CRNA GORA
MINISTARSTVO NAUKE


# Informacija o pozivima za projekte za istraživačke timove iz oblasti informaciono-komunikacionih tehnologija u programu Horizont 2020 tokom 2017. godine

Dokument sadrži izvode iz 3 Radna programa, za oblasti *ICT, Internet of Things i Security*, fokusirajući se na tematske pozive koji mogu biti od značaja timovima iz Crne Gore, imajući u vidu njihovu ekspertizu.

Dokument služi početnoj orijentaciji istraživačkih timova, a za potpuno informisanje preporučuje se konsultovanje zvaničnog teksta Radnih programa.

## Sadržaj - sažeci poziva:

**Iz radnog programa H2020-ICT 2016-17:**
**http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-leit-ict_en.pdf**

## ICT-11-2017: Collective Awareness Platforms for Sustainability and Social Innovation

Rok: 25.04.2017.

**Specific Challenge:** Today Europe fails to capitalise fully on participatory innovation; more models and blueprints are needed to lead to new ways to produce collective intelligence in key sustainability areas, leveraging on open data, knowledge networks, open hardware and Internet of things. The challenge is to demonstrate that innovative combinations of existing or emerging network technologies enable new Digital Social Innovation which can better cope with emerging sustainability challenges, achieving mass adoption and measurable global impact.

Scope: a**. Innovation Actions: pilots of Collective Awareness Platforms (CAPs)** demonstrating new forms of bottom-up innovation and social collaboration exploiting digital hyper-connectivity and collaborative tools based on open data, open knowledge, open source software and open hardware, harnessing crowdsourcing or crowdfunding models.

Proposals are expected to leverage on fresh grassroots ideas and civil society participation in the broad digital social innovation domain.

*Tip projekta: Innovation action, 9M EUR budžet, 1-2M pojedinačni projekat*

**Scope b. Coordination and support Actions**, to coordinate and support the CAPs (Collective Awareness Platforms) initiative and theunderlying broader digital social innovation constituency, by identifying links and synergies among different projects, and ensuring visibility and contacts at European and international level.

*Tip projekta: Coordination and support action, 1M EUR budžet, 0,2 – 0,8M EUR pojedinačni projekat*

***

## ICT-20-2017: Tools for smart digital content in the creative industries

Rok: 25.04.2017.

**Specific Challenge**: High quality content is the main source of revenue for the Creative Industries and also instrumental for their competitiveness in a large, international market. The challenge is to maximise the potential for re-use and re-purposing of all types of digital content, for instance, by directly conceiving and creating content usable in different contexts and technical environments; improving its

granularity; increasing its ability to dynamically adapt to the users; generating more realistic digital models; embedding semantic knowledge; and other approaches to make content "smarter" thanks to new and emerging technologies.

**Expected Impact:** It is expected that the set of funded actions will:

- Increase the potential for re-purposing and re-use of digital content in order to diversify the market and improve the return on investment for producers;
- Provide significantly improved technologies for digital content production and management in the creative industries;
- Reduce the costs for the production of enhanced digital content for the creative industries, with the support of leading edge ICT.

*Tip projekta: Research and innovation action, 17M EUR budžet, 2-4M pojedinačni projekat*

***

## ICT-23-2017: Interfaces for accessibility

Rok: 25.04.2017.

**Specific Challenge:** Research on user-driven multimodal interface design has advanced the usability and accessibility of many software and devices to the benefits of all people, especially for those with different functional abilities. However, despite progress, there are still many who are disadvantaged due to lack of accessible and usable systems. Among those are persons with neurological conditions and disorders as well as cognitive disabilities. More effective solutions, designed with people with disabilities and their carers, are needed to mediate communication experiences or for more natural interactions, including with their environment. Technologies aiming at enhancing cognitive accessibility hold the potential to improve attention, executive functions, knowledge acquisition, communication, perception and reasoning. Furthermore, improving the capacity to decode and use brain signals will help to accelerate the development of solutions for people with communication disorders.

**Expected Impact**: Projects should address the following impact criteria and provide appropriate metrics Improved communication and interaction capability of people with disabilities and facilitate social innovation;

- More affordable technologies and products that support interactions for people with disabilities;
- New generation of services that are highly adaptable and personalisable to individual contexts;
- New approaches to brain computer interfaces.
- Easier and more cost effective assessment of web accessibility requirements, at scale.

