Neighbourhood consultancy centres for the adoption of low-carbon technologies by homeowners

Experiences from Dutch initiatives
1. Energy transition challenges for Dutch municipalities
2. The Triple-A approach
3. Experiences with pop-up consultancy centres
4. Conclusion
Energy transition challenges for Dutch municipalities

Dutch housing:
- 7.7 million houses
- 60% built between 1946 – 1992

Ambitions Netherlands (Dutch Climate Agreement):
- 2030: 1.5 million houses free of natural gas
- 2050: built environment is CO₂-neutral

Main management challenges:
- Policy management: Local authorities have to develop and realize a heat transition plan per district in collaboration with stakeholders
- Portfolio management: Renovation rate has to increase from 1% to 3% per year and more ‘deep’ renovations are needed
- Communication management: Find a way to get ‘behind the door’: 93% of Dutch households have an individual heating system (gas boilers)

Source: RVO, 2019
Source: PAW, 2020
Awareness + Access = Adoption of low-carbon technologies by homeowners

Duration: January 2017 – October 2021
Total budget: 5,297,095.30 €
(60% supported by ERDF via the Interreg 2 Seas programme)

Partners:

Delft University of Technology (NL)
City of Rotterdam (NL)
City of Breda (NL)
Kent County Council (UK)
City of Antwerp (BE)
City of Mechelen (BE)
EOS Oostende (BE)
PSEE Hauts-de-France (FR)

Ghent University (BE)
Fluvius (BE)
The Triple-A approach

Connecting local authority activities to the homeowner renovation journey

The model explained: https://youtu.be/jo_T0xGn4K0
The Triple-A approach

- Web Modules
- Home Energy Monitoring Systems
- Consultancy Pop-ups
- Demo Exemplars

Experiences with pop-up consultancy centres (Rotterdam)

Fixed longer-term in 2 focus areas:
Prins Alexander/shopping center Ommoord
IJsselmonde/ shopping center Keizerswaard

Source: A. De Groot, City of Rotterdam
## Experiences with pop-up consultancy centres (Rotterdam)

<table>
<thead>
<tr>
<th>Pop-up initiative and location</th>
<th>Testing period</th>
<th>Estimated total number of visitors</th>
<th>Average number of visitors per hour</th>
<th>Number of visitors registered follow-up</th>
<th>Share of registered visitors per total number of visitors (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book shop Donner, city center, Rotterdam</td>
<td>open February-June 2016, 43 hours/week</td>
<td>&gt; 1000</td>
<td>1</td>
<td>150</td>
<td>15 %</td>
</tr>
<tr>
<td>Koopgoot, city center (Beurstraverse), Rotterdam</td>
<td>open October-November 2016, 55 hours/week</td>
<td>≥ 1000</td>
<td>2</td>
<td>75</td>
<td>7.5 %</td>
</tr>
<tr>
<td>Shopping center Binnenhof, Ommoord, Rotterdam</td>
<td>open March-June and September-December 2017, 12 hours/week</td>
<td>ca. 800</td>
<td>2</td>
<td>150</td>
<td>19 %</td>
</tr>
<tr>
<td>Sustainability Shop, Shopping center Keizerswaard, IJsselmonde, Rotterdam</td>
<td>From November 2018 – December 2019 (35 hours/week, later 20 hours/week)</td>
<td>ca. 1400</td>
<td>1</td>
<td>1200</td>
<td>86 %</td>
</tr>
</tbody>
</table>
Experiences with pop-up consultancy centres (Breda)

Mobile unit, short-term on multiple locations

Source: C. Vos, City of Breda
# Experiences with pop-up consultancy centres (Breda)

