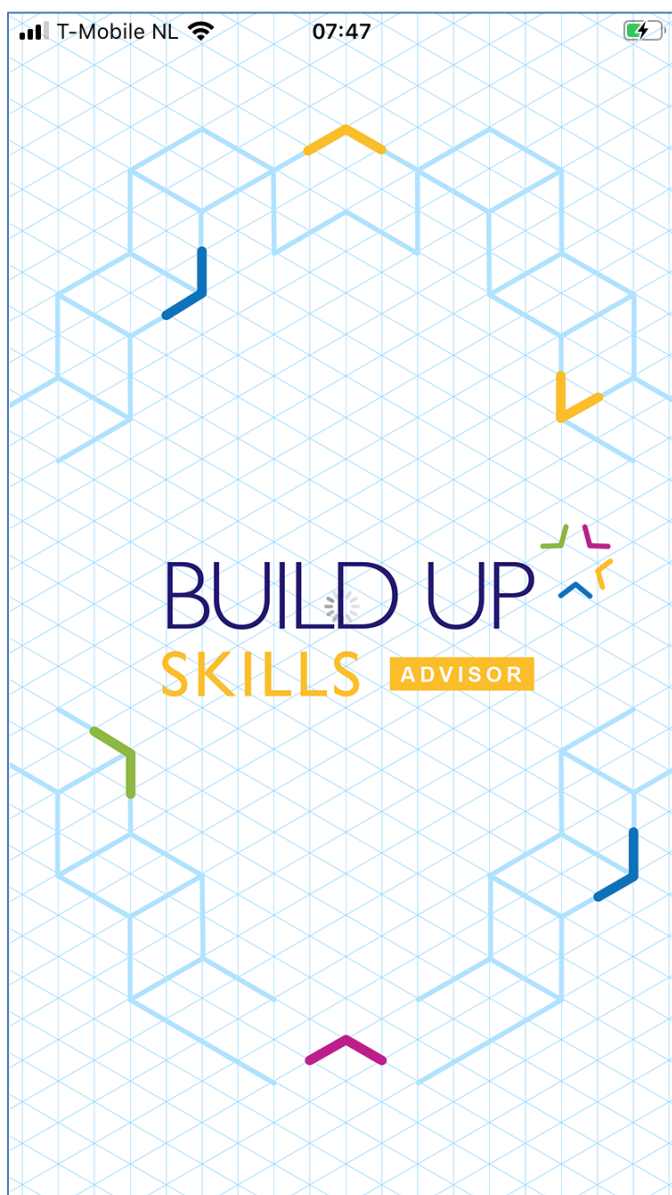


INSTRUCTION GUIDE FOR IMPLEMENTATION OF THE BUILD UP Skills advisor-app



Rotterdam, September 2020

Jan Cromwijk

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1 INTRODUCTION

The BUILD UP Skills advisor app is developed with the purpose to inform and advise craftsmen and professionals working in the building sector; about upskilling opportunities around sustaining of the built environment.

The BUILD UP Skills advisor app and its maintenance environment are built as Software as a Service. Each project and/or region/country using it, receives a dedicated part of the environment. Some essential data is shared with the purpose of mutual recognition. Examples of these are occupations, specialisms and Unit of Learning Outcomes.

Together with ISSO involved EU projects are developing a sustainable business model for sharing hosting and SLA-costs. Ensuring both a business model for organisations implementing the BUILD UP Skills advisor-app and covering of development, hosting and SLA costs.

In this document our approach and the main functions of the BUILD UP Skills advisor app and its maintenance environment are explained.

The BUILD UP Skills advisor app was conceived in a project that has received funding from the European Union's Intelligent Energy – Europe (IEE) under grant agreement no IEE/12/BWI/335/SI2.659666 BUS_N@W



The BUILD UP Skills advisor app is used and extended in projects that received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No's 649737 (BUSToB), 649473 (PROF/TRAC), 754148 (NEWCOM), 745510 (BIMplement), 784972 (TripleA-reno).



Development was co-financed by a Dutch education and training fund (OTIB).
The developer is Geckotech www.geckotech.nl



2 THE BUILD UP SKILLS INFRASTRUCTURE

2.1 OVERVIEW OF THE BUILD UP SKILLS-APP INFRASTRUCTURE

The BUILD UP Skills advisor-app infrastructure consists of several parts.

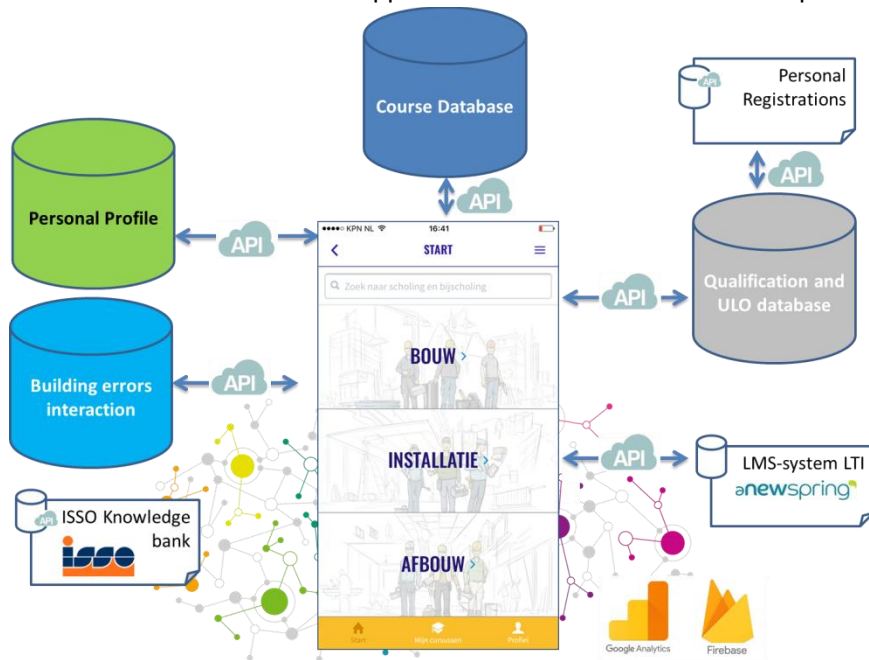


Image 1: Overview of the BUILDUP Skills app infrastructure

Course database

The course database consists of a flexible maintenance environment in which regions, sectors, occupations, specialisations, accreditations, training institutes and qualification descriptors.

English

Courses

Questions

Users

Qualifications

NL

New course

Notifications

Sectors

Professions

Specialisms

Courses

Institutes

Accreditations

Sources

Type	Name	Institute
	3D ontwerpen met Solid Works	HAN
	Aanbestedingen en inkopen	HAN
	Aanbrengen Tonzon Thermoskussens	Tonzon
	Aanbrengen van bevestigingsmaterialen	BouwCirkel
	ACK algemeen	Opleidingscentrum GO°
	ACK Algemeen	NCOI Techniek en veiligheid
	ACK ammoniak basis	Opleidingscentrum GO°
	ACK Ammoniak Basis	NCOI Techniek en veiligheid

Filters

Image 2: Maintenance site for the Course-database.

It also is equipped with functionality for training providers to maintain their own courses and to approve course attendance for the social rating participants can give to trainings they have attended.

This database is communicating with the BUS-app using API.

For developing the right structure of professions, specialisms and so on, the in BUILD UP Skills and PROF/TRAC developed methodology for skillsmapping is applied.

<http://profrac.eu/nzeb-skills-and-qualification-scheme/overview.html>

Personal Profile

For each user that logs into the BUS-app a Personal profile is created. This profile is maintained by the user itself and concerning progress automatically. It consists of:

- Name
- Photo (if social login is used retrieved from the social network)
- Postal code (if filled in by the user)
- Email-address
- Gender (if filled in by the user)
- Company (if filled in by the user)
- Course-ratings
- Course-favourites
- Earned experience points and the context they are earned in (connected to the specialism(s))
- A track-record / personal portfolio / breadcrumb-path
- Notification settings

The storage and use of personal data is fully GDPR compliant.

Building Errors Interaction

For the Building Errors Interaction a maintenance environment is available. In this environment course providers can create their own building error question-sets. This as a tool for branding their own quality.

