

H2020 – WP 2016-2017 NCP Training 12 & 13 May 2016

SC3 : Secure, Clean and Efficient Energy

SC4 : Smart, green and integrated transport

**Cross-cutting activities: Circular economy, Smart Cities and
Communities**

Irmgard HEIBER

Smart Cities & Sustainability

Communication Networks, Content and Technology

European Commission

Work Programme 2016-2017

- **ICT research & innovation: present in several topics**
- **CNECT control: "relatively" lower than in previous years**
- **Calls implemented by executive agencies: INEA, EASME**

Topics of specific interest for ICT:

- **Societal Challenge 3 (SC3): Energy Efficiency (EE), Competitive Low Carbon Economy (LCE)**
- **Societal Challenge 4 (SC4) Smart, green and integrated transport: Mobility for Growth (MG), Automated Road Transport (ART), Green Vehicles (GV)**
- **Cross-cutting activities (Focus Areas): Circular Economy (CIRC), Smart Cities and Communities (SCC)**

Societal Challenge 4: Smart Green and Integrated Transport

**MOBILITY
for
GROWTH**

- Aviation
- Waterborne
- Safety
- Urban Mobility
- Logistics
- Intelligent Transport Systems
- Infrastructure
- Socio-economic

AUTOMATED ROAD TRANSPORT

GREEN VEHICLES

SC4: Smart, green and integrated transport

**Smart,
Green and
Integrated
Transport**

MOBILITY FOR GROWTH:

- **MG-4.1-2017**
- **MG-5.2-2017**
- **MG-8.2-2017**

AUTOMATED ROAD TRANSPORT:

- **ART-0.1-2017**

GREEN VEHICLES:

- **GV-10-2017**

ACHIEVE SUSTAINABLE MOBILITY IN URBAN AREAS

- **MG-4.1-2017: Increasing the take-up and scale-up of innovative solutions to achieve sustainable mobility in urban areas.**

Specific Challenge:

Many individual, local solutions for sustainable mobility available but insufficient take-up. Increase take up of these solutions by

- transferring them to new contexts
- studying and comparing the impacts
- paying attention to social issues and implications

Scope:

The proposed action should cover one or more areas, *inter alia*:

- Traffic and travel avoidance
- Optimising the use of existing infrastructure and vehicles
- Optimising design and use of multi-modals hubs and terminals
- Supporting modal shift towards more efficient modes
- New governance models for freight and passenger transport

MG-4.1-2017 (continuation)

ONLY: Integration of IT and ITS enablers for urban mobility no IT solutions (covered elsewhere in WP)

Expected:

- Demonstrate successful transfer of either a single solution/approach or limited package of mutually reinforcing solutions/approaches from up to 5 locations to at least 10 new locations in Europe.
- Build on clear commitments for a further EU-wide take-up during and after the actions
- Demonstrate how activities lead to faster, more cost-effective and larger scale take-up

ICT FOR FUTURE LOGISTICS

▪ **MG-5.2-2017: Innovative ICT solutions for future logistics operations**

Specific Challenge:

Logistics sector has highly increased collaboration, intermodal and dynamic re-routing of freight

- Need to exploit ICT advances: Internet-of-Things, big data, new satellite navigation and ITS
- Need to rethink the whole chain of planning, booking and executing freight flows
- Provide all stakeholders with reliable information and allow exploitation of the full potential of horizontal collaboration.
- Need for safe and secure real-time and open data to plan and track shared freight
- Ease of access to all future ICT solutions especially for SMEs.
- Consider needs and policies of all public stakeholders

MG-5.2-2017: (continuation)

Scope:

Build on previous work in e-Freight domain / Digital Transport and Logistics Forum, proposals should cover of at least 2 of 3 issues:

A) Planning and data

- Develop booking/planning systems for optimal use of modes and route
- Identify opportunities for increased availability of freight data
- Develop algorithms to increase load factors and optimise delivery route

B) Dynamic routing and business models

- Develop real-time exception management for faster reconfiguration
- Develop business models for dynamic transport services

C) Interoperability and everything connected

- Develop connection tools for low-cost integration of SMEs in supply chain
- Integrate simple and cost effective sensors or smart devices
- Harmonise interoperability between all supply chain partners

BIG DATA IN TRANSPORT

- **MG-8.2-2017: Big data in Transport: Research opportunities, challenges and limitations**

Specific Challenge:

"Big data", have huge potential for many transport related ICT solutions but their collection and use needs to be further investigated, the implication of their use further determined.

