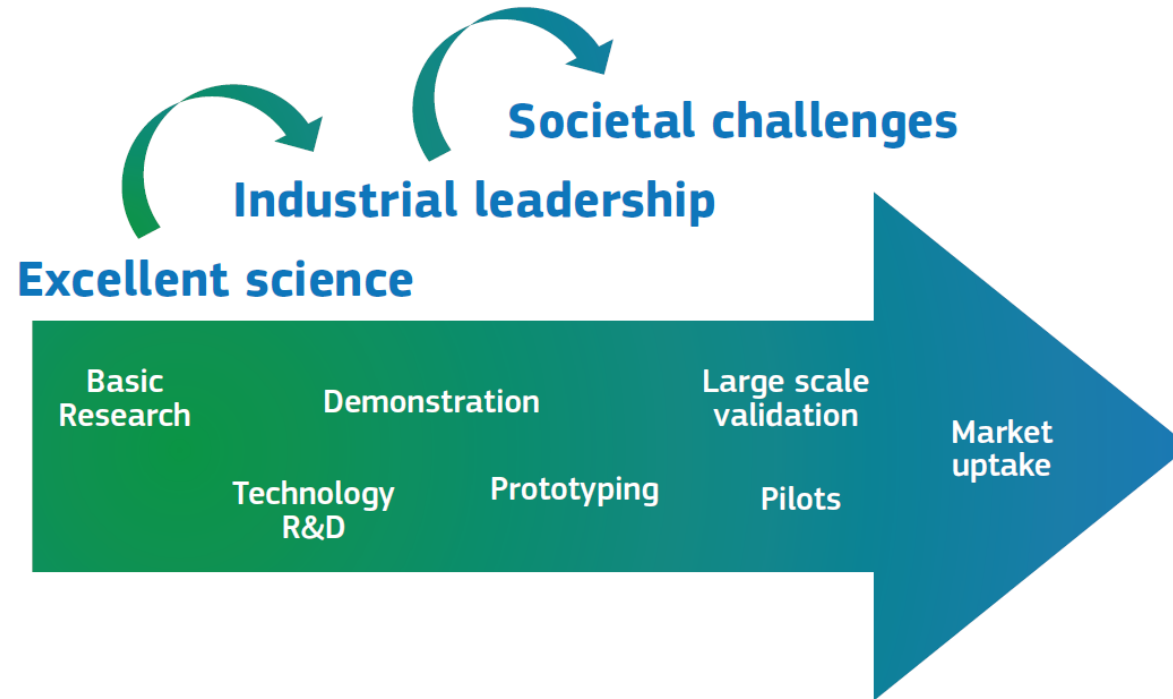
Climate action, resource efficiency,

& raw materials **ICT**

Inclusive, innovative & reflective societies **ICT**

Secure societies **ICT**

# Horizon 2020 – WP 2016-2017



<http://ec.europa.eu/programmes/horizon2020/h2020-sections>

# Societal Challenges – Horizon 2020

Health, demographic change & wellbeing **ICT**

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Secure, clean & efficient energy **ICT**

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# SC1 - Health, demographic change and wellbeing

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016/2017/main/h2020-wp1617-health\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016/2017/main/h2020-wp1617-health_en.pdf)
- Understanding health, well-being and disease
- **SC1-PM-01-2016: Multi omics for personalised therapies addressing diseases of the immune system**
- SC1-PM-02-2017: New concepts in patient stratification
- SC1-PM-03–2017: Diagnostic characterisation of rare diseases
- **SC1-PM-04–2016: Networking and optimising the use of population and patient cohorts at EU level**

# SC2 – Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-food\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-food_en.pdf)
- SFS-05-2017: Robotics Advances for Precision Farming

# SC3 – Secure, clean and efficient energy

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-energy\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-energy_en.pdf)
- **EE-07-2016-2017: Behavioural change toward energy efficiency through ICT**
- **EE-08-2016: Socio-economic research on consumer's behaviour related to energy efficiency**
- EE-20-2017: Bringing to market more energy efficient and integrated data centres

# SC4 – Smart, green and integrated transport

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-transport\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-transport_en.pdf)
- MG-4.1-2017: Increasing the take up and scale-up of innovative solutions to achieve sustainable mobility in urban areas
- MG-4.3-2017: Innovative approaches for integrating urban nodes in the TEN-T core network corridors
- **MG-5.1-2016: Networked and efficient logistics clusters**
- MG-5.2-2017: Innovative ICT solutions for future logistics operations
- **MG-5.3-2016: Promoting the deployment of green transport, towards Eco-labels for logistics**



# SC4 – Smart, green and integrated transport

- **MG-6.1-2016: Innovative concepts, systems and services towards 'mobility as a service,**
- **MG-6.2-2016: Large-scale demonstration(s) of cooperative ITS**
- **MG-6.3-2016: Roadmap, new business models, awareness raising, support and incentives for the roll-out of ITS**
- MG-7.1-2017: Resilience to extreme (natural and man-made) events
- MG-7.2-2017: Optimisation of transport infrastructure including terminals
- MG-7.3-2017: The Port of the future

