

EII SMART CITIES

Member States Initiative

Delegates Meeting

21 May 2012, Vienna, Austria

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Austrian Ministry of Transport, Innovation and Technology**

Agenda

- **11:00** Status and recent developments in Smart Cities (HG Schwarz, BMVIT)
- 11:40 Programme and project screening (Catrin Haider, BMVIT)
- 11:55 EERA Joint Programme Smart Cities (Brigitte Bach, AIT)
- 12:10 EIP on Smart Cities and Communities FP7 Energy WP 2013
(Esperanza Arrizabalaga Vena, European Commission DG RTD)
- **12:45** *Lunch break*
- 13:30 Transnational city cooperation (Reinhard Jank, VWK)
- 13:50 Potential content for first Joint Call (Guy Vekemans, VITO)
- 14:10 Example for Joint Call implementation (Ute Roewer, PTJ)
- **14:30** *Coffee break*
- 14:45 Open discussion on Joint Call
 - a) Topics
 - b) Process towards implementation)
- 15:45 Summary and next steps (Hans-Günther Schwarz, BMVIT)
- **16:00** End of workshop

Overview of Presentation

- MSI process: What happened so far
- Current situation: SET Plan EII SCC = EIP SCC ?
- Smart Cities „lighthouse projects“ need tools and technologies for integrated energy planing, management and monitoring
- Who can fund RDI on Smart Cities tools & technologies?
Arguing for :
 - partnership with the European Commission in the EIP
 - a joint call of the SCMSI

The Smart Cities EII Storyline



- Dec. 2007 Launch of the SET-Plan
- By early 2011 Launch of 6 out of 7 EIs of the SET-Plan
- 24 Feb. 2011 First meeting of EII actors (AT, BE, NL)
- 24 May 2011 First meeting of Smart Cities delegates
 - Common picture, exchange of views, common position
- 21 June 2011 Launch of the Smart Cities and Communities (SCC) Initiative
- 28 Nov. 2011 SET-Plan conference, Warsaw
 - Launch of EERA joint programme on Smart Cities
 - Launch of the Smart Cities Stakeholder Platform process (by the EC)
- **2 Dec. 2011 Launch of the Smart Cities MS initiative**
 - Currently 21 participating countries (MS and AS)
 - Subsequent **meetings in February, March, and May 2012**
 - Overview on national RDI programmes, lighthouse projects, and project bundles
 - Preparation of a joint call for 2013
- 5 June 2012 First activity of the Smart Cities Stakeholder Platform
 - Workshops of the platform working groups
- **10 July 2012 Commission Communication proposing an EIP SCC**

Activities in blue: driven by EC

Activities in red: driven by MS

Vision: Smart, Sustainable and Resilient Energy Systems

- ICT & energy technologies are merging
- Intelligent energy management on regional & city level

New integrated planning approach

- Integrated energy planning
- Active buildings
- Smart grids
- Smart supply technologies and inclusion of regional renewable sources
- Sustainable mobility



New approach to technologies

- New Business Models
- New innovation processes (test beds, living labs, stakeholder dialogues, etc.)