*Tip projekta: Research and innovation action ili Innovation action, 10M EUR budžet, 2M pojedinačni projekat*

***

## ICT-41-2017: Next Generation Internet

Rok: 25.04.2017.

**Specific Challenge:** Today the Internet is key to almost any socio-economic activity, a true value creator which reshapes economic and societal behaviours. This trend is irreversible and in 10 years from now the Internet will be an even more indispensable motor for socioeconomic activity worldwide. If Europe aims to shape this future Internet as a powerful, open, data-driven, user-centric, interoperable platform ecosystem, it must take action now. With a fresh view, the European Commission launches a new track of future Internet research aimed at developing a next generation of the Internet enabled by key technologies and services allowing it to become an open ecosystem avoiding the dominance of a few giant economic players. This coordination and support action will prepare the conditions, mobilize the constituencies and prototype the operations of a large future Next Generation Internet initiative going beyond Horizon 2020.

**Scope**: Proposals should cover one of the three bullet points (a, b or c):

a) Coordination and Support action - Identification of research topics

b) Coordination and Support action - Dynamic and continuous consultation

c) Coordination and Support action - A programme shape for of a Next Generation Internet initiative.

**Expected Impact:**

- Establish the base for a large scale research flagship on the Next Generation Internet.
- Prototype and validate new processes for research and innovation on Next Generation Internet.
- Mobilise the new players indispensable for agile research on the Next Generation Internet, notably leading individual or teams of researchers and high tech startups.
- Build an active, visible and agile ecosystem comprising all relevant stakeholders for making the Next Generation Internet flagship a success.
- Build a dynamic and growing knowledge base of technological trends, initiatives and key players in the area of Next Generation Internet.

*Tip projekta: Coordination and support action, ukupni budzet 2M EUR, pojedinačni projekat 0,7M*

***

## Iz Radnog programa: Cross-cutting activities – Focus areas

**http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-focus_en.pdf**

## IoT-03-2017: R&I on IoT integration and platforms

| Rok: 25.04.2017. |
|---|

**Specific Challenge:** The future design of the Internet of Things applications will depend crucially on the development of sophisticated platform architectures for smart objects, embedded intelligence, and smart networks. Most of the today's IoT systems are however mainly focused on sensors, whereas in the future actuation and smart behaviour will be the key points.

Research driven by ambitious use cases and benefiting from innovation areas in components, systems, networking and web technologies needs to be carried out to respond to the ever increasing needs of future IoT systems in terms of scalability, heterogeneity, complexity and dynamicity. IoT platforms should be open and easy-to-use to support third party innovation.

Scope:

- Architectures, concepts, methods and tools for open IoT platforms…
- IoT security and privacy…

**Expected Impact:** Two or more of the following criteria should be addressed, with success metrics where appropriate.

- Evolution of platform technologies and contribution to scientific progress enabling novel, advanced semi-autonomous IoT applications.
- Strengthen the industrial EU technological offer of innovative IoT solutions
- Contribution to emerging or future standards and pre-normative activities
- Increase of IoT usability and user acceptance, notably through strengthened security and user control
- Support emergence of an open market of services and innovative businesses
- Promote the adoption of EU platforms in European and international context Type of Action: Research and Innovation action

*Tip projekta: Research and Innovation action, budžet 37M EUR, pojedinačni projekat 3-5M EUR*

***

## Iz Radnog programa H2020 - Secure societies – Protecting freedom and security of Europe and its citizens 2016-17

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-security_en.pdf

### SEC-15-BES-2017: Risk-based screening at border crossing

Rok: 24. avgust 2017.

**Specific Challenge**: The concept of 'borders' has changed in recent times. The purpose and function of borders have been, and remain, to delineate and demarcate one sovereignty from another. However, borders must also allow for the smooth movement of people and goods. Maintaining the current level of checks is becoming increasingly expensive given the ever growing volumes of people and goods on the move, and increasingly more disruptive of flows. It would remain sustainable if thorough checks could be limited to fewer individual goods and people pre-selected further to a preliminary (and non-disruptive) risk-based screening of the flows.