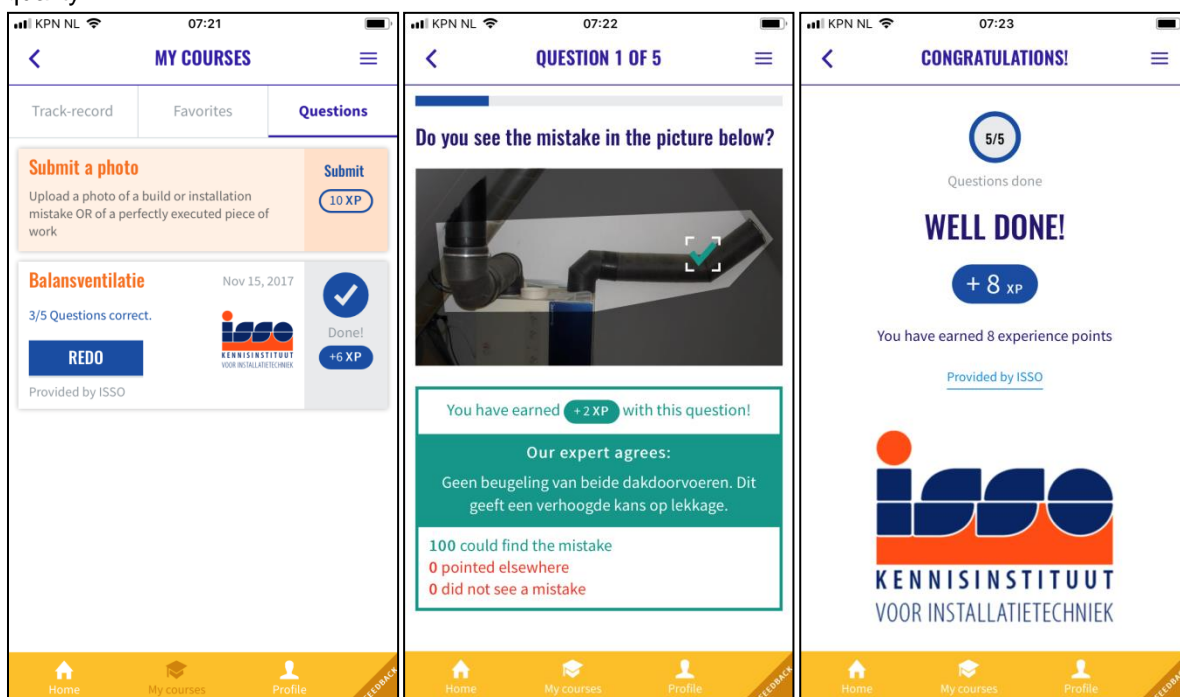


Image 3: Impression of the Building Errors Interaction

Beheer	Vragen sets					
Vragen sets						
Lijst vragen sets						
Nieuwe set						
Gebruikers						
Aanbieders						

Status	Naam	Gemaakt op	Gewijzigd	Gepubliceerd	Aanbieder
PUBLISHED	Balansventilatie	2017-11-15 19:18	2017-11-15 20:04	2017-11-15 20:04	ISSO
DRAFT	Test	2017-11-28 20:15	2017-11-28 20:15		

Image 4: Maintenance environment Building Errors Interaction

Self-check or inspection interaction

For the Building Errors Interaction a maintenance environment is available. In this environment course providers can create their own building error question-sets. This as a tool for branding their own quality.

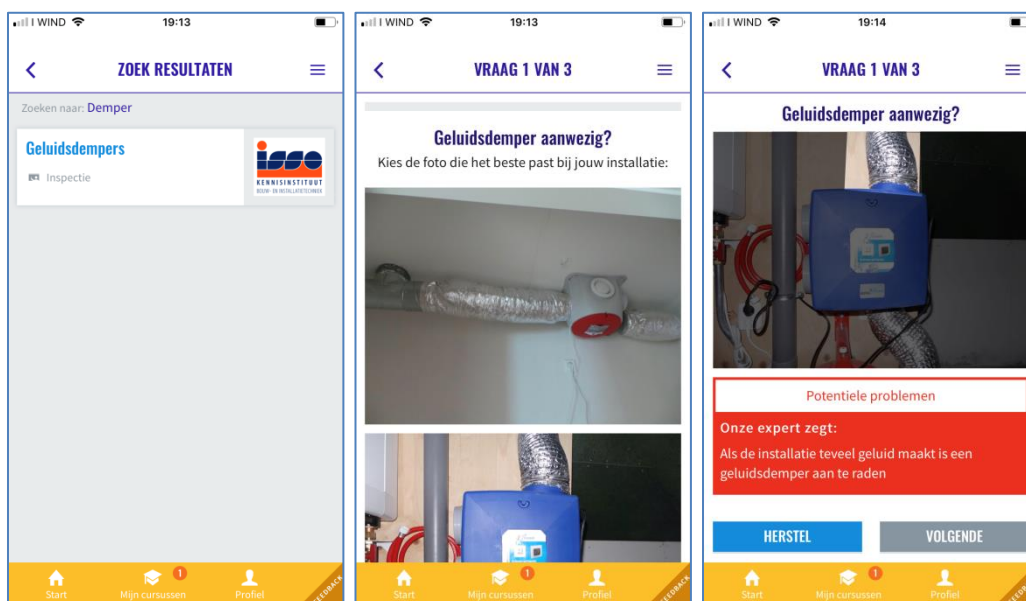


Image 5: Impression of the 'Inspection Interaction'

Manage	Inspections						
Regions							
Courses							
Questions							
Inspections							
Add inspection							

Name	Steps	Executed	Updated	Published	User	Provider
Ventilatie	3	7	2019-10-09 11:58	2019-10-09 11:58	admin	ISSO
Zonnewarmte	2	1	2019-10-29 09:31	2019-10-29 09:31	admin	OTIB
Inspection test	3	6	2019-11-04 11:59	2019-10-04 14:20	admin	
Test inspecties	1	0	2019-11-15 13:45		admin	ISSO

Image 6: Maintenance environment for the 'Inspection interaction'

Registering and finding personal recognitions

For course, exam and recognition providers it is possible to add formal and informal personal recognitions. The individual users of the BUILD UP Skills advisor-app can give their consent to be found when people, employers or clients are searching for persons in the area that are formally or informally recognised.

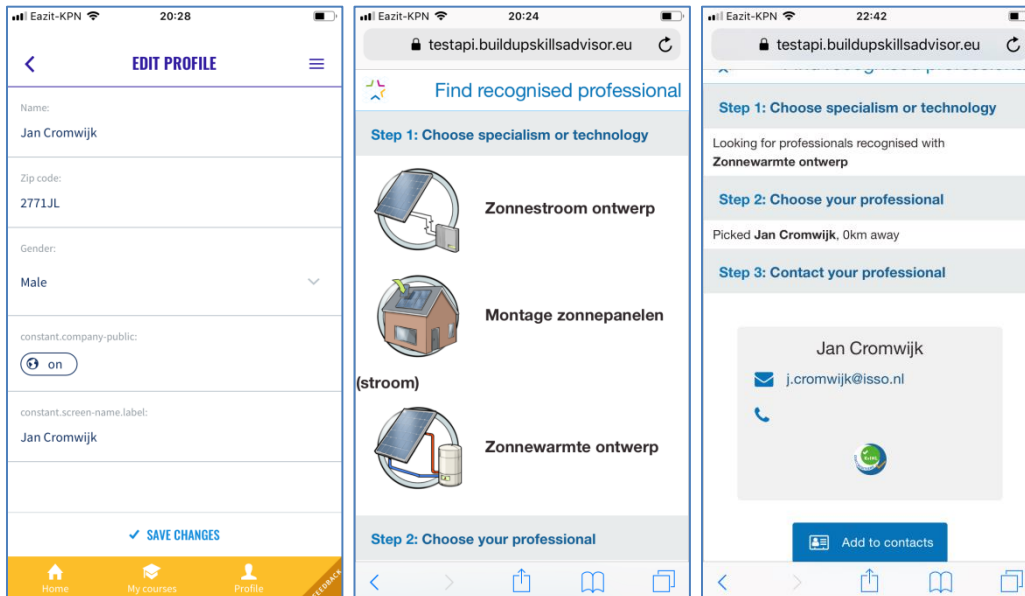


Image 7: giving consent – find specialists – and contact them

Giving consent is also possible on the Mobile site for participants not using the BUS-app
They receive an email to do so, after they have been added

Recognised professional

ViaEuropa has indicated you have completed null which makes you a recognized professional.
With your consent, BuildUpSkills can let people be able to find you in our database. The following personal information will be listed:

- Test Gebruiker
- Your current location

☐ Let people find me or the company where I work

save preferences

E-learning / LMS integration

For seamless integration of e-learning Application Programming Interfaces (API) and Learning Tools Interoperability (LTI) is used. All e-learning environments that support those standards can be connected. The first integration is made with the aNewSpring LMS.