Scope: In order to meet this challenge, proposals should address the following aspects:

- Identification of areas and contexts for ICT and big data via series of case studies and contexts in Europe to determine prerequisites of successful use of big data in transport
- Identify methodologies + tools for effective data mining + exploitation.
- Analyse barriers / limitations of transport system to exploit big data
- Examine institutional / governmental issues and barriers concerning big data in transport

Mobility for Growth Calls

Implementation : INEA

MG-4.1-2017 Urban mobility (IA Innovation action; two stage)

- Opening date: 20/09/2016; **deadline: 26/01/2017, 17:00**
- Second stage; **deadline: 19/10/2017, 17:00**

MG-5.2-2017 Logistics (RIA Research + Innovation action; two stage)

- Opening date: 20/09/2016; **deadline: 26/01/2017, 17:00**
- Second stage; **deadline: 19/10/2017, 17:00**

MG-8.2-2017 Big Data (CSA Coordination and support action; single stage)

- Opening date: 20/09/2016; **deadline: 1/02/2017, 17:00**

ICT FOR ROAD TRANSPORT AUTOMATION

- **ART-0.1-2017: ICT infrastructure to enable the transition towards road transport automation**

Specific Challenge: ICT technologies, cooperative ITS and more accurate and reliable satellite navigation and positioning will enable safe, sustainable and efficient driving strategies that allow automated road transport .

ICT-related challenges to overcome concern the connectivity required for advanced levels of road vehicle automation and the architecture of the connected ICT infrastructure.

Scope:

Focus on development, testing and real-life validation of ICT infrastructure architectures to enable transition towards road vehicle automation up to automation levels 3 + 4

Proposals need to integrate automotive, IT and telecommunication industries as necessary to address one or several of the following areas:

ART-0.1-2017 (continuation)

- Functional and technical requirements for the required connectivity (V2V and V2I) for large-scale deployment of vehicle automation levels 3 and 4, using connectivity over commercial telecom networks and / or over dedicated ITS spectrum, examine in depth including cyber-security
- Connectivity: architecture, functional and technical requirements for data generation, processing, storage and retrieval in the context of large-scale deployment of automation levels 3 and 4
- Tamper-proof in-vehicle platforms for automated vehicles building on and advancing the principles of cyber security for automated vehicles
- Dynamic and accurate localisation and mapping, using cloud-based spatial data for highly automated driving

Automated road transport

Implementation : INEA

ART-01-2017 ICT FOR ROAD TRANSPORT AUTOMATION

(IA Innovation action; two stage)

- Opening date: 20/09/2016; **deadline: 26/01/2017, 17:00**
- Second stage; **deadline: 19/10/2017, 17:00**

ELECTRIFIED L-VEHICLES IN URBAN AREA

- **GV-10-2017: Demonstration (pilots) for integration of electrified L-category vehicles in the urban transport system**

Specific Challenge:

Growing traffic in urban areas high traffic congestion, greenhouse gas emissions, and air pollution BUT economic development needs efficient + sustainable mobility and citizens need affordable, adaptable and multimodal transport.

L-category vehicles (motorbikes, scooters, quads, other light 2 – 3 wheelers) are good option for passenger and logistics of small goods reducing above pollutions, electrical L vehicles are a further step for more sustainable transport.

Today, these vehicles are still a niche market but new development could meet needs of large public.

GV-10-2017(continuation)

Scope:

- Focus on demonstration of potential market penetration of EL-Vs in different European cities and EL vehicles attractive to a large public
- Demonstrate use of EL-Vs as private, shared, or service vehicles to enhance user uptake and integration into usual urban mobility.
- Include deployment of ICT tools for driver support and integrating EL-Vs into the urban transport.
- The consortium should have at least two cities as beneficiaries.
- Focus of investments should be on demonstration of potential market penetration of EL-Vs in different European cities, rather than purchasing the actual vehicles and their appropriate infrastructure.

Green vehicles

Implementation : INEA

GV-10-2017 (IA Innovation action; single stage)

- Opening date: 4/10/2016; **deadline: 1/02/2017, 17:00**

SC3: Secure, clean and efficient energy

Energy Efficiency

ENGAGING CONSUMERS TOWARDS SUSTAINABLE ENERGY:

- **EE-06-2016-2017**
- **EE-07-2016-2017**

BUILDINGS:

- **EE-12-2017**

INDUSTRY, SERVICES AND PRODUCTS:

- **EE-20-2017**

Competitive low-carbon energy

TOWARDS AN INTEGRATED EU ENERGY SYSTEM:

- **LCE-01-2016-2017**
- **LCE-04-2017**
- **LCE-05-2017**

ENERGY EFFICIENCY

ENGAGING CONSUMERS TOWARDS SUSTAINABLE ENERGY:

- **EE-06-2016-2017: Engaging private consumers towards sustainable energy**
- **EE-07-2016-2017: Behavioural changes towards energy efficiency through ICT**

BUILDINGS

- **EE-12-2017: Integration of Demand response in Energy management System while ensuring interoperability through Public Private partnership (EeB PPP)**

INDUSTRY, SERVICES AND PRODUCTS

- **EE-20-2017: Bringing to market more energy efficient and integrated data centres**

ENGAGING CONSUMERS TOWARDS SUSTAINABLE ENERGY

▪ **EE-06-2016-2017: *Engaging private consumers towards sustainable energy***

Specific Challenge: Consumers should be considered at the heart of the energy system and become active market players; future private consumer is: more aware, active, energy sufficient, prosumer producing energy for own consumption (where possible); insufficient use of relevant ICT solutions and insufficient understanding of energy bills contribute to hampering achievement of a more sustainable energy system;

Scope: The proposed action should cover one or more areas, *inter alia*:

- Facilitate wider deployment and consumer adoption of existing ICT-based solutions, for energy efficiency and information on energy consumption and costs, with a focus on action and resulting in improved understanding of ICT interfaces and information depiction (including smart metering and related systems).

ENGAGING CONSUMERS TOWARDS SUSTAINABLE ENERGY:

- **EE-07-2016-2017: *Behavioural change toward energy efficiency through ICT***

Challenge: To demonstrate that ICT-based solutions can contribute to saving energy by motivating and supporting behavioural change of energy end-users.

Scope: Activities are focused on the development of innovative user-friendly digital tools and applications or services making use of energy end-user generated information or captured from in-home equipment/sensors (...), in possible combination with intelligent controls and automation, with the purpose to significantly enhance energy efficiency by behavioural change of end-users taking informed decisions.

ICT solutions should primarily address energy efficiency, but may integrate other solutions including also indoor climate, building/home security or health monitoring. This "packaging" approach would need to demonstrate the added benefits for consumers, as well as the market potential.

BUILDINGS:

- **EE-12-2017: Integration of Demand Response in Energy Management Systems while ensuring interoperability through Public Private Partnership (EeB PPP)**

Challenge: Control, automation and monitoring tools integrated into buildings are becoming more sophisticated; to guarantee energy efficient operation, building service systems need to deliver adequate control and monitoring of building energy parameters. The challenge:

- To integrate demand response enabling elements into Energy Management Systems;
- To create building – energy system interaction towards optimising energy consumption, production and storage at building level, considering availability and price of energy supplied via the grid;
- To ensure full interoperability between grids, systems and products for seamless integration of all required components in building energy management systems.

BUILDINGS: EE-12-2017 (continuation)

Scope: At the building and building unit level (residential or non-residential) the focus should be on optimisation, integration and demonstration of cost effective and interoperable solutions, including testing of new technologies and systems in real life situations.

The proposed solutions shall be demonstrated for buildings which incorporate intelligent Energy Management Systems and new technologies (smart home devices). They should ensure, *inter alia*, interoperability, evolving and adapting to the operational environment (self-learning), including indoor and outdoor conditions. Such solutions should be effective and resilient, ensuring low operational and maintenance costs and should include functions for predictive maintenance.

The topic EUB-02-2017 ("Utilities: energy management at home and in buildings") in Part 5.i ICT of the WP is also relevant and addresses similar challenges.

INDUSTRY, SERVICES AND PRODUCTS:

- **EE-20-2017: *Bringing to market more energy efficient and integrated data centres***

Challenge: To speed up the time-to-market of promising innovative solutions and concepts to bring to market more energy efficient and integrated data centres.

Following the increasing demand for cloud computing, big data, Internet of Things, dematerialization of documents and other ICT services, the demand for ICT processing is expected to grow exponentially in the coming years. Data centres should:

- become more energy efficient; and
- maximise integration of renewable energy sources;

Existing and new data centres should be better integrated into the various energy grids (electricity and/or heat) in order to turn their energy use and waste into a benefit for the whole energy system.

