Smart Cities and Communities Lighthouse Projects

Synergies with the EIP-SCC

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The Smart Cities and Communities lighthouse projects are funded by the European Commission Research and Innovation Framework Horizon 2020 and managed by the Innovation and Networks Executive Agency INEA.
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Lighthouse Projects Cooperation

57 cities paving the way towards a Smarter and more Sustainable Europe
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### SCC1 Collaboration Timeline

**2015**
- GrowSmarter
- REMOURBAN
- TRIANGULUM

**2016**
- REPLICATE
- SHARING CITIES
- SmartEnCity
- Smarter Together

**2017**
- mySMARTLife
- RUGGEDISED

**Collaboration Fields**

**Start of Collaboration**
- May 16: Meeting Eindhoven
- Oct 16: Collaboration framework
- Dec 16: Approval of collaboration framework

**Meeting Locations**
- Sep 16: Meeting Stockholm
- Mar 17: REMOURBAN Study Tour
- Jun 17: EIP-SCC

**Events**
- Nov 16: SCEWC
Expected outcomes (the five pillars)

• **Smart Cities solutions** are mainstreamed
• **Shared learning** and capacity building
• **Foster scale adoption** (demand aggregation, replication and mass market adoption)
• **Value for money** through:
  – Delivering greater internal efficiency
  – Demonstrate that smart approaches deliver real external return of investment and drive market value
• **Policy insights** to support future regulatory change
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SCC1 lighthouse projects’ cluster

Lighthouse Projects Cooperation Manifesto

- Approved by all SCC1 coordinators and EC
- Signed by all SCC1 coordinators in Nottingham (March, 23 2017)
- Establishes the basis for the cooperation

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Smart Cities and Communities lighthouse projects
Brussels | June, 20 2017
Some outcomes so far

- Smart City solutions mainstreamed:
  - Development of map of measures
  - Development of a multi-touch screen software to show this information

- Workshops/meetings for knowledge transfer on:
  - E-mobility implementation
  - Financial schemes and business models for districts retrofitting

- Joint participation in events
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Economies of scale for different solutions

The graph illustrates the best life-cycle value for different solutions at various scales. It shows the concept of economies of scale, where value maximization is achieved through scale advantages, and the opposite, where the value deteriorates due to erosion of competition and other factors.

- **Urban Data Platform**: The best life-cycle value is maximized at lower scales, then deteriorates as the scale increases.
- **eBike**: Shows an optimal point where value is maximized.
- **Humble Lamppost**: Demonstrates a scenario where the value is maximized at higher scales.

Source: Sharing Cities
Mapping of actions

**eV and Charging points coarse analysis**

- **Using EC funds to stimulate scale**
  - € 2.1 m EU funds – ‘stimulus’
  - € 14 m Total Direct – city-specific additional investment
  - € 40 m identified trigger funds

Source: Sharing Cities
## Mapping of actions

### Energy actions

<table>
<thead>
<tr>
<th>Buildings</th>
<th>EU funding (€)</th>
<th>42 M€</th>
<th>Energy savings (MWh/year)</th>
<th>316,967</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total direct investment (€)</td>
<td>308 M€</td>
<td>CO2 emissions reduction (tCO2/year)</td>
<td>122,279</td>
</tr>
<tr>
<td>Leverage factor (before replication)</td>
<td>7.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total direct investment after replication in the city (€)</td>
<td>2,582 M€</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage factor (after replication)</td>
<td>60.11</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: INEA
# SCC1 lighthouse projects’ impacts

## Impacts of the lighthouse projects

<table>
<thead>
<tr>
<th>Total expected impacts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EU funding (€)</td>
<td>109.76 M€</td>
</tr>
<tr>
<td>Total direct investment (€)</td>
<td>1,201.21 M€</td>
</tr>
<tr>
<td>Leverage factor (before replication)</td>
<td>10.94</td>
</tr>
<tr>
<td>Invested €/MWh/year saved</td>
<td>2,024 €</td>
</tr>
<tr>
<td>EU funding/citizen</td>
<td>22.52</td>
</tr>
<tr>
<td>Global emission factor (tCO2/MWh)</td>
<td>0.39</td>
</tr>
<tr>
<td>Total direct investment after replication in the cities</td>
<td>3,756.08 M€</td>
</tr>
<tr>
<td>Leverage factor after replication</td>
<td>34.22</td>
</tr>
<tr>
<td>Energy savings (MWh/year)</td>
<td>593,369</td>
</tr>
<tr>
<td>CO2 emissions reduction (tCO2/year)</td>
<td>230,445</td>
</tr>
<tr>
<td>Total number of citizens impacted</td>
<td>4.87 M</td>
</tr>
</tbody>
</table>

*Source: INEA*
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**Lighthouse cities**
Demonstration of common solutions for shared challenges (technical, social, financial)

**Synergies with the EIP-SCC**

**Follower cities**
Ground for replication, represent the city needs/demand
Thank you for your attention!

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