Worksession 1a
Harvesting training resources within BUILD UP Skills and beyond
Jan Cromwijk
ISSO
Which tools can we mobilize right now?
A story with examples from H2020 projects

PROF/TRAC
BUStoB
TripleA-reno
BIMplement
NEWCOM

BUSLeague
Skills mapping methodology
### Technology and Interdisciplinary Skills per Work Field

<table>
<thead>
<tr>
<th>Work Field</th>
<th>Architecture</th>
<th>Civil Engineering</th>
<th>Electrical Engineering</th>
<th>Mechanical Engineering</th>
<th>Building Management</th>
<th>Construction Management</th>
<th>Finishing &amp; Procurement</th>
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</thead>
<tbody>
<tr>
<td>Reference professions</td>
<td>Architect</td>
<td>Civil Engineer</td>
<td>Electrical Engineer</td>
<td>Mechanical Engineer</td>
<td>Facility Manager</td>
<td>Project Manager</td>
<td>Procurer</td>
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<td>Construction Engineer</td>
<td>ICT Engineer</td>
<td>Building Automation Engineer</td>
<td>Technical Energy Engineer</td>
<td>Cost Engineer</td>
<td>Project Developer</td>
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<td>Structural Engineer</td>
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<td>Energy Engineer</td>
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#### Skill Gaps

<table>
<thead>
<tr>
<th>EM</th>
<th>Smart grid systems</th>
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<td>EM3</td>
<td>Building management systems</td>
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**ENERGY MANAGEMENT**

<table>
<thead>
<tr>
<th>EP</th>
<th>Geothermal energy</th>
<th>2</th>
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<td>EP4</td>
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<td>EP5</td>
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<td>Solar power systems for electricity generation</td>
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</table>
## nZEB Qualification

<table>
<thead>
<tr>
<th>Technology Nr.</th>
<th>Mini wind power generation</th>
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</thead>
<tbody>
<tr>
<td>EP9</td>
<td>Mini wind turbines for use on-site (on roofs etc.)</td>
</tr>
</tbody>
</table>

### Project phase
- **General**
  - Understand mini wind power related to nZEB
    - Understands the basic working and application of mini wind power, is able to explain and discuss within the project team. Is aware of constraints and boundary conditions (regulations, construction, available energy sources).

- **Pre design**
  - Perform a feasibility study on mini wind power
    - Is able to perform a feasibility study on mini wind power including financial aspects. Can estimate needed electrical power demand of the building. Can determine the part of mini wind power on total power supply. Understands basic principles needed in design and calculation, e.g. orientation, wind, power inverter.

- **Design**
  - Engineer the mini wind power system
    - Detailed engineering of the mini wind power system, including batteries and power inverters, in coherence with other power supply sources. Engineering of the construction strength for placing mini turbine. Accurate calculation of the needed power (kW).

- **Contracting**
  - Specify a mini wind power system in tender contracts.
    - Can specify a mini wind power system for use in contracting. Is able to select products that fit specifications and demands on given quality aspects. Make detailed and accurate descriptions and drawings of the design. Is able to make financial calculations related to contracting phase.

- **Realisation**
  - Quality assurance of mini wind power
    - Can manage, instruct and audit contractors on site during realisation of a mini wind power, based on information given by the designer and the tender documents. Is able to instruct the contractor on the specifics of the system. Can audit the realisation on critical points.

- **Commissioning**
  - Commission a mini wind power system
    - Is able to commission the mini wind turbine on functionality. Can determine if the installation operates as planned, makes sure the foreseen energy performance is realised.

- **Use & Maintain**
  - Ensure optimal operation of mini wind power during life cycle
    - Can give instructions to users (or to facility manager). Is able to set up a maintenance plan to ensure optimal operation of the mini wind power system.
On this page you can find all relevant training materials on NZEB. Use the filter form on the left to narrow the results.

<table>
<thead>
<tr>
<th>Relevant report</th>
<th>Topic</th>
<th>Project</th>
<th>More details</th>
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</thead>
<tbody>
<tr>
<td>Holistic Design Kit for nZEB Renovation</td>
<td>Energy reduction</td>
<td>ZenN</td>
<td><a href="#">More details</a></td>
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BUILD UP Skills advisor-app
BUILD UP Skills advisor-app
BUILD UP Skills advisor-app
Task based Qualification

Qualification scheme

<table>
<thead>
<tr>
<th>en</th>
<th>nl</th>
<th>es</th>
<th>de</th>
<th>sk</th>
<th>hu</th>
<th>fr</th>
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<tbody>
<tr>
<td>Title</td>
<td>NEWCOM nZEB Roofer</td>
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<tr>
<td>Description</td>
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<tr>
<td>Tasks</td>
<td>Perform diagnostic of existing state of the roof</td>
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<tr>
<td></td>
<td>Identify necessary changes to the roof</td>
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<td>Definition of the overall condition</td>
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</table>
Task based Qualification
Task based Qualification

New subtask

Title: Define the horizontal dimensions of the roof

ULO: Perform smart measurements and data collection on

Professions: Roofer

Specialisms and technologies: Insulation flat roof
Task based Qualification
Personal Recognition
Personal Recognition
# Personal Recognition

<table>
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<tr>
<th>Name</th>
<th>E-mail</th>
<th>Company</th>
<th>Date</th>
<th>Approval</th>
<th>Overall rating</th>
<th>Card</th>
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<tr>
<td>Jan Cromwijk</td>
<td>Jan Cromwijk @ ISSO1</td>
<td>Sep 28, 2020</td>
<td>Approved</td>
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<tr>
<td>Jan Cromwijk</td>
<td>ISSO Jan Cromwijk</td>
<td>Sep 29, 2020</td>
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Add participant to nZEB ventilation

Name: Jan Cromwijk
E-mail:
Date: 28-09-2020
Grade: 7

**NEWCOM**

Competence Card
Pass name
Jan Cromwijk @ ISSO1
Jan Cromwijk
date of birth: 1 February 1977

valid from 28/9/2020 to 28/9/2023
nZEB ventilation designer

[QR Code]
Personal Recognition

Find recognised professional

Step 1: Choose specialism or technology
- Flat roof insulation
- Quality assurance building
- Airtight construction

Step 2: Choose your professional
1 results found
- 0.02km - Jan Cromwik @ ISSO

Step 3: Contact your professional

Jan Cromwik @ ISSO
- j.cromwik@isso.nl
- Phone number

NEWCOM
Compare qualifications

Step 3: Compare version(s)

Tasks & subtasks
Assess the concept design by regarding energy related infrastructural aspects

Competence
Knowledge
Skills
Collaborate & BUILDUPon

Plan
Energy savings targeted during the design phase

Design
Energy savings designed utilised to achieve energy optimization

Operate
Energy savings through in-use building performance management

Build
Energy savings achieved through the building operation stage

Potential Energy

Embedded Energy

Sustainable Energy

Operational Energy
Collaborate & BUILDUPon
NZEB
NEARLY ZERO ENERGY BUILDING