For development of the e-learning we mainly use www.aNewSpring.nl and an easy to use method and template. In aNewSpring license sharing is possible.

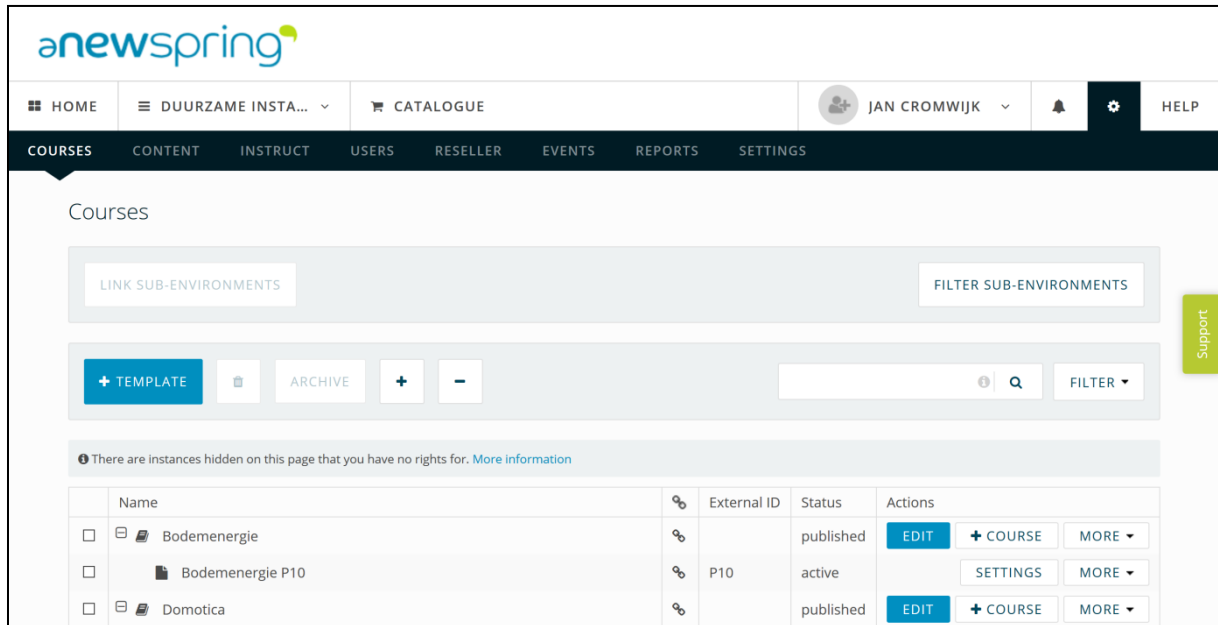


Image 8: Snapshot of the aNewSpring LMS

If required for it is possible to integrate also with Moodle or other e-learning environments.



Image 9: Logo of Moodle

Google Analytics and Firebase

For statistics and analytics an integration with Google Analytics and Firebase is in place. Both for ingoing and outgoing traffic. Course providers that also use Firebase and UTM coding are able to track conversion from the BUS-app, this is an enabler for future businessmodels.

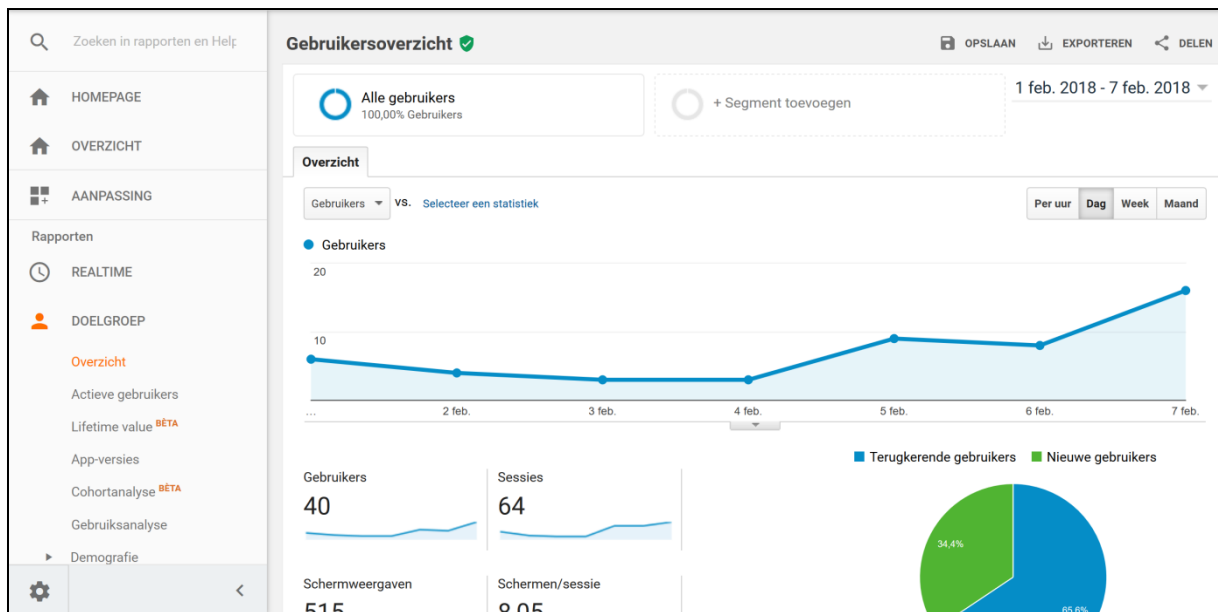
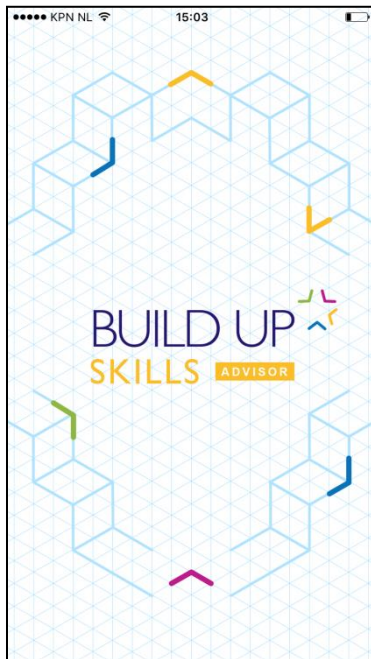


Image 10: Screenshot of the Google Analytics integration

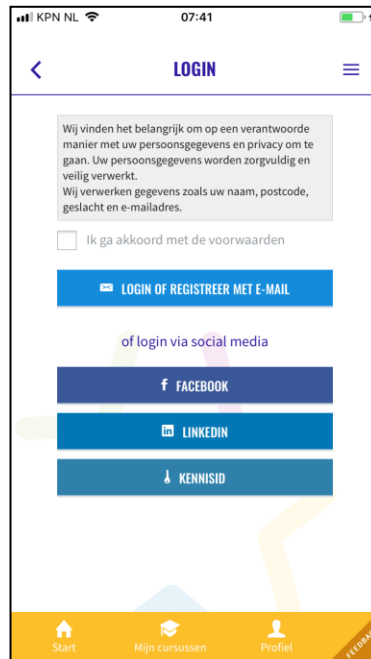
2.2 TOUR OF THE BUILD UP SKILLS ADVISOR-APP

The for end-users free-to-use app is a handy tool that quickly maps out the relevant training opportunities for sustaining of the built environment. By linking these possibilities to specific techniques and professions, the app provides you with an appropriate training advice that matches your situation. By turning on the app notifications for the specific techniques you want to follow, you will automatically receive updates on the most current course offers and question sets about practical situations.

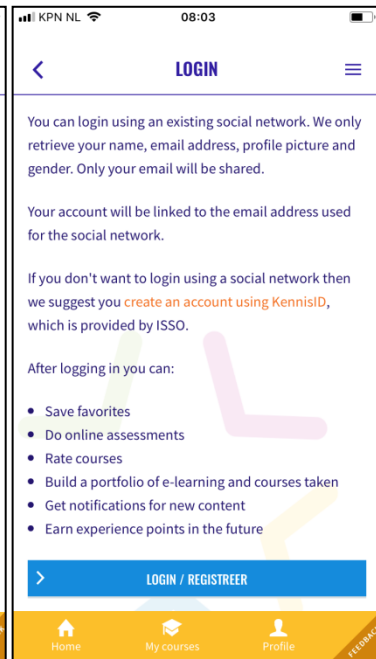
Note: some of the images are a mix between Dutch and English. There the language EN is used for viewing Dutch content.



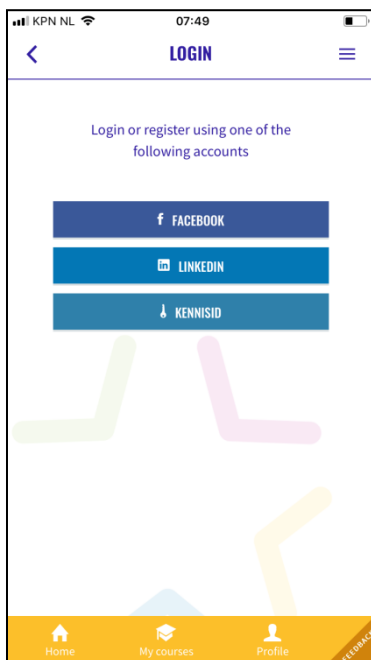
Splash screen



Accept EULA



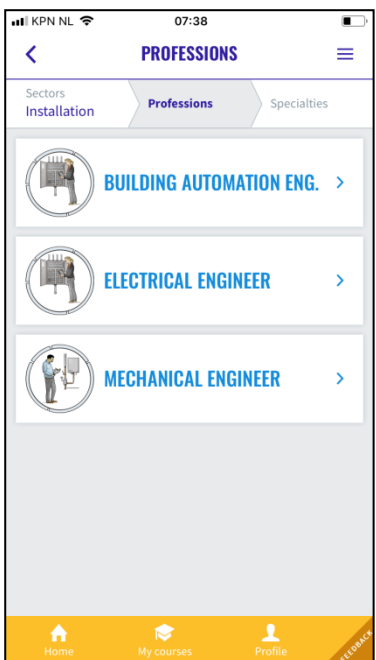
Before login



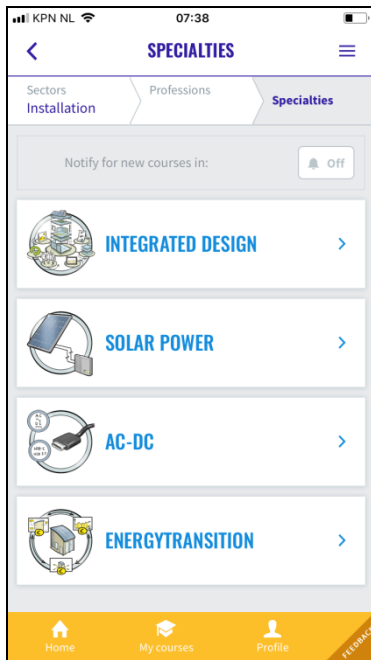
Login 2



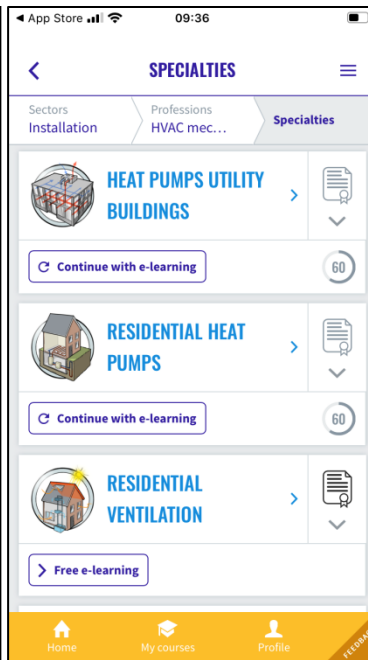
Select a sector



Select your profession



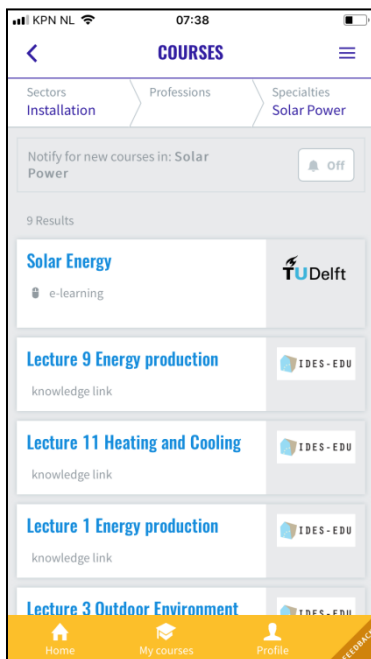
Select the technology



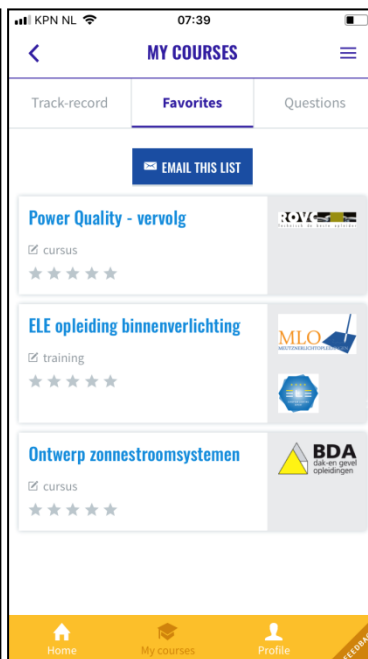
Select e-learning (NL)



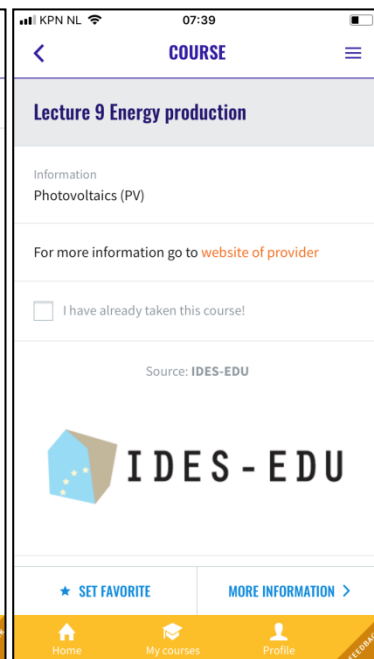
Follow e-learning (NL)