# SC4 – Smart, green and integrated transport

- MG-8.2-2017: Big data in Transport: Research opportunities, challenges and limitations
- **MG-8.3-2016: Assessing future requirements for skills and jobs across transport modes and systems**
- MG-8.4-2017: Improving accessibility, inclusive mobility and equity: new tools and business models for public transport in prioritised areas
- MG-8.5-2017: Shifting paradigms: Exploring the dynamics of individual preferences, behaviours and lifestyles influencing travel and mobility choices

# SC4 – Smart, green and integrated transport

- ART-01-2017: ICT infrastructure to enable the transition towards road transport automation
- **ART-04-2016: Safety and end-user acceptance aspects of road automation in the transition period**
- **ART-05-2016: Road infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network**
- ART-07-2017: Full-scale demonstration of urban road transport automation
- GV-08-2017: Electrified urban commercial vehicles integration with fast charging infrastructure
- GV-10-2017: Demonstration (pilots) for integration of electrified L-category vehicles in the urban transport system

# SC5 – Climate action, environment, resource efficiency and raw materials

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-climate\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-climate_en.pdf)
- **SC5-20-2016: European data hub of the GEOSS information system**

# SC6 – Europe in a changing world – Innovative, inclusive and reflective societies

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-societies\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-societies_en.pdf)
- **CO-CREATION-05-2016: Co-creation between public administrations: once-only principle**
- CO-CREATION-06-2017: Policy-development in the age of big data: data-driven policy-making, policy-modelling and policy-implementation
- CO-CREATION-07-2017: Towards a new growth strategy in Europe - Improved economic and social measurement, data and official statistics
- **CO-CREATION-09-2016: A European map of knowledge production and co-creation in support of research and innovation for societal challenges**

# SC6 – Europe in a changing world – Innovative, inclusive and reflective societies

- REV-INEQUAL-09-2017: Boosting inclusiveness of ICT-enabled research and innovation
- **CULT-COOP-08-2016: Virtual museums and social platform on European digital heritage, memory, identity and cultural interaction**
- CULT-COOP-09-2017: European cultural heritage, access and analysis for a richer interpretation of the past
- **CULT-COOP-11-2016/2017: Understanding the transformation of European public administrations**

# SC7 – Secure societies – Protecting freedom and security of Europe and its citizens

- [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-security\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-security_en.pdf)
- **CIP-01-2016-2017: Prevention, detection, response and mitigation of the combination of physical and cyber threats to the critical infrastructure of Europe**
- **DS-01-2016: Assurance and Certification for Trustworthy and Secure ICT systems, services and components**
- **DS-02-2016: Cyber Security for SMEs, local public administration and Individuals**
- **DS-03-2016: Increasing digital security of health related data on a systemic level**

# SC7 – Secure societies – Protecting freedom and security of Europe and its citizens

- **DS-04-2016: Economics of Cybersecurity**
- DS-06-2017: Cryptography
- DS-07-2017: Addressing Advanced Cyber Security Threats and Threat Actors
- DS-08-2017: Privacy, Data Protection, Digital Identities



# SHIFT2RAIL – The rail join undertaking

- Founding members – EC, Alstom, Ansaldo STS, Bombardier, CAF, Network Rail, Siemens AG, Thales, Trafikverket
- PPP under Horizon 2020
- Innovation Programme 2: Advanced traffic management and control systems
- Innovation Programme 4: IT Solutions for attractive railway services
- Innovation Programme 5: Technologies for sustainable and attractive European rail freight

# SHIFT2RAIL – The rail join undertaking

Actor	Activity	Type of call	Indicative EU contribution	Indicative minimum in-kind contribution of JU members	Indicative publication date
JU members	Call for Proposals	Closed - Restricted to JU members	€ 34.6 mln	€ 38 mln	Q4 2015
Non-JU members	Call for Proposals	Open	€ 10 mln	N/A	Q4 2015
Non-JU members	Call for Tenders	Open	€ 700 000	N/A	Q4 2015
TOTAL			€ 45.3 mln	€ 38 mln	

# Call for proposals for S2R JU members

- IP 5

1. Development of functional requirements for sustainable and attractive European Rail Freight
2. Start-up activities for Freight Automation
  - Develop mathematical modelling tools for freight automation
  - Develop novel and enhanced intelligent functionality in freight traffic management based on signalling development, including automatic loading and unloading at terminals, and more efficient and automated marshalling yards

# Open call for proposals for non-JU members

- IP2

2. Threat detection and profile protection definition for cyber-security assessment

- Threat analysis and assessment
- Attacks identification and mitigation strategies

3. IT virtualization of testing environment

- IP5

4. Novel single wagon load (SWL), intermodal and system trains with support of innovative access and operation tools