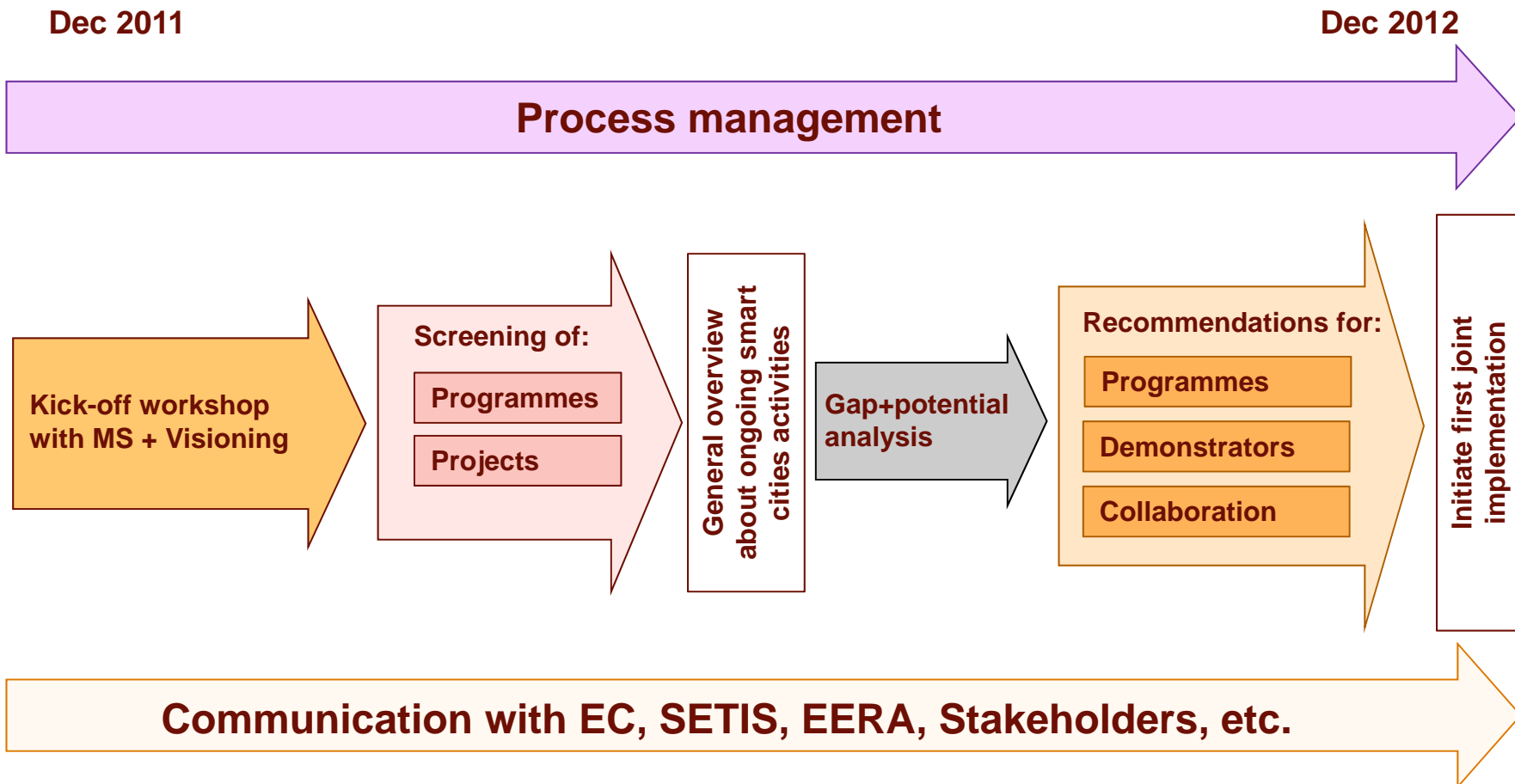
Source: AIT

The Smart Cities Member States Initiative

Objectives:

- to enable **coordinated collaboration** of MS and AS participating in the Smart Cities and Communities Initiative of the SET-Plan
- to create a **unified process of contributions** to the EII on Smart Cities and Communities from the part of the participating countries
- to define the **role of MS and AS as active partners** in the set-up and execution of the initiative
- to best support national cities and industry stakeholders in the **development of knowledge** and in the **sharing of best practice**

MSI Process



The Role of the Smart Cities MSI

- Stock Taking
 - National programmes
 - Lighthouse / demonstration projects
 - Energy research institutions (e.g. RTOs involved in EERA JP on Smart Cities)
- Create a common basis for future development
 - Create trust and mutual understanding
 - Define best practice as a basis for a new RD&I framework
 - Agree on standards (for planning, evaluation and monitoring)
 - Leverage the results and strengths of the EERA JP Smart Cities
- Jointly drive the process towards Smart Cities (together with EC)
 - Establishing standards and finance mechanisms for new pilot and demo projects
 - Securing short learning cycles by excellent monitoring and analysis
 - Preparing roll out in partnership among cities by delivering pragmatic methods with input from industry and research
 - Delivering input for European policy