**Expected Impact: Short/Medium term**: • Enhanced situational awareness for border control practitioners, enabling the timely and proper identification of potentially dangerous people and goods, and preventing smuggling and human trafficking; • Improved risk-management coordination and cooperation between border control (passport/persons), customs (baggage/goods) and security in transport (pre-boarding security checks on persons and baggage); Long term: • Improved solutions for remote detection of abnormal behaviours; • Improved and people-respectful border automated screening systems through close cooperation with actions resulting from SEC-18-BES–2017: Acceptance of "no gate crossing point solutions". More effective use of intelligence to reduce risks at borders;

Tip projekta: Innovation action, ukupan budžet: 8M EUR, pojedinačni projekat: 8M EUR, Technology Readiness Level: 7

***

### SEC-16-BES-2017: Through-foliage detection, including in the outermost regions of the EU

Rok: 24. avgust 2017.

**Specific Challenge:** Member States' authorities are carrying out activities all along the European border, and have started to share operational and situational information. But several regions at the borders of the European Union are covered with forests, and face extreme temperature conditions. Detecting, locating, tracking or identifying persons and vehicles crossing the border in forested regions is extremely difficult given that technologies for surveillance through harsh unstructured environments are currently

not effective. The HORIZON 2020 - Work Programme 2016 - 2017 Secure societies – Protecting freedom and security of Europe and its citizens Part 14 - Page 40 of 85 increasing risk of irregular flows and immigration across the border with, for instance, Turkey, Ukraine, Belarus, Russia or Brazil makes the issue even more acute than in the past.

**Expected Impact:**

Short term: • Improved border surveillance and search-and-rescue capabilities, especially in forested regions;

Medium term; • Validated through-foliage detection technologies, in terms of fitness for purpose, low rate of false alarms, practicability, mobility, and cost effectiveness.

Long term: • Demonstrated through-foliage detection technologies in the context of realistic operational scenarios, in extreme weather conditions, to be implemented in collaboration with the relevant border surveillance authorities and in regions where the Frontex Agency indicates that important irregular border crossing and smuggling may be taking place.

*Tip projekta: Research and Innovation action, ukupan budžet: 8M EUR, pojedinačni projekat: 8M EUR, Technology Readiness Level: 5-6*

***

## SEC-18-BES-2017: Acceptance of no gate crossing point solutions

Rok: 24. avgust 2017.

**Specific Challenge:** For the traveller it would be ideal to cross borders without being slowed down. It is indeed likely that, in the next 10 years or so, technologies make it possible to implement "no gate crossing point solutions" that allow for seamless crossing of borders and security checks for the vast majority of travellers who meet the conditions of entry, and make sure that those who do not fulfil such conditions are refused entry.

There is a broad variety of technologies and systems including information systems and (networks of) sensors that will become available to support border checks based on risk-assessment methods. Some are to be deployed in the vicinity of border crossing points, others can be mobile and used to check travellers data along his/her journey.

However, in the intensive use of technologies that this will require bears the risk to invading people’s privacy, and the societal and political acceptance of technologies for “no gate solutions” is required prior to their implementation.

**Scope:** The assessment of the acceptability of such (combinations of) technologies and systems by citizens (who need to remain in control of personal data) and practitioners is needed, that takes account of human behaviour, gender, legal frameworks, societal issues, and possible risk of discrimination.

Methods developed to perform such assessments need also to generate information useful for decision makers to take informed decisions about future technology deployments, and for industry to design products that preserve privacy.

**Expected Impact:** Information systems that better manage personal information and support the automated checking and analysing of various entry and exit data, without increasing the risk of loss of privacy thanks to close cooperation with actions resulting from SEC-15-BES–2017: Risk-based screening at border crossing. Networks of sensors that better collect information needed for border checks, without increasing the risk of loss of privacy thanks to close cooperation with actions resulting from SEC-15-BES–2017. A method, and metrics, to assess acceptability by the society of the concept of border control processes based on "no gate crossing point solutions", and of the various technology components that may be required.

*Tip projekta: Research and Innovation action, ukupan budžet: 14M EUR, pojedinačni projekat:3 M EUR*

***

Nacionalna kontakt osoba (NCP) za ICT i Bezbjednost: Saša Ivanović, sasa.ivanovic@mna.gov.me

Koordinator NCP za Crnu Goru: Branka Žižić, branka.zizic@mna.gov.me

http://www.mna.gov.me/ministarstvo/Horizont2020/