▪ **EE-20-2017 (Continuation)**

Scope:

Innovative actions to increase energy efficiency, use of renewable energy sources and integration of data centres in the energy system.

Proposals should:

- cover several areas (innovative & energy efficient cooling solutions, waste heat reuse, geographical & temporal workload balance, integration of local & remote renewable energy sources, integration in smart grids, integration with district heating/cooling networks, integration of power back-up system in the grid and use of heat pumps for efficient use of waste heat, etc.);
- include development of business models to trade heat, cold, electricity or energy security and storage;
- build upon results of previous projects (e.g. FP7 Smartcities Call 2013);
- focus on new and existing data centres.

Energy Efficiency Calls

Implementation : EASME (<https://ec.europa.eu/easme/>)

ENER Contact: Margot PINAULT - Margot.PINAULT@ec.europa.eu

EE-06-2016-2017 (CSA Coordination and support action; single-stage)

- Opening date: 15/03/2016; **deadline: 15/09/2016, 17:00**
- Opening date: 19/01/2017; **deadline: 07/06/2017, 17:00**

EE-07-2016-2017 (IA Innovation action; single stage)

- Opening date: 26/07/2016; **deadline: 19/01/2017, 17:00**

EE-12-2017 (IA Innovation action; single stage)

- Opening date: 26/07/2016; **deadline: 19/01/2017, 17:00**

EE-20-2017 (IA Innovation action; single stage)

- Opening date: 26/07/2016; **deadline: 19/01/2017, 17:00**

COMPETITIVE LOW-CARBON ENERGY

TOWARDS AN INTEGRATED EU ENERGY SYSTEM:

- **LCE-01-2016-2017: Next generation innovative technologies enabling smart grids, storage and energy system integration with increasing share of renewables: distribution network**
- **LCE-04-2017: Demonstrating of smart transmission grid, storage and system integration technologies with increasing share of renewables**
- **LCE-05-2017: Tools and technologies for coordination and integration of the European energy system**

LCE-01-2016-2017: Next generation innovative technologies enabling smart grids, storage and energy system integration with increasing share of renewables: distribution network

Challenge: Europe need to develop the next generation of competitive technologies and services:

- for the distribution grid at medium and low voltage levels;
- clearly beyond the state-of-the-art;
- ready to be integrated in the market in 5 to 10 years' time.

These technologies and services should:

- enable advanced solutions for demand response, smart grid, storage and energy system integration;
- while respecting the needed stability and security in the context of an increasing share of variable renewable energy sources in the electricity grid.

LCE-01-2016-2017 (continuation)

Scope: In 2017, Proposals must target technologies, tools and/or services in one of the following two areas (to be clearly indicated):

(a) Demand-response:

- tools and technology validation for demand response forecast, profiling, segmentation, load forecasting, innovative and user-friendly services for customers based on smart metering;
- inclusion of Virtual Power Plant and micro grid as active balancing assets; associated innovative market and business models;
- secure data handling;

(b) Intelligent electricity distribution grid: tools for the optimisation of the distribution grid, technologies for autonomous and self-healing grids, energy management and control systems, technologies for advanced power electronics, for enhanced observability, e.g. real-time system awareness; secured communications in the smart grid in particular cyber security and big data analytics.

LCE-04-2017: Demonstration of smart transmission grid, storage and system integration technologies with increasing share of renewables

Challenge:

- To integrate variable renewable energies challenges the transmission network.
- The target to reach 10% of interconnection of the production capacity:
 - calls for new approaches to the transmission network and its management;
 - opens new perspectives in terms of sharing and resources across borders.

LCE-04-2017 (continuation)

Scope: Proposals will target the transmission grid and demonstrate a combination of at least 2 of the following aspects:

- Power transmission technologies and management of large scale generation in the context of an increased share of variable renewables;
- Large scale storage relevant to the transmission network (GWh scale
- Communication / ICT technologies / control tools to enhance real-time awareness, introduce more flexibility the transmission grid, the integration of storage facilities, of more flexible generation, of demand-response mechanism and its interface to the distribution grid; cross-border collaboration;
- New approaches to the wholesale market facilitating the participation of variable renewable energy sources, remunerating adequately new flexibility services to the grid such as offered by storage, active participation of demand and new players such as aggregators and reducing the cost of operations.

LCE-05-2017: Tools and technologies for coordination and integration of the European energy system

Challenge: To create and deploy common tools for planning, integration and operation across the energy system and its actors.

Following the increasing share of variable renewable energy sources and 2020&2030 targets for the reduction of greenhouse gas emissions, there is a need for significant changes in the European energy systems:

- more flexibility;
- more active involvement of all stakeholders;
- more collaboration.

Actions are needed to avoid several risks which the power system will face: poor quality of electricity supply, congestion, lack of stability, excessive levels of curtailments, impossibility to cope with electro mobility demand, etc.

LCE-05-2017 (continuation)

Scope:

Proposals must target the development of technologies, tools and systems in one or several of the following areas:

1. Novel European grid and end-to-end energy system planning tools, including foreseeable features such as storage, aggregation, demand-response and integrating cost aspects;
2. Enhanced TSO/DSO collaboration and coordination tools, secure data exchange across networks along whole the value chain, ICT tools for cross-border trading for nearly real-time balancing; definition of minimum set of specifications to allow automated digital cross-border electricity market;

LCE-05-2017 (continuation) - scope:

4. Solutions for the deployment of neutral data access points ensuring a fair and transparent data access to all energy actors (TSOs, DSOs, ESCOs, Telcos, ICT companies, consumers, etc.); validation of new business models resulting from the cooperation between them; investigation of incentives and possible commercial arrangements with a fair share of benefits across actors;
5. Synergies between electricity, gas and heat networks, associated business and market mechanisms and analysis of existing regulatory aspects; *(technologies for hydrogen production and storage are addressed in the frame of the Fuel Cell and Hydrogen JU and are therefore excluded from this call)*;
6. Socio-economic aspects and environmental aspects related to large scale infrastructures relevant to renewable generation and changes to transmission infrastructure need for their integration; socioeconomic aspects of consumer behaviours in demand-response mechanisms, consumer engagement.

Competitive low-carbon energy Calls

Implementation: INEA

ENER Contact: Remy DENOS (remy.denos@ec.europa.eu)

LCE-01-2016-2017 (RIA Research and Innovation action; single stage)

- Opening date: 20/09/2016; **Deadline: 14 /02/2017, 17:00**

LCE-04-2017 (IA Innovation action; single stage)

- Opening date: 20/09/2016; **Deadline: 14/02/2017, 17:00**

LCE-05-2017 (RIA Research and Innovation action; single stage)

- Opening date: 20/09/2016; **Deadline: 14/02/2017, 17:00**

Cross-cutting activities (Focus Areas)

**Industry
2020 in the
Circular
Economy**

CIRCULAR ECONOMY:

- **CIRC-02-2016-2017: Water in the circular economy**

**Smart and
Sustainable
Cities**

SMART CITIES AND COMMUNITIES:

- **SCC-1-2016-2017: Smart Cities and Communities lighthouse projects**

SUSTAINABLE CITIES THROUGH NATURE-BASED SOLUTIONS:

- **SCC-02-2016-2017: Demonstrating innovative nature-based solutions in cities**

INDUSTRY 2020 IN THE CIRCULAR ECONOMY

CIRC-02-2016-2017: Water in the context of the circular economy

Challenge: The water sector has a prominent position in economy and society, but it is very diverse and fragmented. It needs to revolutionise the way public and private actors work together, to address water-related challenges and seize on opportunities strengthening a demand-driven approach.

Water services aim mainly to save water and improve its quality. But water becomes a scarce resource as a result of urbanisation, increased competition between various uses, economic sectors and extreme weather events. Thus it is necessary to improve water systems by:

- considering the whole water-use production chain; and
- identifying solutions that enhance both economic and environmental performance of the system.

CIRC-02-2016-2017 (continuation)

Scope: In 2017, proposals shall address the following issue:

b) Towards the next generation of water systems and services—large scale demonstration projects (2017):

The objective is to demonstrate innovative solutions at a large scale (i.e. regions, cities and/or river basins), in line with EIP Water priorities and objectives of the Water Framework Directive.

Projects should build on experience already gained, engage all relevant stakeholders, apply new business models and new value chains.

To enhance the systemic approach and the transformation of water services toward a more circular economy approach, digital technologies and ICT tools should be also considered.

Activities aiming at facilitating market uptake of innovative solutions, including standardisation, should be also addressed.