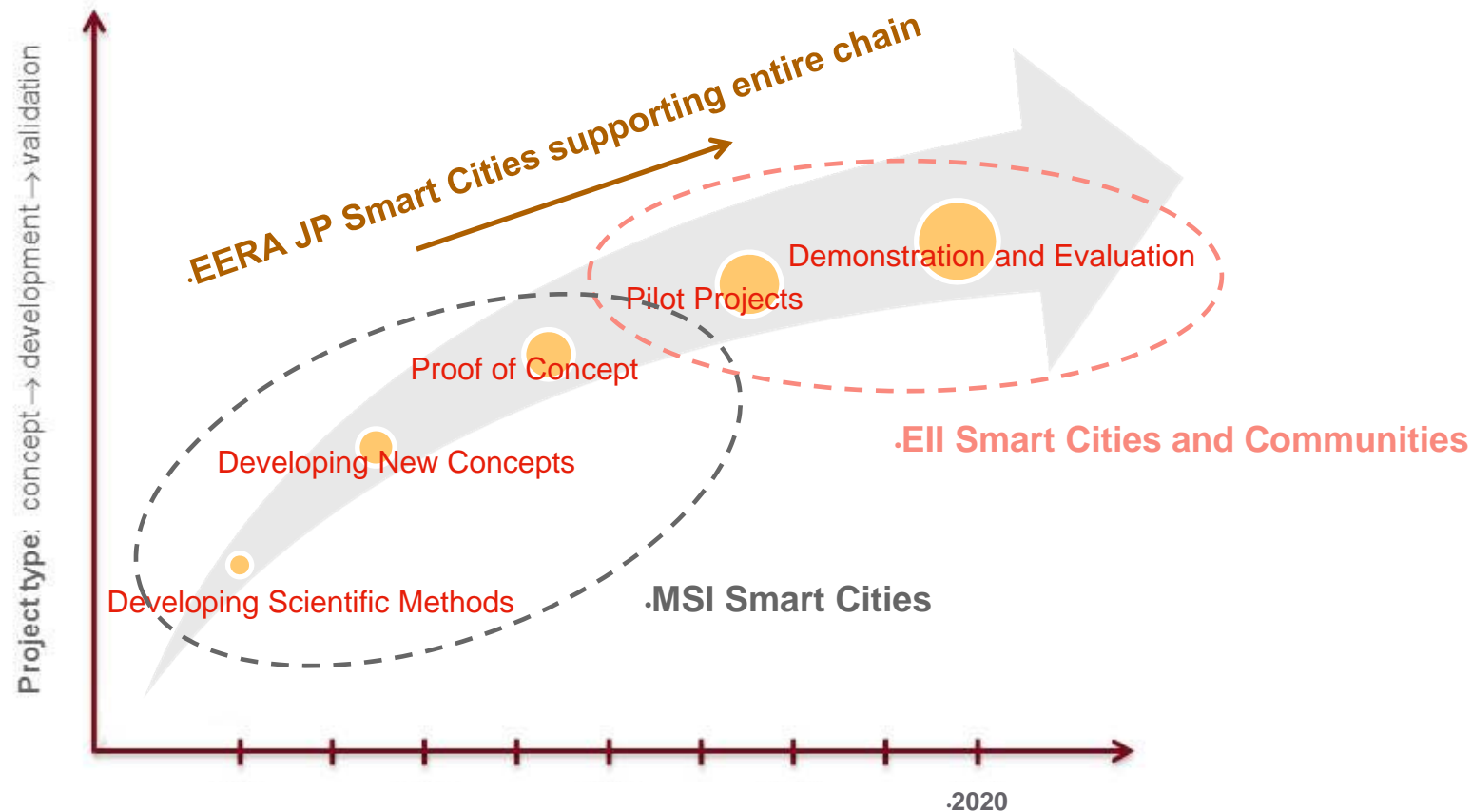
Instruments:

- **Transnational joint calls** among MS and AS (first call planned for 2013)
- **Shared financing of energy relevant RDI** between MS and European Commission (Berlin Model – collaboration D-A-CH planned for late 2012)
- Trans-border collaboration to **create a liaison between RD&I and structural funds priorities** (focus on the 5% target of funds dedicated to cities)
- **Joint programming efforts** between European Commission and MS (ERA-NET Plus model; to be discussed for 2014 ?)

Stakeholders: (addressed through the instruments)

- **Cities and urban regions** (the main proponents of „sub-national governments“, *responsible for 2/3 of all public investments in OECD countries*)
- **Industry**
- **EERA, other energy related research institutions**

Driving Innovation for Smart Cities



Smart Cities – Thematic areas

ICT & Energy Technologies are merging
Intelligent energy management on regional & city level

- **Integrated Urban Energy Planning**
- **Smart Urban Energy Networks**
- **Energy-efficient Interactive Buildings**
- **Urban Supply Technologies (RES)**
- **Mobility**
- **New Business Models + financial schemes**



Smart Cities research needs

General approach

- Research needs to address several levels:
 - Processes
 - Concepts
 - Tools
 - Standards and evaluation
- Method oriented research questions enabling scientific support for city transformations

Proposed next steps within the SCMSI

- Stock-taking (will be finalised before September 2012)
- First building blocks (joint calls to be started in 2013)
 - **Methods** of evaluation and monitoring
 - **Instruments** of planning and governance
 - **Technologies** for energy production, integration and and efficiency
 - **Demonstration** of best practice by cities and project bundles
- Development and transfer of knowledge
 - actively **involving European cities** in the development of new knowledge
 - **building on the results** of already existing projects and results
 - **taking up and actively supporting the innovative potential** of the EERA
 - **facilitating the transfer of experience** between „lighthouse“ cities and ambitious „emerging cities“

Proposal of Collaboration between SC MSI and EC

- Create an active partnership within the EII on Smart Cities and Communities
- Build and agree on common strategy
 - build a strategic long-term collaboration,
 - include all possible instruments on national and EU level
 - identify fields of complementary action and funding
 - identify fields of joint action and funding
- Not all stakeholders are equal
 - Smart Cities Stakeholder Platform cannot cover the needs of MS and AS
 - When national and local investments come into play, new ways of strategic collaboration have to be found
 - We believe that we are stronger, when MS and EC work in unison

The Role of Joint Calls (I)

First Phase: 2013 - 2014

- Creating a common basis for future development
 - Through the **documentation, pooling, and further development of existing best practice** concepts and methods
 - Working in partnership with relevant national and EU institutions (EERA, European Commission, etc.)
 - Fostering the standardisation of smart urban transformation
 - Supporting the sharing of results among demonstration projects
- The topics
 - Scientific tools and methods
 - Governance and planning processes
 - Monitoring and KPIs

The Role of Joint Calls (II)

Second Phase: 2015 - 2018

- Jointly driving the process towards Smart Cities
 - Setting up and financing RDI on Smart Cities in partnership with the European Commission (ERA-NET Plus, or other innovative instruments)
 - Standards and finance mechanisms for new pilot and demo projects
 - Blueprint for a Europe wide roll out in transnational partnership among cities and with input from industry and research
 - Methods for excellent real time monitoring and analysis
- Potential topics (towards implementation)
 - Developing flagship cities
 - Engaging newcomer cities
 - Preparing tools and methods for roll-out

Thank you for your attention!



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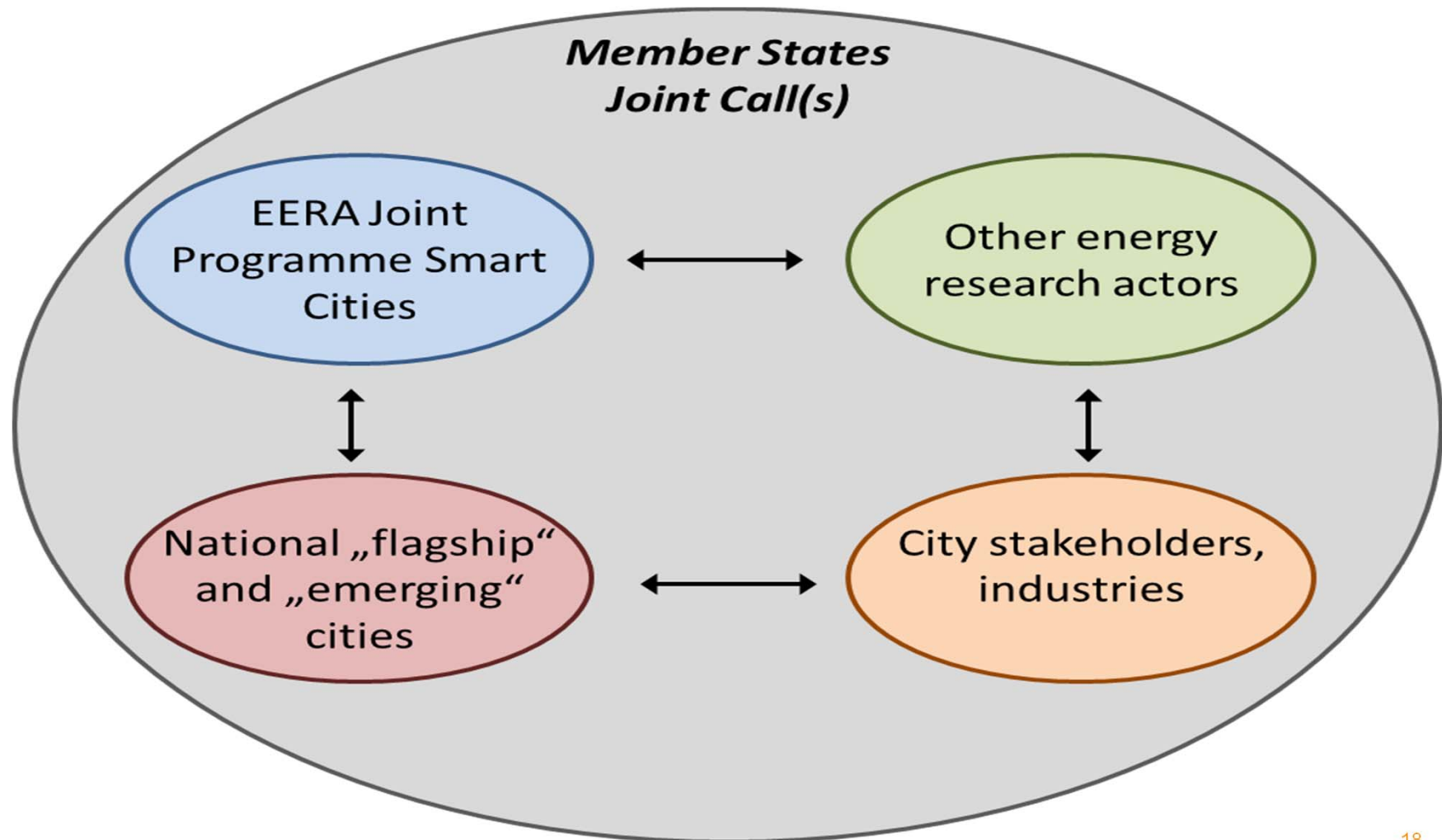


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Stakeholder Groups to be included



Joint Call Themes in Detail

- **Scientific tools and methods:**

Development of an integrated simulation/modelling platform

- **Governance and planning processes:**

Standardisation of City Transformation Processes

- **Monitoring and KPIs:**

Integrated urban monitoring concepts

Scientific Tools and Methods

- Development of an integrated simulation/modelling platform
 - Two different types of tools will be needed:
 - Decision support tool for city roadmaps and action plans (incl. appropriate structures for energy data systems)
 - Dynamical tool for city-wide simulation of energy flows (for design and operation of entire energy system)
 - Tools will have to be based on commonly agreed standards (methodology, protocols, data structure, procedures for co-simulation etc.)

Monitoring and KPIs

- Integrated urban monitoring concepts
 - Monitoring as an essential instrument during city transformation process
 - At different urban scales (components, buildings, districts, city)
 - Set-up of appropriate KPIs
 - Data collection and management
 - Two different levels of monitoring:
 - Strategic level: in terms of funding schemes, local policy making, sets of energy measures,
 - Operational level: characterise actual energy performance of city and optimise entire system behaviour

Governance and Planning Processes

- Standardisation of City Transformation Processes
 - Based on project screening activity
 - Involvement of “flagship” and “emerging” cities
 - Initiate European wide “roll-out” of Smart Cities concept
 - Screening of existing city visions, roadmaps and action plans
 - Development of standard methodologies for city transformation processes
 - Establishment of common framework for stakeholder processes
 - Identification of common drivers and barriers