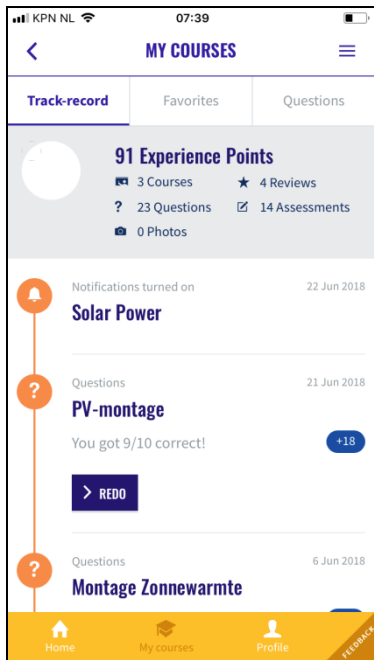
See available courses



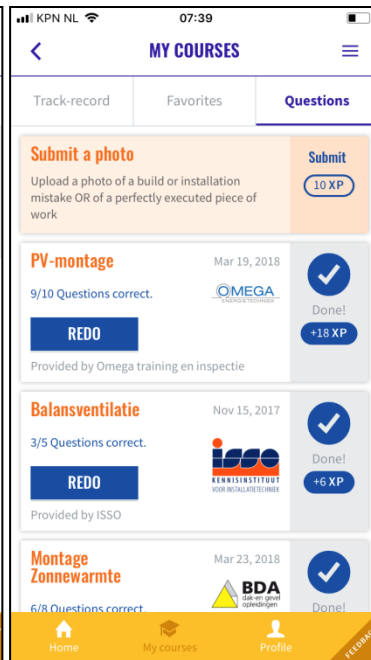
Add course to favorites



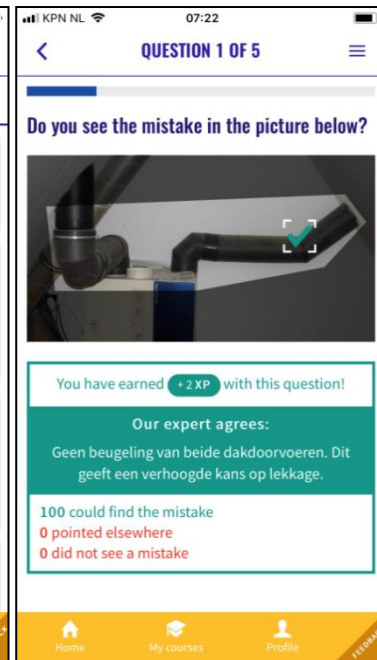
View course details



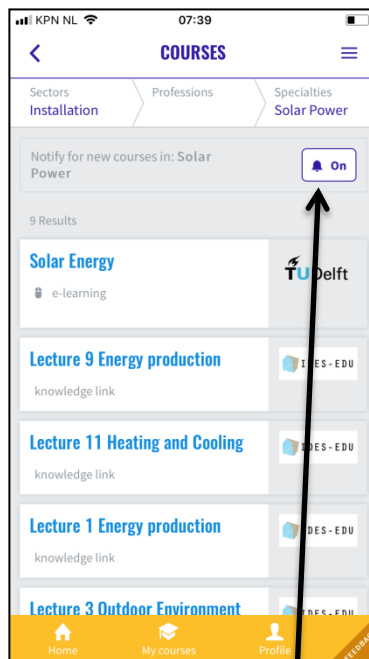
See personal track



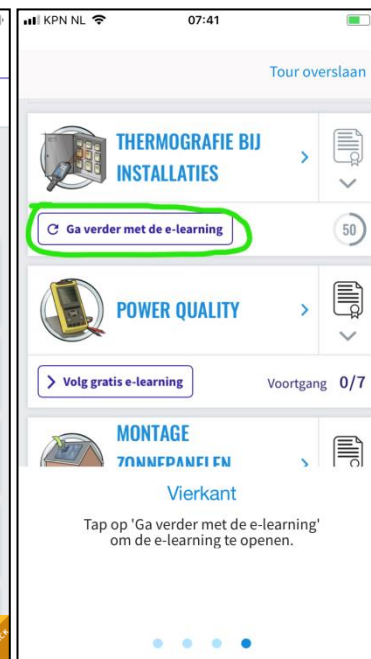
Select assessments



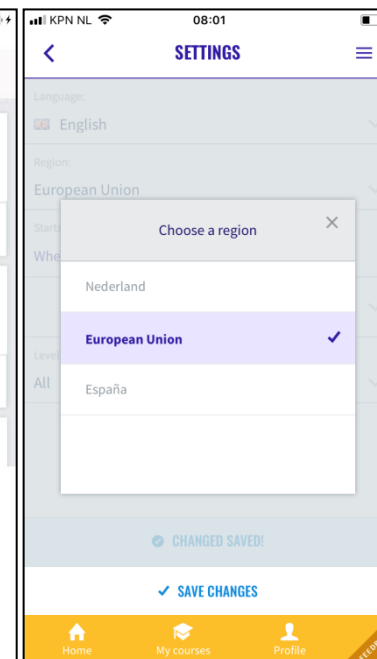
Practical assessments (NL)



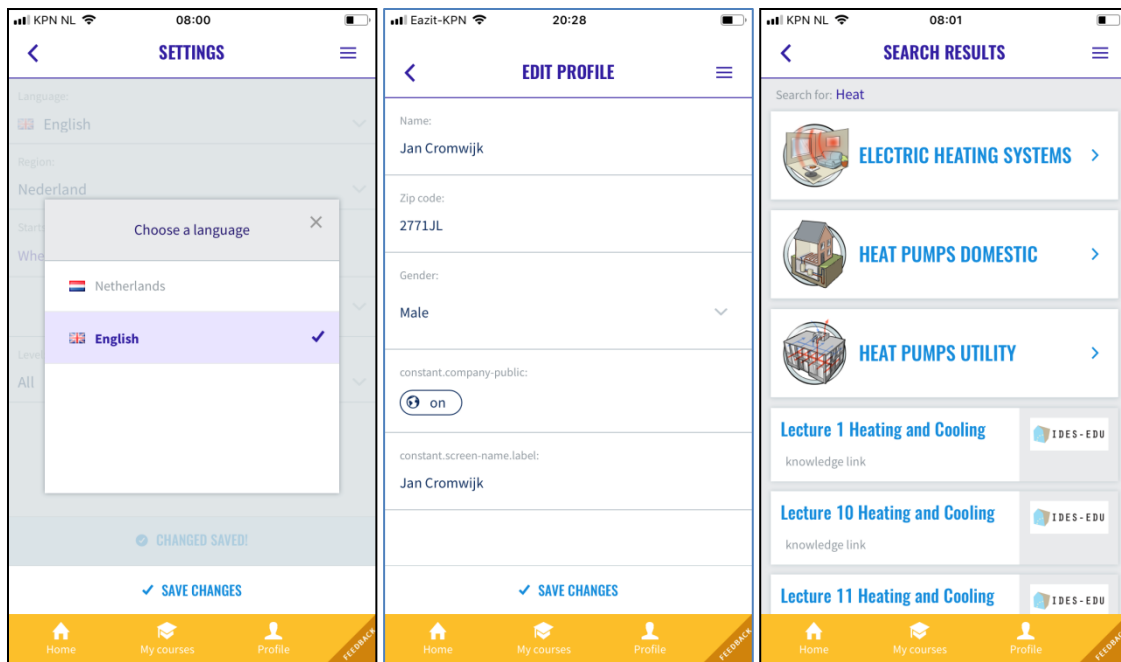
Personal notifications



Follow the tour



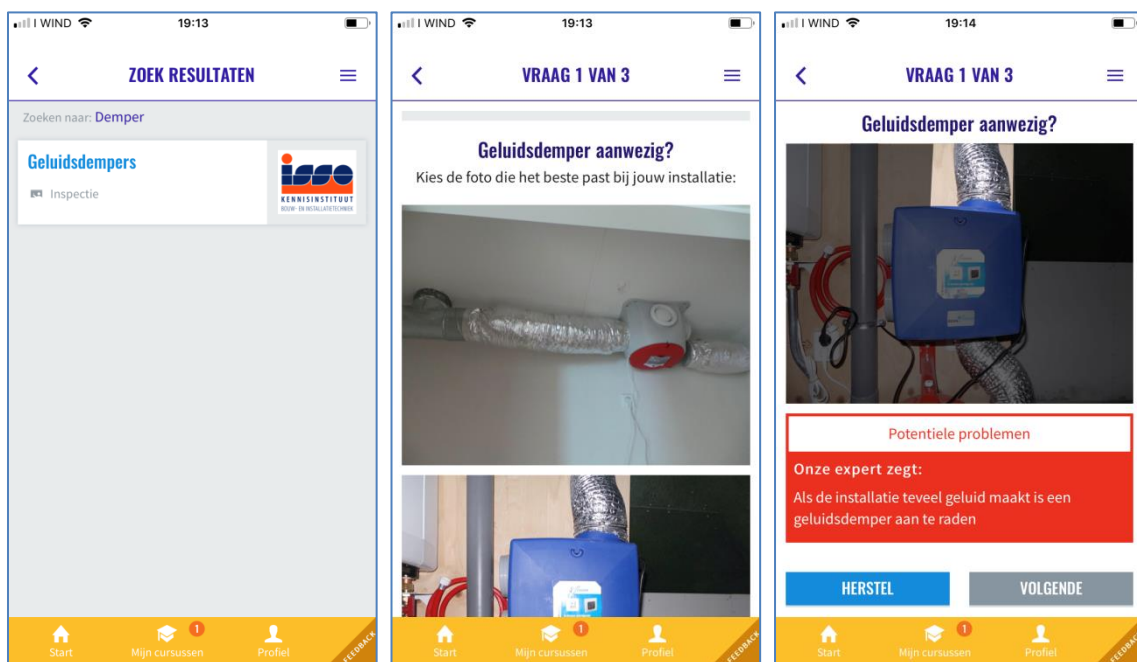
Select region



Change language

Give consent to be found / not

Search and find



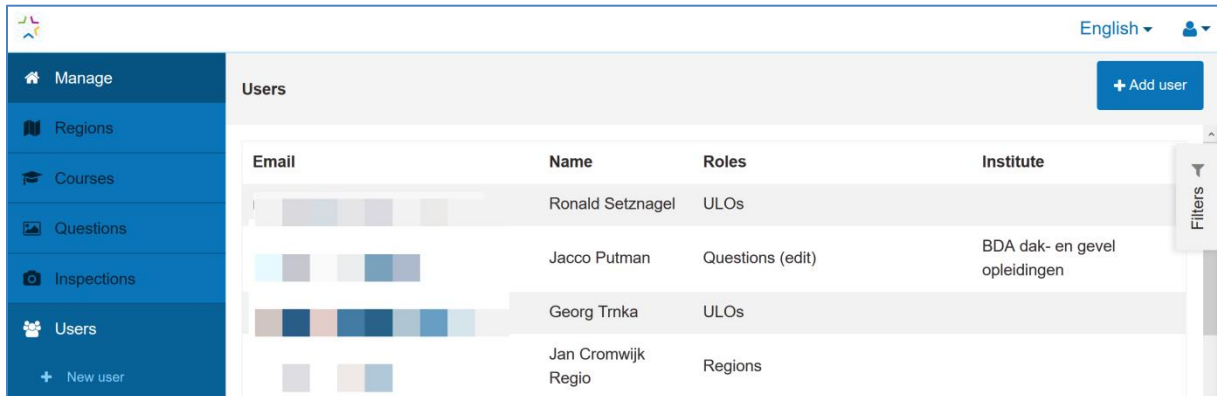
Find an Inspection

Perform Inspection

Get feedback and improve

3 ADMINISTRATION TOOLS

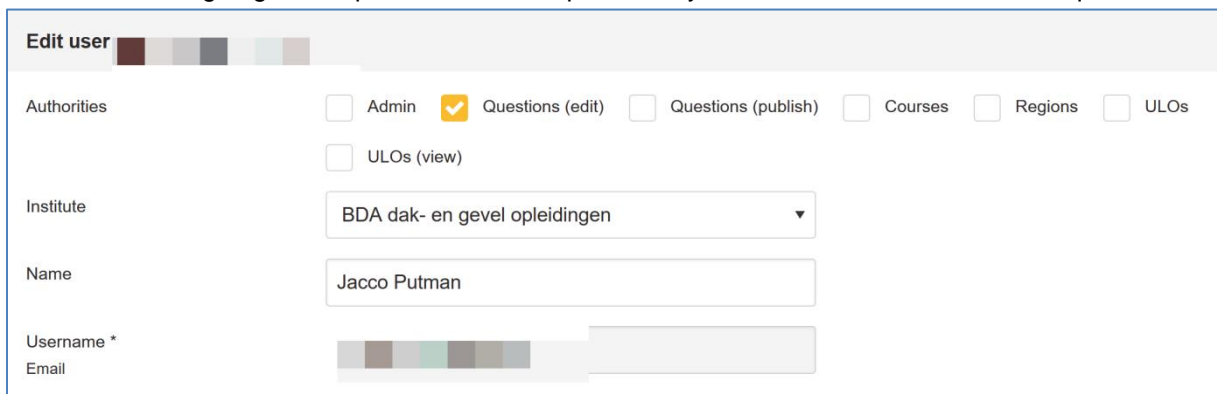
3.1 MANAGE USERS



Email	Name	Roles	Institute
	Ronald Setznagel	ULOs	
	Jacco Putman	Questions (edit)	BDA dak- en gevel opleidingen
	Georg Trnka	ULOs	
	Jan Cromwijk Regio	Regions	

Click on the email-address of a user **to modify** the user role
(in the screen above only Jacco Putman can edit questions)

A screen for assigning roles opens. In the example below you can see that Jacco can edit questions



Edit user

Authorities: ☐ Admin ☒ Questions (edit) ☐ Questions (publish) ☐ Courses ☐ Regions ☐ ULOs
☐ ULOs (view)

Institute: BDA dak- en gevel opleidingen

Name: Jacco Putman

Username *: [input field]

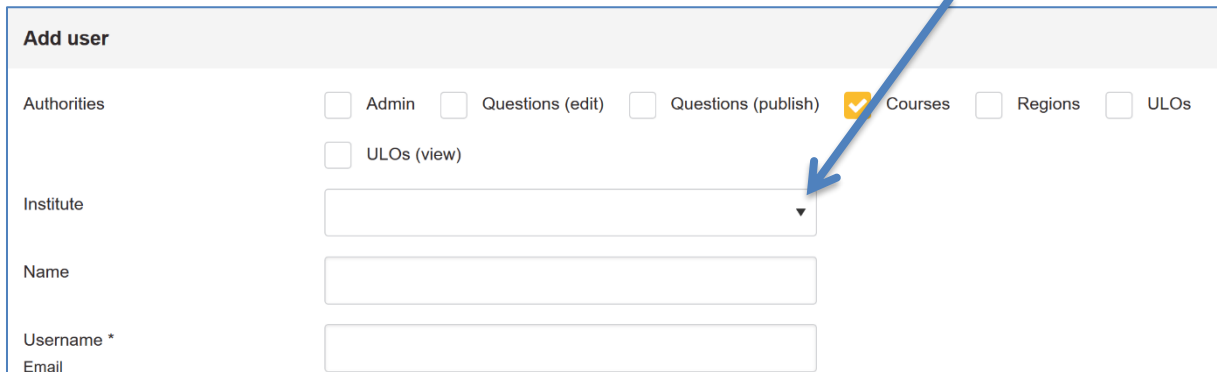
Email: [input field]

Admin = Systems admin (only visible for admins)

Questions (edit) = Being able to edit questionsets (cannot be combined with publish)

Questions (publish) = Being able to edit and publish a questionset (cannot be combined with edit)

Courses = Being able to add and modify courses in the course-catalog for one institute



Add user

Authorities: ☐ Admin ☐ Questions (edit) ☐ Questions (publish) ☒ Courses ☐ Regions ☐ ULOs
☐ ULOs (view)

Institute: [dropdown menu]

Name: [input field]

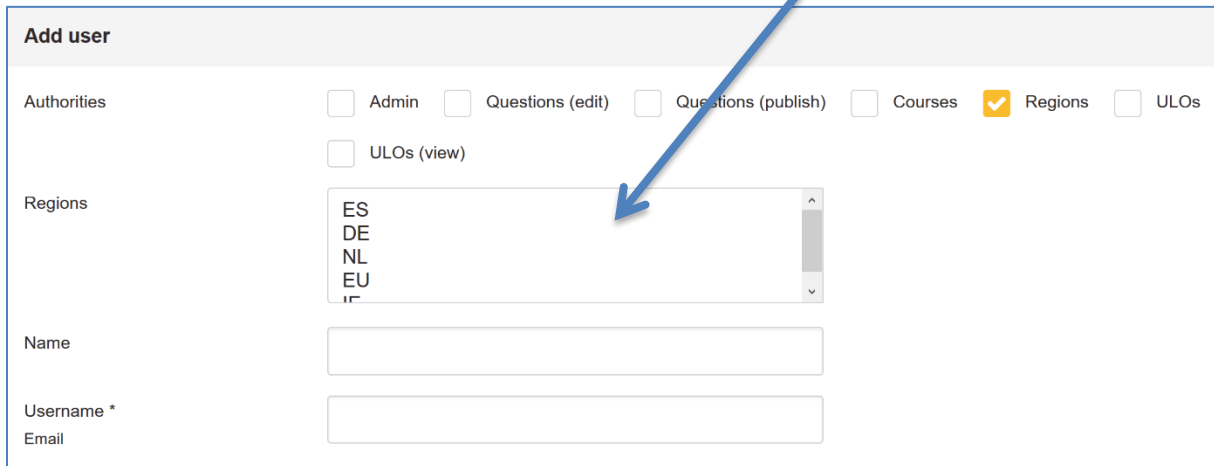
Username *: [input field]

Email: [input field]

Regions = Region manager (only visible for admins and region managers)

A region manager can manage all content in one or more region(s)

A region manager has to confirm new publications



The 'Add user' form includes the following fields and options:

- Authorities:** A row of checkboxes for 'Admin', 'Questions (edit)', 'Questions (publish)', 'Courses', 'Regions' (checked), and 'ULOs'. A second row contains a checkbox for 'ULOs (view)'.
- Regions:** A dropdown menu showing a list of regions: ES, DE, NL, EU, and IF.
- Name:** A text input field.
- Username *:** A text input field.
- Email:** A text input field.

ULO's = Able to create Qualifications and ULO's

ULO's (view) = can only view Qualifications and export them to Excel

Press 'Update' when ready with assigning roles



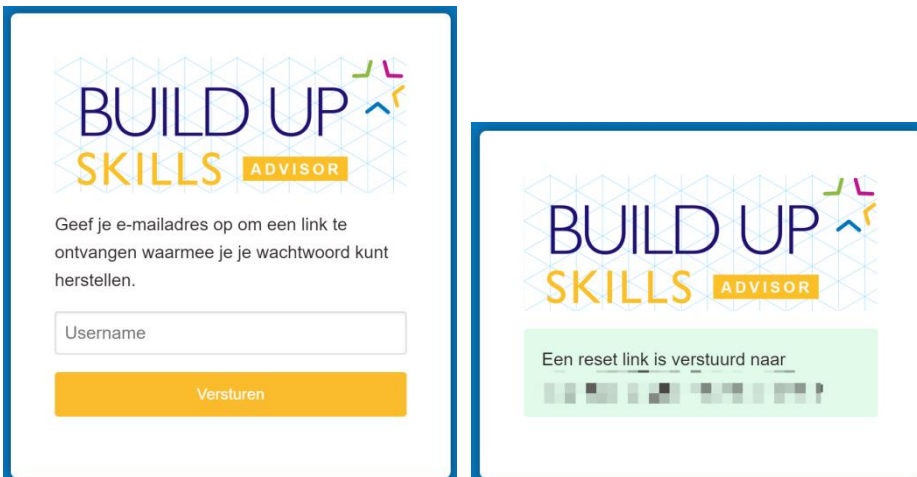
A horizontal bar with a blue arrow pointing to the right, ending at an orange button labeled 'Update' with a document icon.

3.2 RESET USER PASSWORD

To reset a user's password use this link <https://api.buildupskillsadvisor.eu/registration/forgotPassword>

The interface asks for the emailaddress you want to reset. Then click 'Versturen' or 'Send'.

Then a link for reset will be send to the user.



The first screenshot shows the password reset form with the following elements:

- Header:** BUILD UP SKILLS ADVISOR logo.
- Text:** 'Geef je e-mailadres op om een link te ontvangen waarmee je je wachtwoord kunt herstellen.'
- Form:** A text input field labeled 'Username'.
- Button:** An orange button labeled 'Versturen'.

The second screenshot shows the confirmation message:

- Header:** BUILD UP SKILLS ADVISOR logo.
- Text:** 'Een reset link is verstuurd naar' followed by a masked email address.

4 COURSE DATABASE

The BUILD UP Skills course database consists of a flexible maintenance environment in which regions, sectors, occupations, specialisations, accreditations, training institutes and qualification descriptors. In this guide an overview on how to implement and use this database.

4.1 REGIO ADMIN: CREATE A REGION

Use of the BUILD UP Skills infrastructure starts in general with the creation of a new region.

In general we see each EU memberstate as a region. If needed also provinces or parts of a kingdom can be added as regions.

The image shows two screenshots illustrating the process of creating a new region. The top screenshot displays the 'Regions' admin interface. On the left is a sidebar menu with options: Manage, Regions (selected), Courses, Questions, Users, Tour, EULA, and Qualifications. The main content area is titled 'Regions' and contains a table with columns 'Flag' and 'Name'. The table lists four regions: EU (European Union flag), ES (Spain flag), DE (Germany flag), and NL (Netherlands flag). A blue button labeled '+ New Region' is located in the top right corner of the table. A blue arrow points from this button to the right. To the right of the main screenshot is a smaller screenshot of a mobile app interface. The app shows a 'HOME' screen with a search bar and a bottom navigation bar. A dialog box titled 'Choose a region' is open, displaying a list of regions with flags: NL, EU, ES, DE, and IE. The 'IE' option (Ireland) is highlighted with a checkmark. A blue arrow points from the '+ New Region' button in the admin interface to the 'IE' option in the app dialog.

Click on '+ New Region' to add a new region.

Result in the app

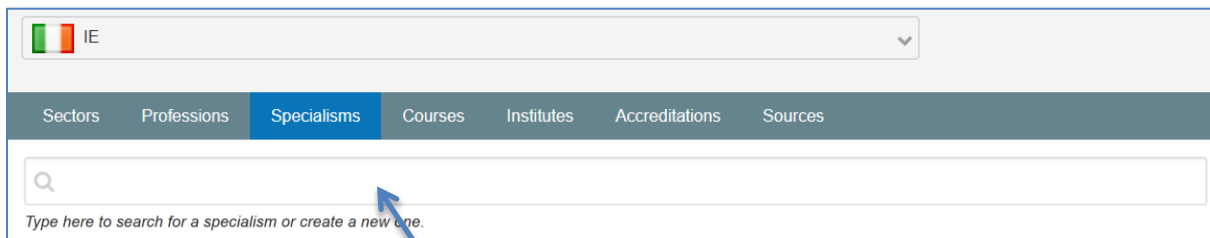
Give the region a name (in general we use the ISO3166-1 alpha-2' country codes and flags)
Upload a flag icon (Dropbox: BUILD UP Skills advisor-app implementations\Visualisations\Flags\png)
Save the new region

4.2 REGIO ADMIN: CREATE A SPECIALISM

When a region is created, the region is empty.

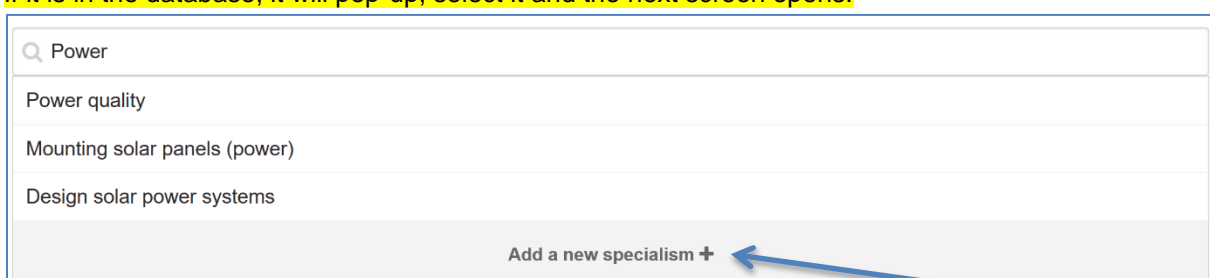
As next step at least one specialism needs to be added.

To do so, it is possible to use the list of already available specialism and the visualizations available on Dropbox. An overview of specialisms can be found in chapter 11 Specialisms & images of specialism.

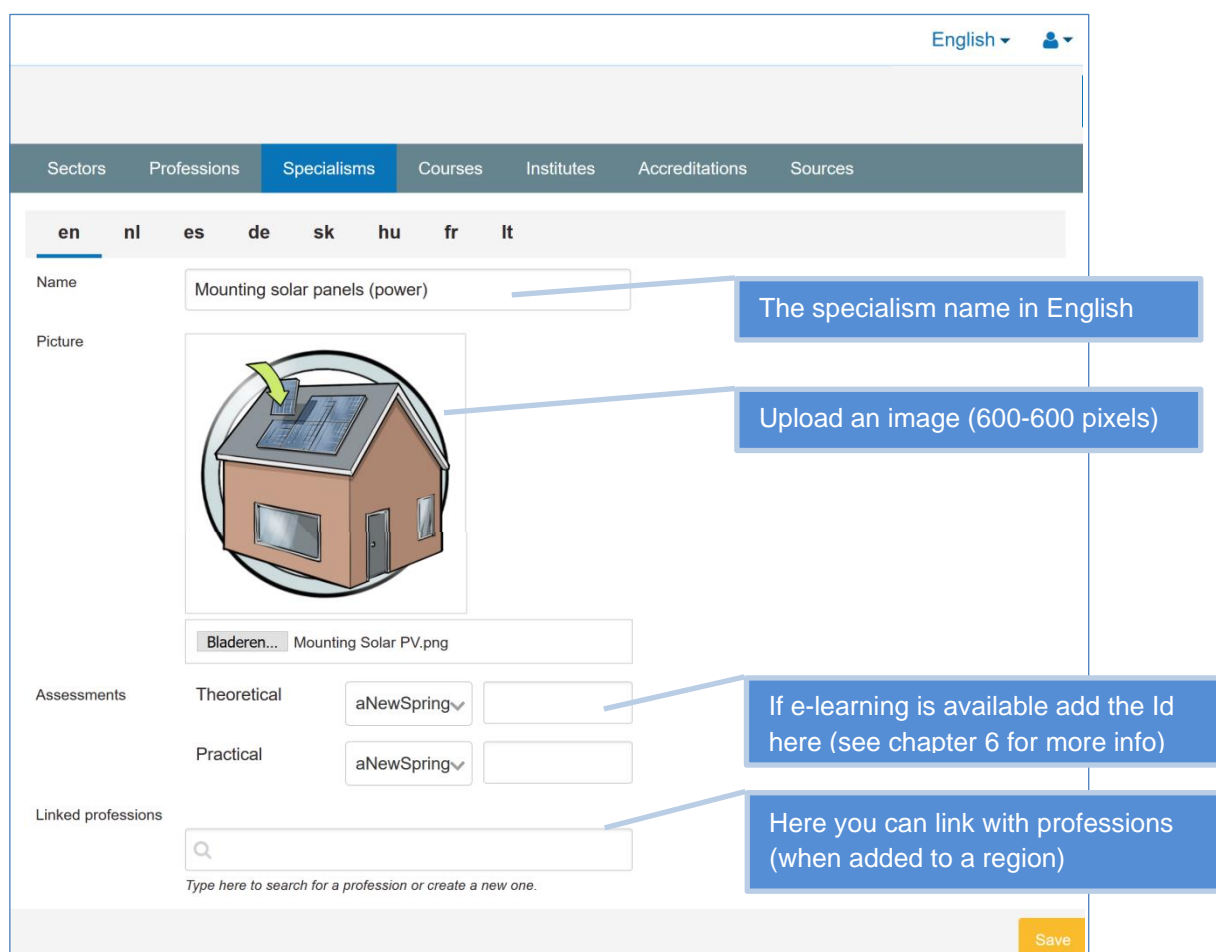


Type the specialism name in English to check if it is already in the database.