<table>
<thead>
<tr>
<th>Pop-up initiative and location of the Greenhopper in Breda</th>
<th>Testing period</th>
<th>Estimated total number of visitors</th>
<th>Average number of visitors per hour</th>
<th>Number of visitors registered for follow-up</th>
<th>Share of registered visitors per total number of visitors (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grote Markt</td>
<td>Opening 10/10/2018; 6,5 hours</td>
<td>131</td>
<td>20,15</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Kasteelplein</td>
<td>2018; 14 hours</td>
<td>160</td>
<td>11,43</td>
<td>9</td>
<td>6</td>
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<tr>
<td>Upelaar</td>
<td>2018; 19 hours</td>
<td>127</td>
<td>6,68</td>
<td>15</td>
<td>12</td>
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<tr>
<td>Ulvenhout</td>
<td>2018; 22 hours</td>
<td>121</td>
<td>5,50</td>
<td>37</td>
<td>31</td>
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<tr>
<td>Boerderij Wolfslaar</td>
<td>2018; 18 hours</td>
<td>141</td>
<td>7,83</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>Teteringen</td>
<td>2019; 20 hours</td>
<td>83</td>
<td>4,15</td>
<td>7</td>
<td>8</td>
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<tr>
<td>Brabantpark</td>
<td>2019; 16 hours</td>
<td>60</td>
<td>3,75</td>
<td>7</td>
<td>12</td>
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<tr>
<td>Hoge Vught</td>
<td>2019; 18,5 hours</td>
<td>103</td>
<td>5,57</td>
<td>6</td>
<td>13</td>
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<tr>
<td>Prinsenbeek</td>
<td>2019; 18 hours</td>
<td>119</td>
<td>6,61</td>
<td>22</td>
<td>18</td>
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<tr>
<td>Koepelgevangenis</td>
<td>2019; 7 hours</td>
<td>25</td>
<td>3,57</td>
<td>2</td>
<td>8</td>
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<tr>
<td>Belcrum</td>
<td>2019; 17 hours</td>
<td>60</td>
<td>3,53</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Centrum</td>
<td>2019; 17 hours</td>
<td>92</td>
<td>5,41</td>
<td>6</td>
<td>7</td>
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<tr>
<td>Wolfslaar</td>
<td>2019; 15 hours</td>
<td>78</td>
<td>5,20</td>
<td>8</td>
<td>10</td>
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<tr>
<td>Bavel</td>
<td>2019; 16,5 hours</td>
<td>57</td>
<td>3,45</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Ginniken</td>
<td>2019; 19 hours</td>
<td>107</td>
<td>5,63</td>
<td>34</td>
<td>32</td>
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<tr>
<td>Kasteelplein</td>
<td>2019; 15,5 hours</td>
<td>113</td>
<td>7,29</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Heksenwiel</td>
<td>2019; 16 hours</td>
<td>90</td>
<td>5,63</td>
<td>15</td>
<td>17</td>
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<tr>
<td>Breda: TOTAL 2018</td>
<td>2018; 79,5 hours</td>
<td>680</td>
<td>8,55</td>
<td>81</td>
<td>12</td>
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<tr>
<td>Breda: TOTAL 2019</td>
<td>2019; 195,5 hours</td>
<td>987</td>
<td>5,05</td>
<td>128</td>
<td>13</td>
</tr>
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<td>Breda: TOTAL</td>
<td>2018-2019; 275 hours</td>
<td>1667</td>
<td>6,06</td>
<td>209</td>
<td>13</td>
</tr>
</tbody>
</table>
Experiences with pop-up consultancy centres

- Internal procedures can reduce effectiveness: follow-up of visitors is not always possible
- Proposed and executed renovation measures are too often “quick wins”
- Staff needs and opening hours are difficult to predict

+ Co-creation with cooperatives, citizens, non-profit organisations,.. is feasible
+ The developed pop-ups have already been “copied” by multiple local authorities
Conclusion

• Pop-ups in specific target areas can raise awareness and attract and activate local residents to seek consultancy for their renovation
• There is no “one size fits all” solution: both short-term mobile and longer-term fixed pop-up models can be suitable
• It is important to analyse the target areas, the customer segments and channels they use, the building typologies
• Operational effectiveness of pop-ups can be influenced by location, timing and weather, staff training, related events, co-creation effort
Acknowledgements

project partners...

with financial support of...

Supporting: