



BUILD UP

The European Portal For
Energy Efficiency In Buildings

Online event 10 December 2020

**12th BUILD UP Skills
European exchange meeting**

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



BUSLeague



BUStoB



...

TripleA-reno



BIMplement



NEWCOM



Skills mapping methodology



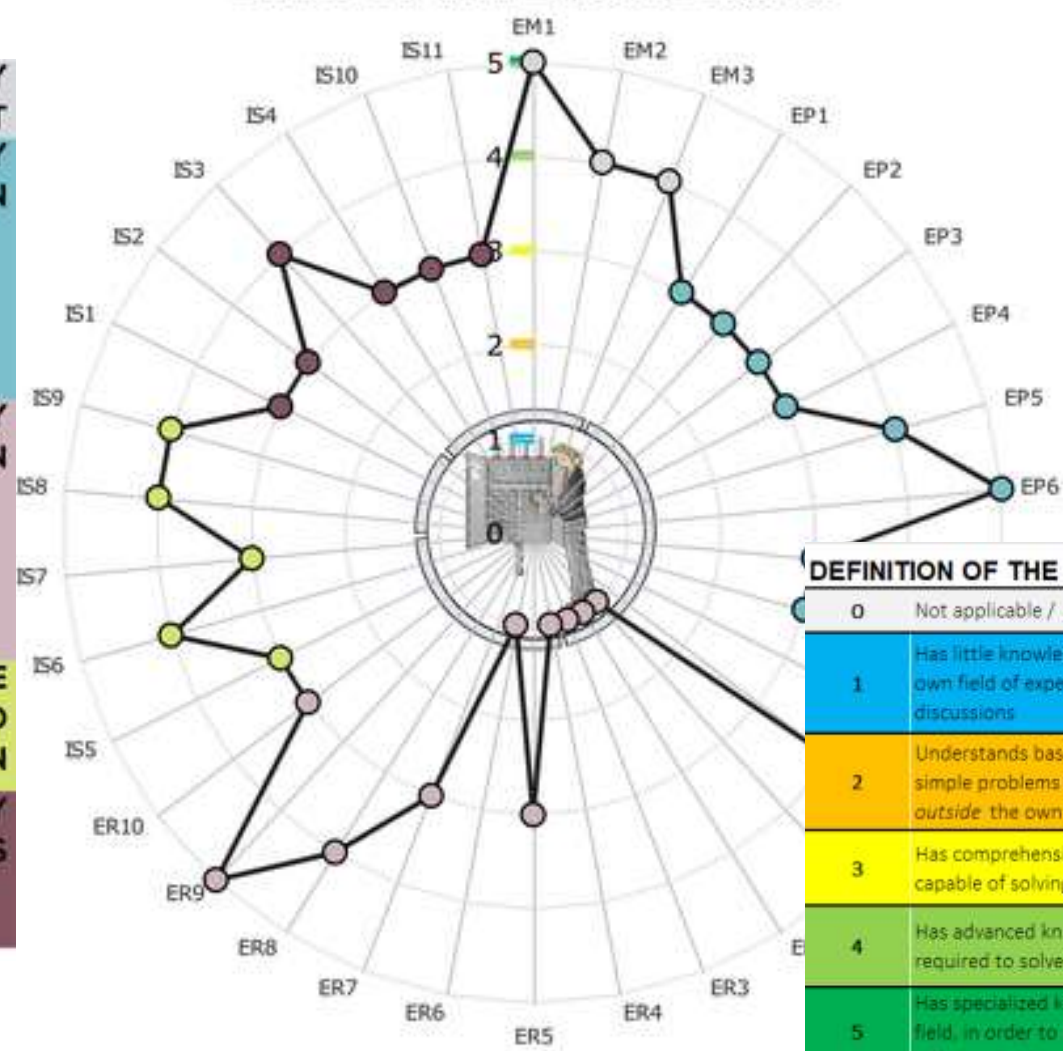
PROF / TRAC

Open Training and Qualification Platform
on NZEB construction and renovation



ELECTRICAL ENGINEERING

SKILLS	ENERGY MANAGEMENT	
	EM1	Smart grid systems
	EM2	Domotic systems
	EM3	Building management systems
	ENERGY PRODUCTION	
	EP1	Geothermal energy
	EP2	Biomass
	EP3	Biogas
	EP4	District Heating and Cooling
	EP5	Heat pumps
	EP6	Solar power systems for Electricity generation
EP7	Solar thermal systems for Cooling generation	
EP8	Solar thermal systems for Domestic Hot Water and/or Heating	
EP9	Mini wind power	
EP10	Combined Heat and Power (CHP)	
ENERGY REDUCTION		
ER1	Insulation	
ER2	Air tightness building	
ER3	Micro climates	
ER4	Envelope systems	
ER5	Hot Water systems	
ER6	Window and/or glazing systems	
ER7	Heating and Cooling emission systems	
ER8	Electric Heating systems	
ER9	Artificial lighting systems	
ER10	Ventilation systems	
SUSTAINABLE INTEGRATED DESIGN		
IS5	Sustainable architectural design	
IS6	Integrated design	
IS7	Sustainable building materials	
IS8	Sustainable installation materials	
IS9	Environmental (indoor) quality	
INTERDISCIPLINARY SKILLS		
IS1	Communication	
IS2	Information management	
IS3	Collaboration	
IS4	Quality assurance	
IS10	Economics	
IS11	Procurement	










DEFINITION OF THE SKILL LEVELS

0	Not applicable / no knowledge and skills required
1	Has little knowledge and skills with respect to the relevant field / technology (mostly outside the own field of expertise). Understands basic principles and is able to take part in project team discussions
2	Understands basic knowledge and has practical skills within the field / technology, is able to solve simple problems by selecting and applying basic methods, tools, materials and information (mostly outside the own field of expertise)
3	Has comprehensive, factual and theoretical knowledge and skills within the field / technology, is capable of solving standard problems within the field
4	Has advanced knowledge involving a critical understanding of theories and principles and skills, required to solve complex and unpredictable problems in the field and is aware of the boundaries
5	Has specialized knowledge and problem-solving skills, partly at the forefront of knowledge in the field, in order to develop new knowledge and procedures and to integrate knowledge from different fields



Skill
gaps

TECHNOLOGY AND INTERDISCIPLINARY SKILLS PER WORK FIELD

WORK FIELD	ARCHITECTURE	CIVIL ENGINEERING	ELECTRICAL ENGINEERING	MECHANICAL ENGINEERING	BUILDING MANAGEMENT	CONSTRUCTION MANAGEMENT	FINANCING & PROCUREMENT
							
Reference professions	Architect	Civil Engineer	Electrical Engineer	Mechanical Engineer	Facility Manager	Project Manager	Procurer
		Construction Engineer	ICT Engineer	Building Automation Engineer	Technical Energy Engineer	Cost Engineer	Project Developer
		Structural Engineer		Energy Engineer	Operator	Quality Assurance	

EM	ENERGY MANAGEMENT							
EM1	Smart grid systems	2	1	5	3	3	2	1
EM2	Domotic systems	2	1	4	4	3	2	1
EM3	Building management systems	2	1	4	5	3	2	1
EP	ENERGY PRODUCTION (on-site and nearby renewable energy production and off-site renewable energy)							
EP1	Geothermal energy	2	2	3	4	2	2	1
EP2	Biomass	2	2	3	4	2	2	1
EP3	Biogas	2	2	3	4	2	2	1
EP4	District heating and cooling	2	2	3	4	2	2	1
EP5	Heatpumps	2	2	3	5	2	2	1
EP6	Solar power systems for electricity generation	3	3	5	4	2	2	1

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nZEB Qualification



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Technology Nr.							
EP9		Mini wind power generation				Mini wind turbines for use on-site (on roofs etc.)	
Project phase (if applicable)	Short description (to be used in the advisor app)	Detailed description of skills	for skill level(s)				
			1	2	3	4	5
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.					





TRAINING MATERIAL REPOSITORY WEBPAGE



On this page you can find all relevant training materials on NZEB. Use the filter form on the left to narrow the results.

nZEB knowledge to share?

Upload your training material in the repository and make it available to the PROF/TRAC Community.

[UPLOAD MATERIAL >>](#)



Topic



Type of project



Building use



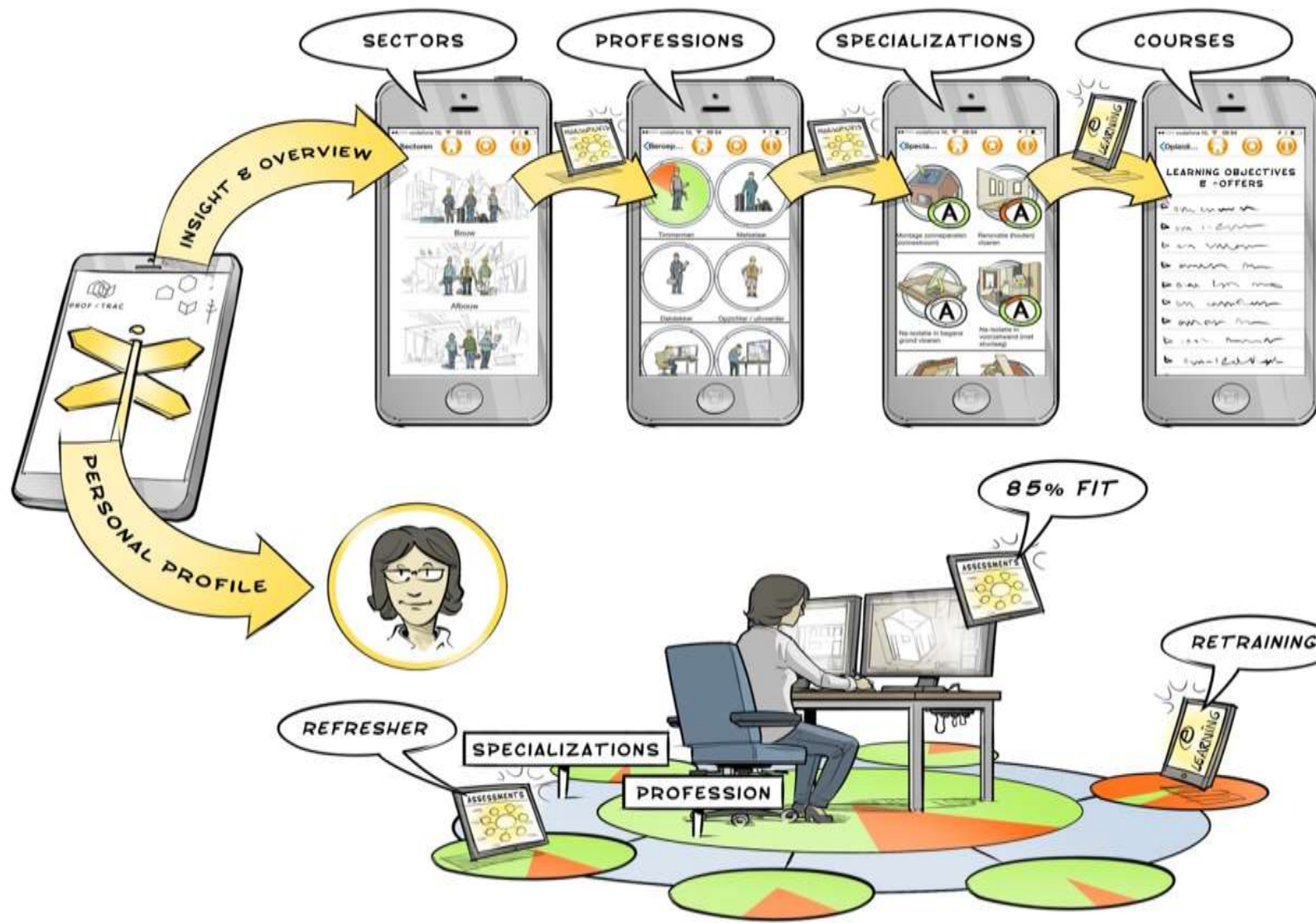
Relevant report	Topic	Project	
 ZenN Magazine: Nearly zero energy neighbourhoods. Energy efficient renovations of residential areas	Energy reduction	ZenN	More details
 Holistic Design Kit for nZEB Renovation	Energy reduction	ZenN	More details
 ZenN Guidelines: Translation of technical knowledge for nearly zero energy neighbourhoods	Energy reduction	ZenN	More details



BUILD UP Skills advisor-app

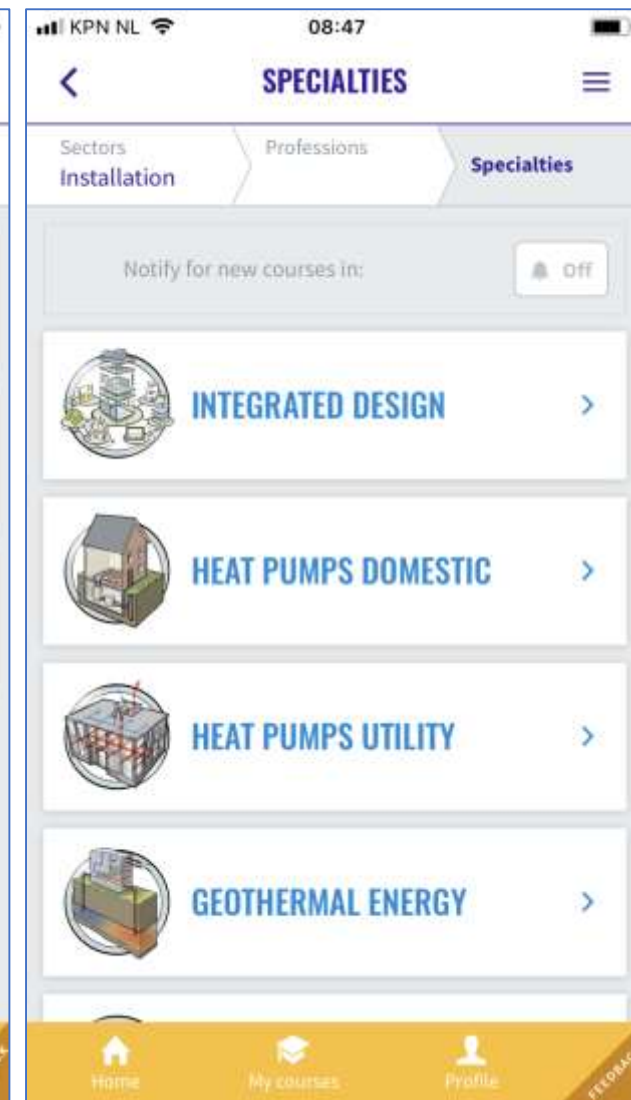
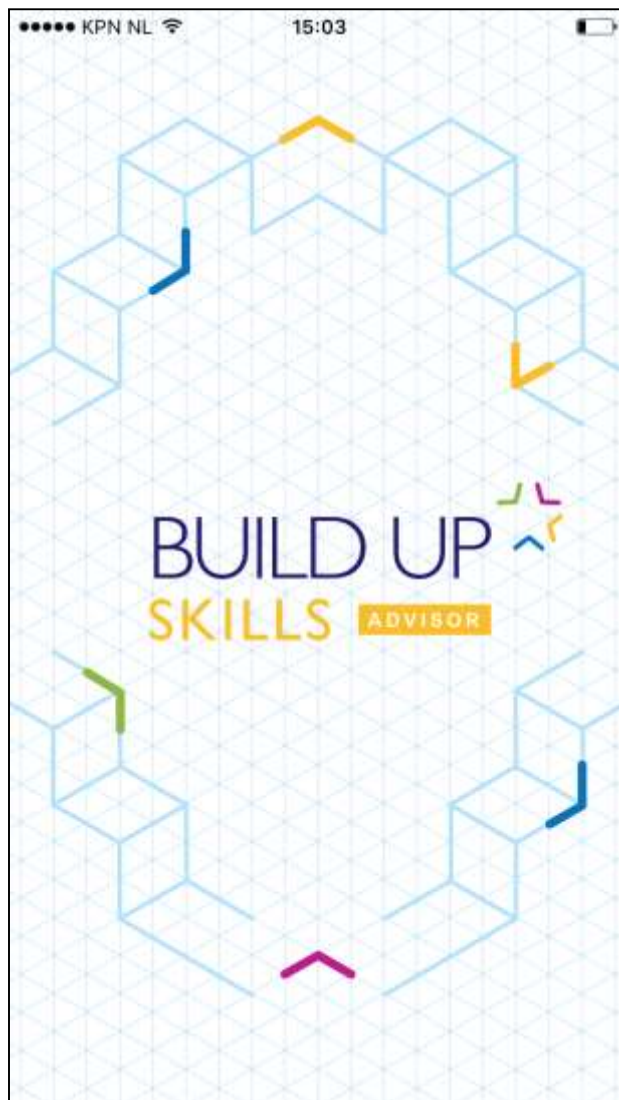


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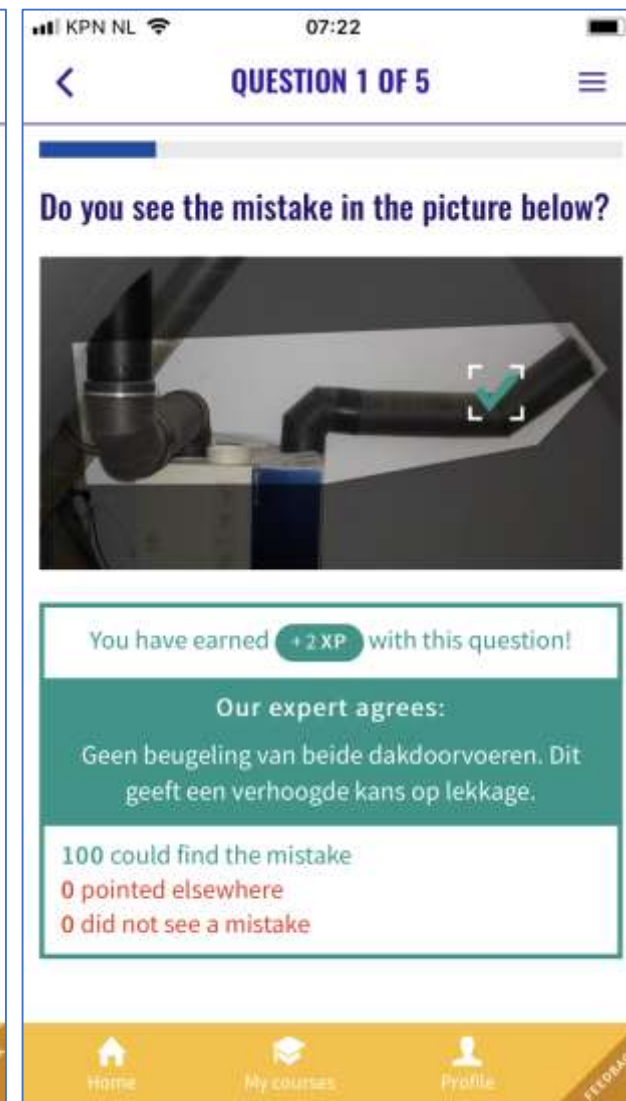
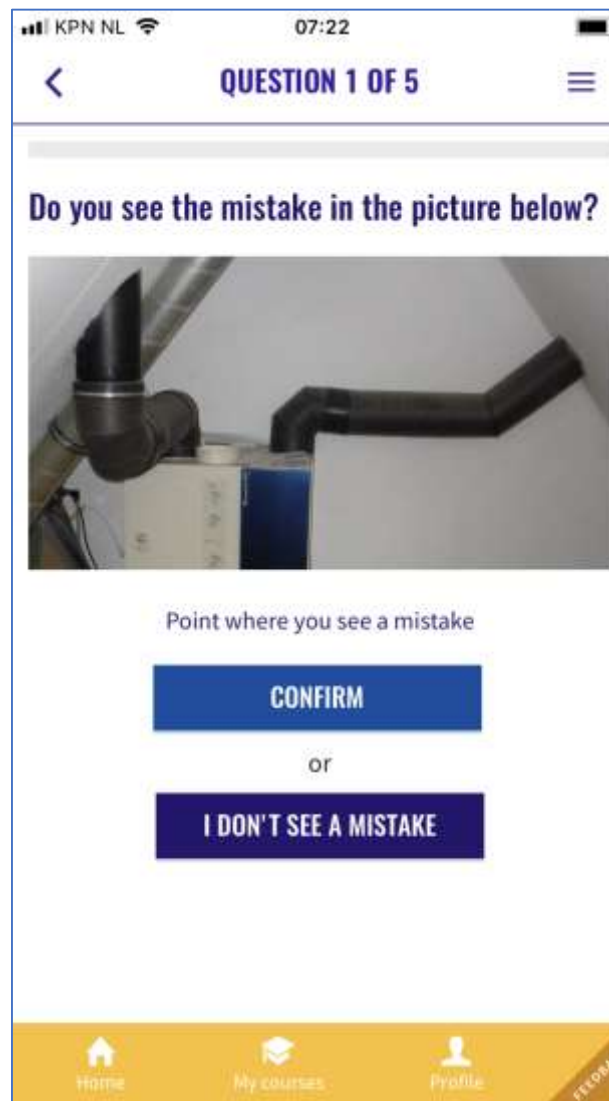
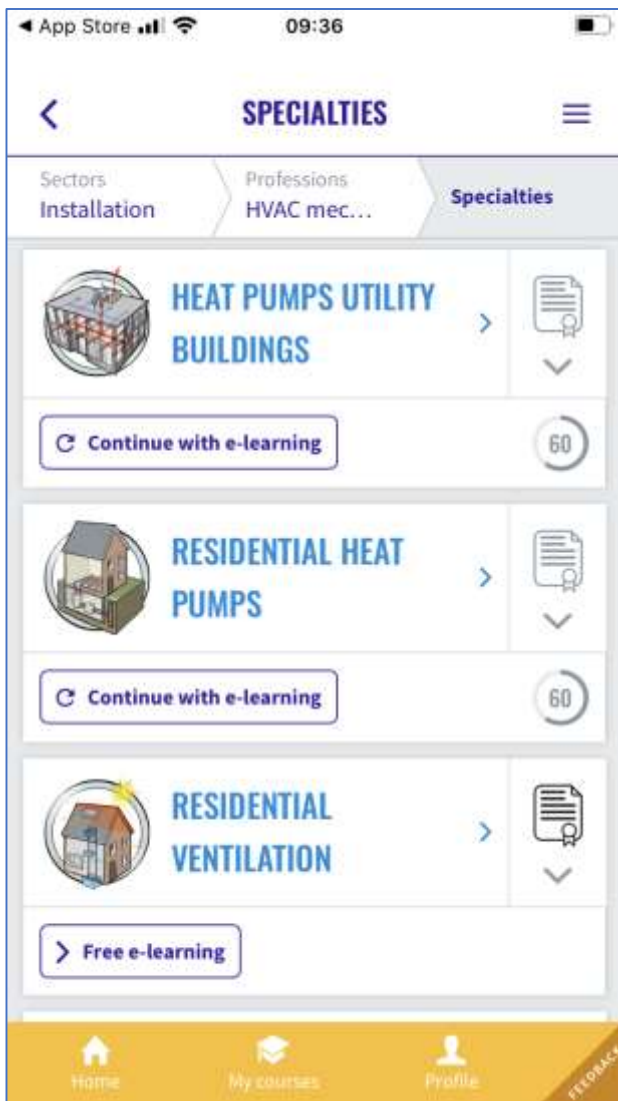
BUILD UP Skills advisor-app

BUILD UP Skills
The Netherlands

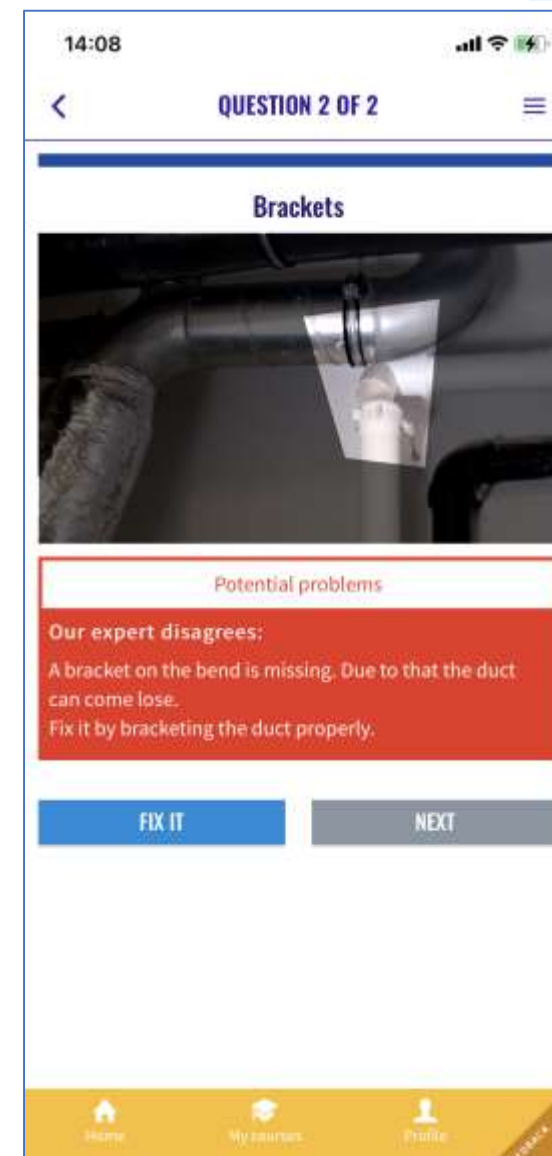
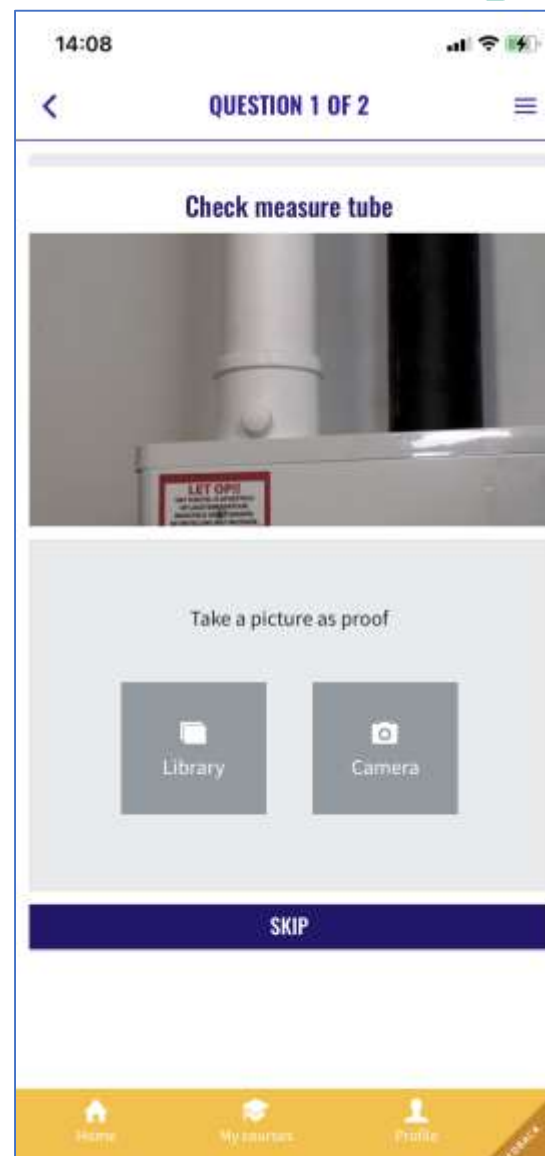
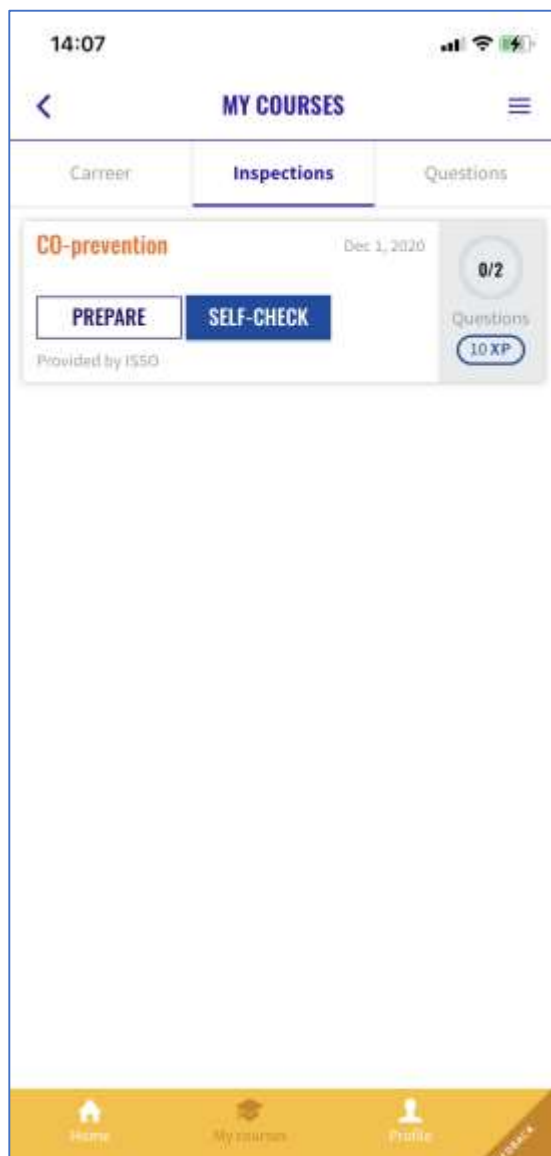


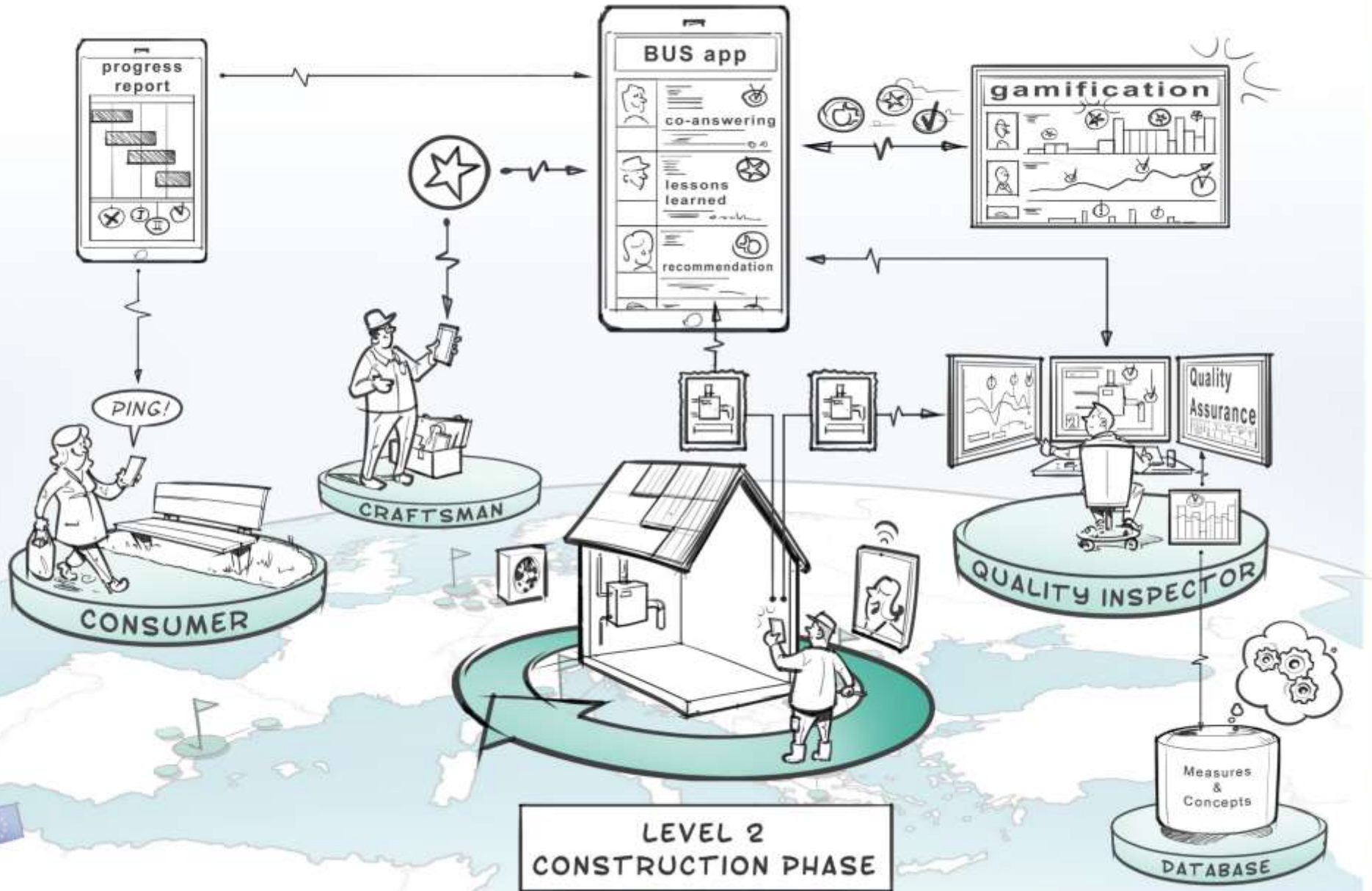
BUILD UP Skills advisor-app

BUILD UP Skills
The Netherlands



BUILD UP Skills advisor-app





Task based Qualification



English

Qualification scheme

en nl es de sk hu fr it

Title: NEWCOM nZEB Roofer

Description: NEWCOM qualification for the nZEB Roofer

Tasks

- Perform diagnostic of existing state of the roof
- Identify necessary changes to the roof
- Definition of the overall condition

Delete Publish Save scheme



Task based Qualification



English

Manage
Regions
Courses
Questions
Inspections
Users
Tour
EULA
Qualifications

New task

en nl es de sk hu fr it

Title

Subtasks

- Define the horizontal dimensions of the roof
- Define the vertical dimensions of the roof-field/slope
- Define the vertical dimensions of the roof-details/outskir
- Open the roof and monitor the layers and its state (humi
- Repair the roof opening
- Report the diagnostic survey of the roof
- Connect structural damage report with the diagnostic of

Save task



Task based Qualification



English

New subtask

en nl es de sk hu fr it

Title

ULO

Type here to search for an ULO or create a new one.

Professions

Specialisms and technologies

Save subtask



Task based Qualification



English

en nl es **de** sk hu fr it

⚠ This ULO is used in 13 subtasks. Changes are applied to all subtasks!

Competence Responsible for	Durchführung von intelligenten Messungen und Datenerfassung <small>Perform smart measurements and data collection on the roof</small>
Assessment	<input checked="" type="checkbox"/> Theoretical test <input checked="" type="checkbox"/> Practical test <input checked="" type="checkbox"/> Silhouetted by colleague
Skills Able to	Erklären der Bedeutung der richtigen geometrischen Datenerfassung <small>Explain the importance of the good geometrical data collection</small>
	Durchführung von Dachaufmassen <small>Perform roof measurements</small>
	<input type="text" value=""/> <small>Type here to search for Skills or create a new one.</small>
Knowledge to know	Kenntnisse über Aufmassarbeiten am Dach <small>How to measure on roofs</small>

Save ULO



Personal Recognition

NEWCOM

English

Publish qualification scheme

Country: Choose country

Profession: Choose profession

en nl es de sk hu fr it

Name: NEWCOM nZEB Roofer

Select the tasks, subtasks and ULOs to be included in this publication:


- Perform diagnostic of existing state of the roof
 - Define the horizontal dimensions of the roof
 - Perform smart measurements and data collection on the roof
 - Define the vertical dimensions of the roof-field/slope
 - Perform smart measurements and data collection on the roof
 - Define the vertical dimensions of the roof-details/outskirting
 - Perform smart measurements and data collection on the roof
 - Open the roof and monitor the layers and its state (humidity)
 - Open and repair existing roof to diagnose the state of art

Publish



Personal Recognition

NEWCOM

English 


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[Sectors](#) [Professions](#) [Specialisms](#) [Courses](#) [Institutes](#) **Accreditations** [Sources](#)


[New accreditation +](#)


Layout name

Header image
Max 800px wide and 100px high


 [New qualification schemes to build high quality](#)

[Bladeren...](#) Geen bestand geselecteerd.

Background color 

Primary color 

Footer image
Max 800px wide and 100px high

 This project received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 754588
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[Bladeren...](#) Geen bestand geselecteerd.

[Save](#)



Personal Recognition



Notifications Courses

← Back Add new participant Import Excel

Name	E-mail	Company	Date	Approval	Overall rating	Card
Jan Cromwijk	[redacted]	Jan Cromwijk @ ISSO1	Sep 28, 2020	Approved		
Jan Cromwijk	[redacted]	ISSO Jan Cromwijk	Sep 29, 2020			

NEWCOM New qualification schemes to build high quality

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



NEWCOM

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



This project received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 754148
This deliverable represents the author's view and CASME is not responsible for any use that may be made of the information it contains.

Add participant to nZEB ventilation

Name: Jan Cromwijk

E-mail: [redacted]

Date: 28-09-2020

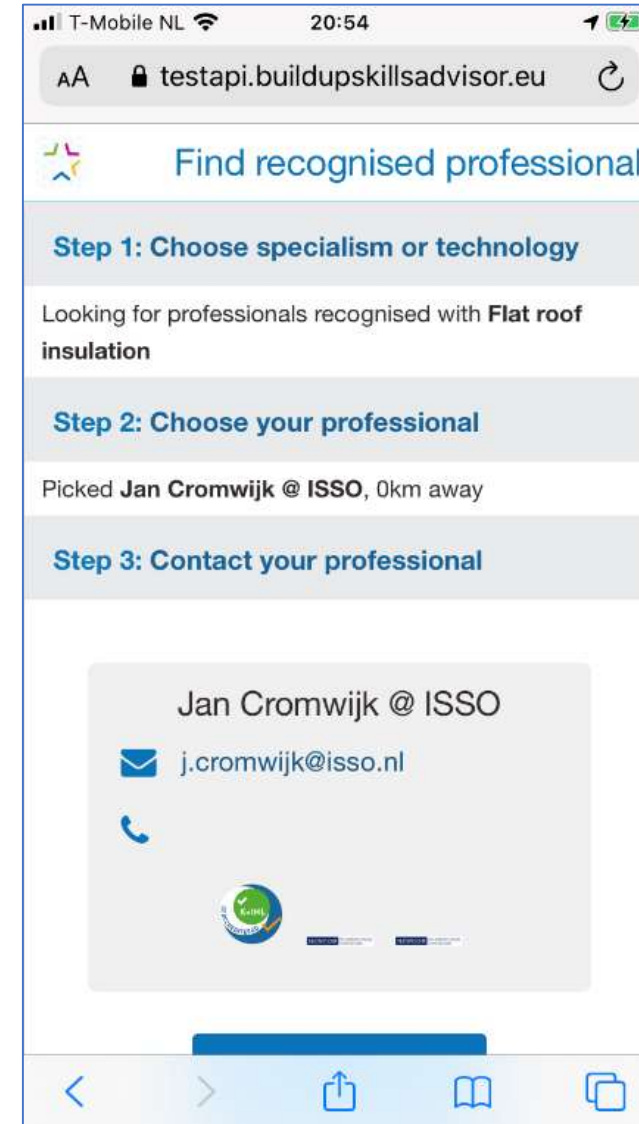
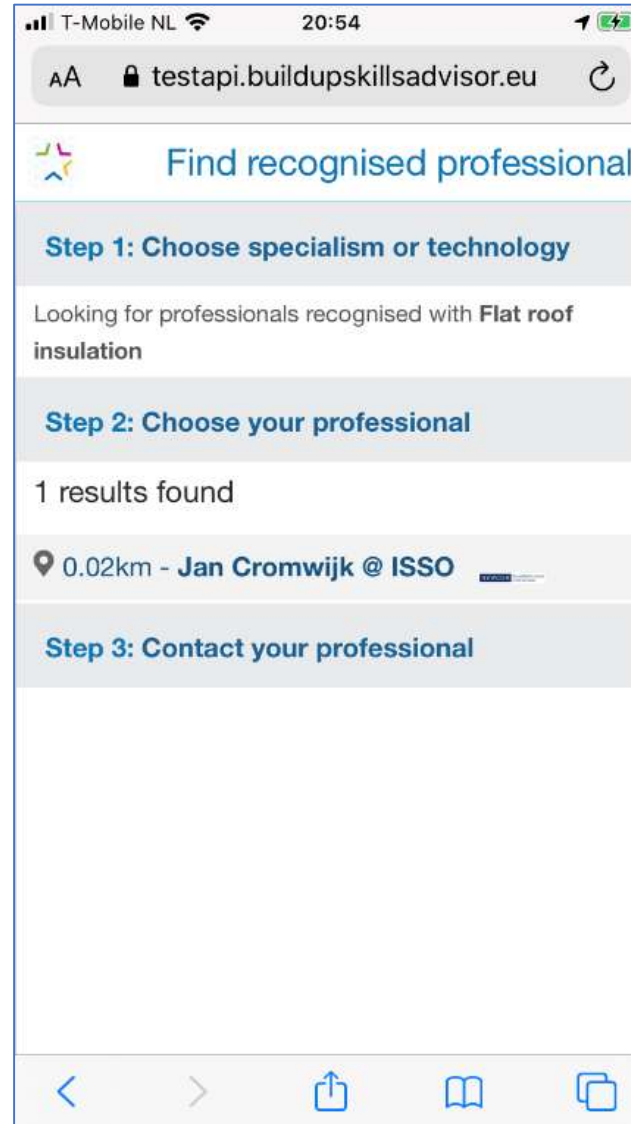
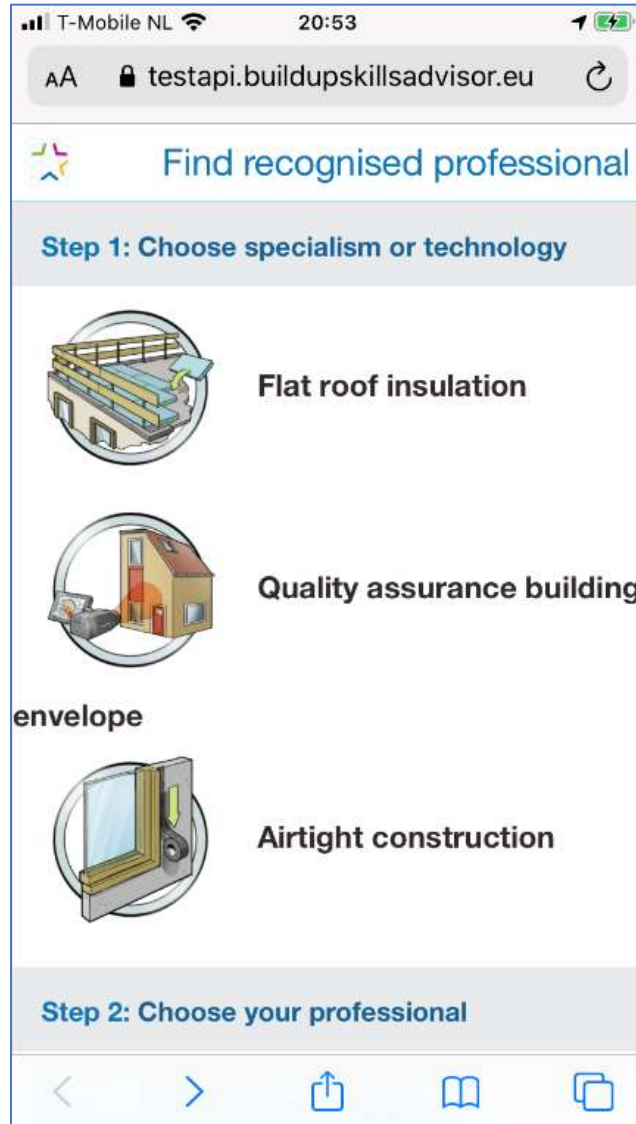
Grade: 7

Cancel Add participant



Personal Recognition

NEWCOM



Compare qualifications

NEWCOM



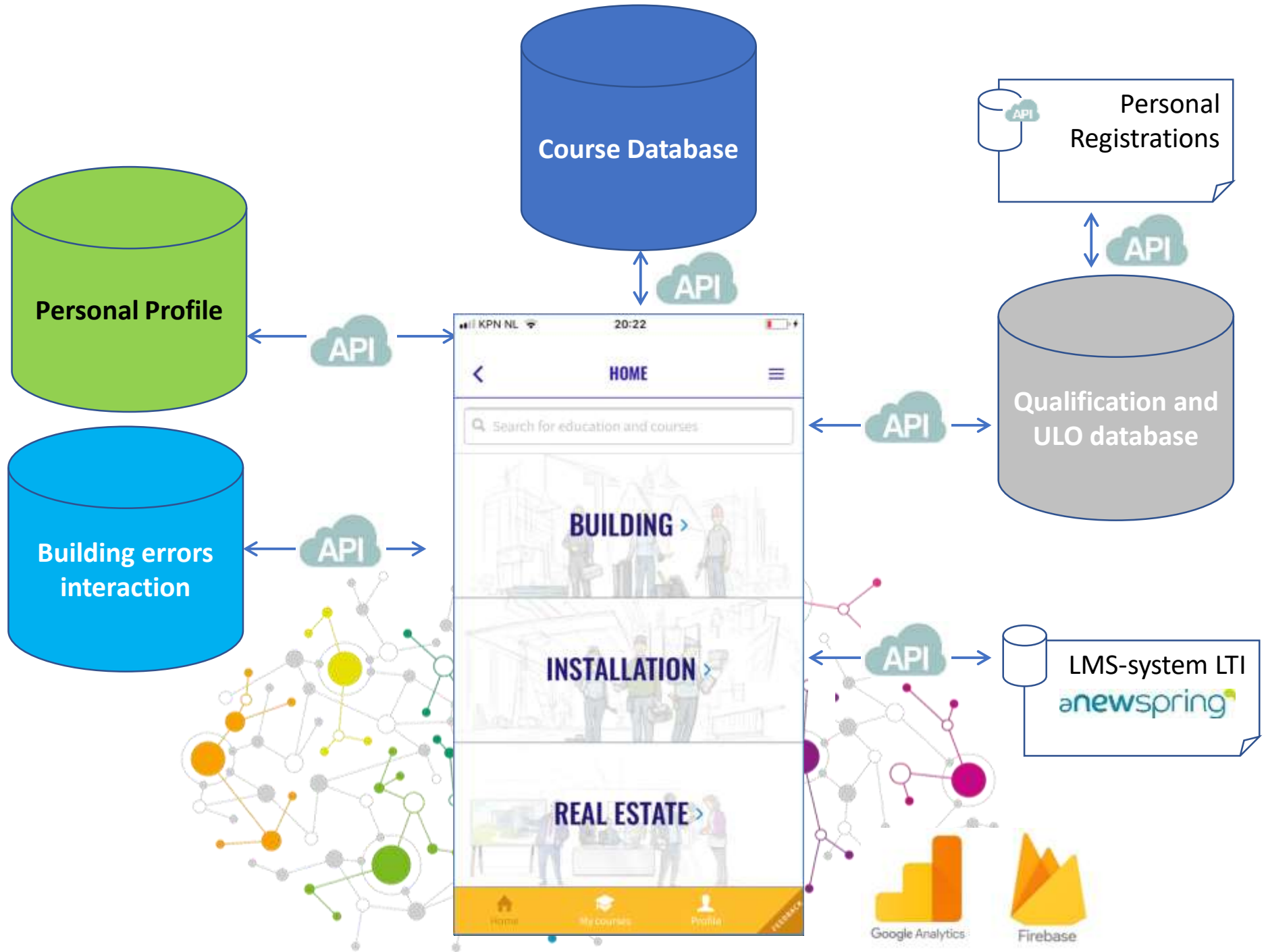
Compare qualifications

Step 3: Compare version(s)

	nZEB Building Inspector Austria	Building Inspector NL
Tasks & subtasks		
Assess the concept design by regarding energy related infrastructural aspects	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Competence		
Knowledge		
Skills		



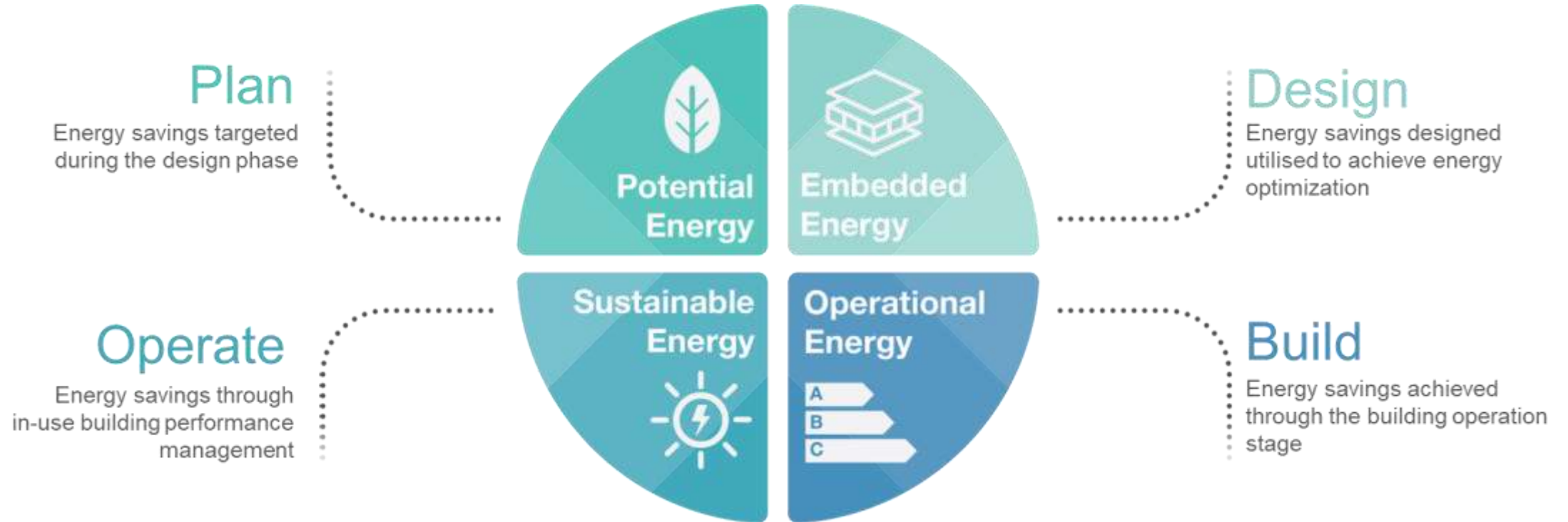
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Collaborate & BUILDUPon



BIM-EPA



Collaborate & BUILDUPon



October 27-30, 2020
Digital Event



Horizon 2020
European Union funding
for Research & Innovation

Workshop on Sustainable energy skills
in the construction sector



LUXEMBOURG
INSTITUTE OF SCIENCE
AND TECHNOLOGY



NZEB

NEARLY ZERO ENERGY BUILDING

