EASME
Executive Agency for Small and Medium-sized Enterprises

EU support for Smart Buildings under Horizon 2020

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EASME's role within the European Commission

- Manage EU programmes
- Feed project outcomes into EU policymaking
H2020 Energy Efficiency 2016 call results

- Heating & cooling: 7 projects, ~24 M€
- Consumers: 8 projects, ~14 M€
- Innovative Financing: 10 projects, ~13.5 M€
- Industry and Products: 4 projects, ~15 M€
- Local Authorities: 2 projects, ~3.5 M€
- Buildings: 13 projects, ~26 M€

- Total: €96 M
- 44 projects
- 38 countries
- 500 participants
- 23% SMEs
Research question

"How is Europe's Horizon 2020 framework programme supporting research, innovation and market uptake of smart buildings?"
Methodology

EPBD Review proposal: Smart Readiness Indicator for buildings

Ability of a building to:

1. interact with its users
2. manage itself efficiently
3. interact with the wider energy environment
## Methodology

### Building's ability to interact with users

<table>
<thead>
<tr>
<th>Full automation</th>
<th>User interface</th>
<th>Control of entire building</th>
<th>Control of individual appliances</th>
<th>Implicit Demand Response</th>
</tr>
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</table>

### Building's ability to manage itself

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<tr>
<th>On-site storage</th>
<th>Heating and cooling</th>
<th>Lighting</th>
<th>Domestic Hot Water</th>
<th>Domestic appliances</th>
<th>Self-learning / AI</th>
<th>Optimization</th>
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### Building's ability to interact with the energy environment

<table>
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<tr>
<th>Interoperability &amp; communication</th>
<th>Electromobility &amp; smart charging</th>
<th>Data privacy &amp; protection</th>
<th>Explicit Demand Response</th>
</tr>
</thead>
</table>
Number of projects by funding scheme

![Bar chart showing the number of projects by funding scheme: RIA with 12, IA with 21, CSA with 1, MSCA with 2, ERC with 1, SME Inst with 5.](chart.png)
Budget/EU contribution by funding scheme
Number of projects by Call

- H2020-LCE-2014-3: 3
- H2020-LCE-2015-2: 3
- H2020-EI-2015-1-PPP: 2
- H2020-EI-2015-2-RIA: 2
- H2020-EI-2015-3-MeritUppake: 2
- H2020-EB-2014: 1
- H2020-EB-2015: 1
- H2020-SCC-2015: 1
- H2020-SCC-2016: 1
- H2020-MSCA-RISE-2014: 1
- H2020-MSCA-RISE-2016: 1
- ERC-2016-PoC: 1
- H2020-SMEINST-2-2014: 1
- H2020-SMEINST-2-2016-2017: 1
- H2020-SMEINST-2-2015: 1
Number of projects per coordinator's country

- **BE**, 3 projects
- **CH**, 1 project
- **DE**, 3 projects
- **DK**, 1 project
- **EL**, 2 projects
- **ES**, 8 projects
- **FR**, 4 projects
- **IE**, 2 projects
- **IL**, 1 project
- **IT**, 5 projects
- **NL**, 5 projects
- **SE**, 1 project
Building's ability to interact with users

Number of projects

- Implicit Demand Response: 14
- Control of individual appliances: 18
- Control of entire building: 19
- User interface: 28
- Full automation: 18
Building's ability to manage itself

Number of projects

- Optimization: 24
- Self-learning / AI: 13
- Domestic appliances: 10
- Domestic Hot Water: 18
- Lighting: 14
- Heating and cooling: 30
- On-site storage: 23
Building's ability to interact with the wider energy environment

Number of projects

- Explicit Demand Response: 23 projects
- Data privacy & protection: 23 projects
- Electromobility & smart charging: 10 projects
- Interoperability & communication: 24 projects
Conclusions

- As of May 2017, Horizon 2020 has supported 42 actions relating to smart buildings
- Total costs of these 42 actions = 318.5 million EUR
- No single project is comprehensively investigating every aspect of smart buildings
- There is no automated way to collect this kind of data – manual searches are necessary.
Horizon 2020 Energy Info Days 2017

save the date
23-25 OCTOBER 2017

ENERGY INFO DAYS 2017
Horizon 2020 Work Programme 2018-2019

Brussels, Charlemagne Building

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http://ec.europa.eu/easme/en/energy