Water in circular economy

CIRC-02-2016-2017: Water in the context of the circular economy

(IA Innovation action; two stage)

- Opening date: 8/11/2016; **deadline first stage: 7/03/2017, 17:00**
- **Deadline second stage 5.09.2017, 17:00**

SMART AND SUSTAINABLE CITIES

SMART CITIES AND COMMUNITIES:

- **SCC-1-2016-2017: Smart Cities and Communities lighthouse projects**

SUSTAINABLE CITIES THROUGH NATURE-BASED SOLUTIONS:

- **SCC-02-2016-2017: Demonstrating innovative nature-based solutions in cities**

Smart cities and communities

SCC-1-2016-2017: Smart Cities and Communities lighthouse projects

Challenge: To demonstrate solutions at district scale integrating smart homes, smart grids (electricity, district heating, telecom, water, etc.), energy storage, electric vehicles and smart charging infrastructures, using the latest generation ICT platforms (and infrastructure) based on open specifications.

Scope: Lighthouse cities develop and test integrated innovative solutions at large scale (at least district level). The proposals should address a well-balanced combination of smart homes, smart energy and ICT systems and electric vehicles.

The project should cover:

1. A larger district of buildings (old or new or mixed and ideally nearly zero or low energy).

SCC-1-2016-2017: (continuation)

Scope: The project should cover (continuation):

2. Smart interaction of different energy systems at districts level going far beyond classical electricity grids management only (smart management of electricity, heat cold, gas or other grid systems, including water with smart solutions for storage, including intelligent use of thermal mass of buildings that exploit synergies between these urban grids).
3. Integration with and/or consolidation of low carbon ICT systems at district level (communication networks, computing facilities, data centres).
4. Electromobility: smart EV charging (grid to vehicle and vehicle to grid), ,while ensuring a positive impact on the whole energy system from a technical point of view.

Sustainable cities through nature-based solutions

SCC-02-2016-2017: Demonstrating innovative nature-based solutions in cities

Challenge: To provide a robust EU-wide evidence base and develop a European reference framework on nature-based solutions for regional and local city authorities, communities, enterprises, other stakeholders, about benefits, co-benefits, cost-effectiveness, economic viability of these solutions, to: (i) enhance climate and water resilience in cities and (ii) address inclusive urban regeneration in cities, thus promoting their large scale deployment and creation of a global market.

Mass urbanisation is one of the most urgent challenges in the 21st century. Cities and urban communities have to cope with several challenges (poor air quality, heat island effects, increased flood risks, increased frequency/severity of extreme events, derelict industrial sites, dis-functioning urban areas, increased criminality, social exclusion, inequalities, marginalisation, poverty, degraded urban environments).

SCC-02-2016-2017 (continuation)

Scope: Projects should adopt a 'front-runner' and a 'follower' cities approach, to facilitate rapid exploitation, replication, up-scaling of the solutions, and via large-scale demonstration should aim to:

- develop, deploy and demonstrate innovative, replicable and locally attuned nature-based solutions, with systemic impact at the scale of the intervention;
- assist 'follower' cities that commit proactively seek advice, expertise, assistance capacity building and mentoring, and develop a sustainable urban planning that systemically replicates, embeds and integrates the demonstrated nature-based solutions customised to their particular context.
- engage 'front-runner' cities in further networking;
- set up a robust monitoring scheme to monitor the performance and assess the impact of the solutions;

SCC-02-2016-2017 (continuation)

Scope: Projects should aim to (continuation):

- develop methodologies for replication and up-scaling in different contexts;
- Identify and assess potential regulatory, economic, social and technical barriers of relevance to these solutions, and propose ways to overcome them;
- Establish long-term sustainable data platforms to systematically document information and provide evidence on practices and lessons learnt regarding the deployment, cost-effectiveness and performance of nature-based solutions.

Proposals shall address **all** of these points. The involvement of social sciences and humanities (SSH) in the project will be required to properly address these complex challenges.

SMART AND SUSTAINABLE CITIES

Smart Cities and Communities: SCC-1-2016-2017 (IA Innovation action; single-stage)

- Opening: 04/10/2016; **Deadline: 14/02/2017, 17:00**

Sustainable Cities through Nature-based Solutions: SCC-02-2016-2017 (IA Innovation action; two-stage)

- Opening: 08/11/2016; **deadline: 07/03/2017, 17:00; 2nd stage deadline: 05/09/2017, 17:00**

Thank you for your attention!

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