If it is in the database, it will pop-up, select it and the next screen opens.



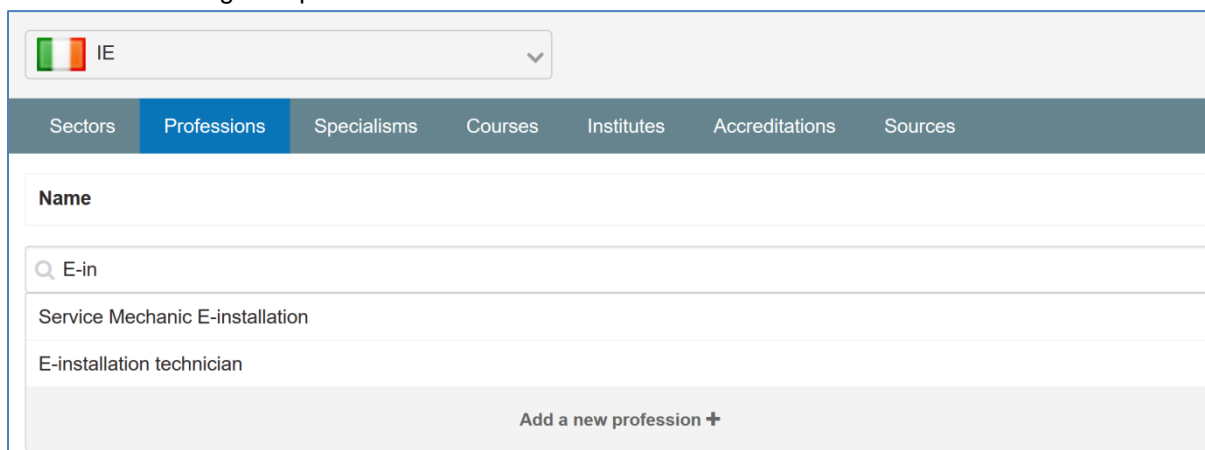
If it is not in the database, then complete the name and hit 'Enter' or the button 'Add a new Specialism'. The next screen opens.



4.3 REGIO ADMIN: CREATE A PROFESSION

Next step in setting up a region is the creation of a profession / occupation

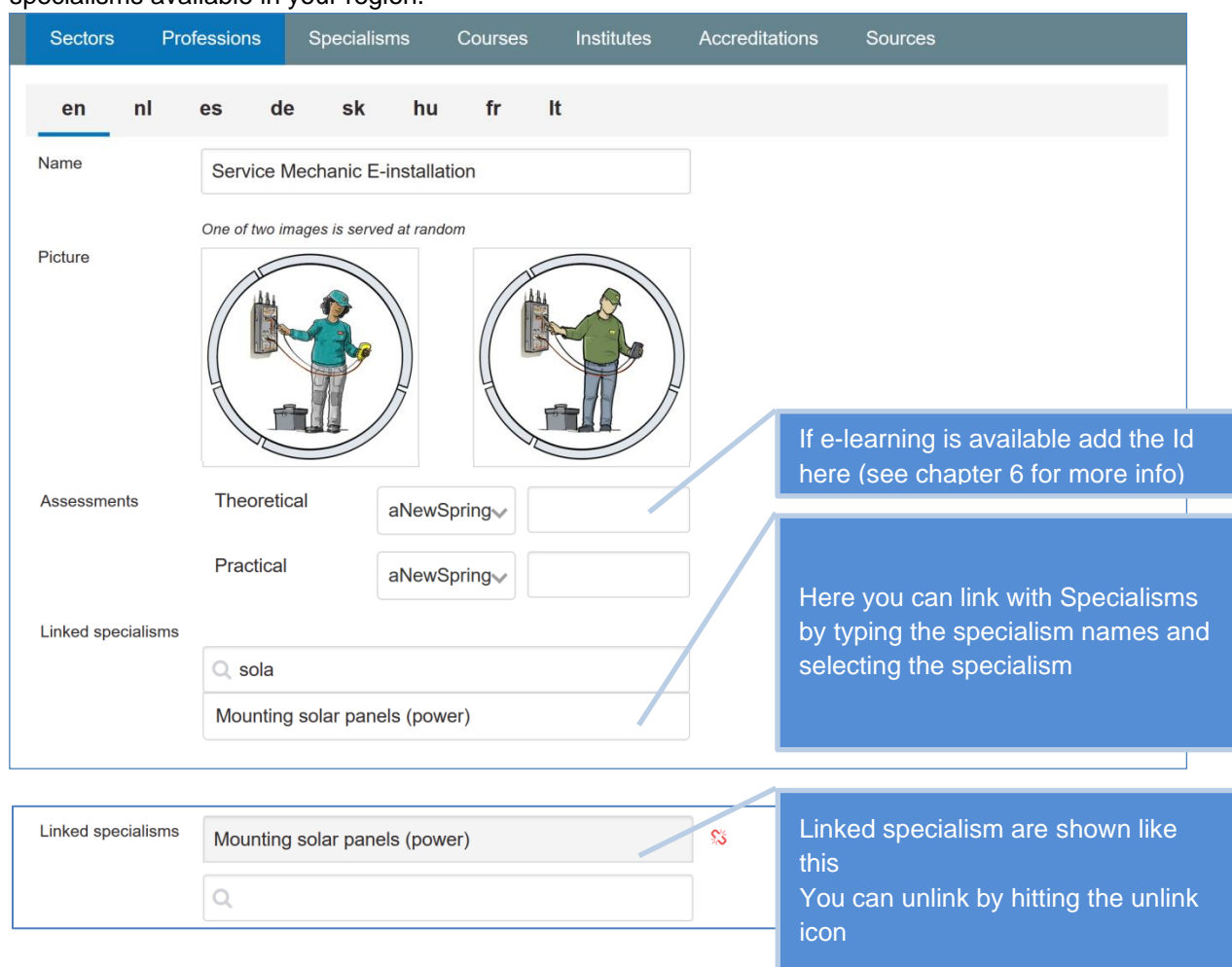
An overview of already existing professions and available visualisations can be found in chapter 10 Professions & images of professions.



Type the name of the profession in English to check if it already exists in the database.


- ✓ If the profession is already in the database, it will pop-up, select it and the next screen opens.
- If not, then complete the name of the profession and hit 'Enter' or the button 'Add a new profession'.

The next screen opens. In this screen you can add visualisations of the profession and link it to specialisms available in your region.



4.4 REGIO ADMIN: CREATE A SECTOR

In the BUILD UP Skills advisor-app professions are linked to sectors. Before that can be done a sector needs to be added.

 IE

New sector +

SectorsProfessionsSpecialismsCoursesInstitutesAccreditationsSources

Name

Professions

Click the 'New sector +' button

Fill in the details required

New sector +

SectorsProfessionsSpecialismsCoursesInstitutesAccreditationsSources


ennl es de sk hu fr It

Name

Installation sector

Add a name

Picture



Bladeren... Installation.png

Add a visualisation

Linked professions

E-in

E-installer

Service Mechanic E-installation1

Search and link professions


Result: of the linked professions

Linked professions

E-installer

Service Mechanic E-installation1

The final result: a sector with linked professions

 IE

New sector +

SectorsProfessionsSpecialismsCoursesInstitutesAccreditationsSources

Name


Professions

Installation sector

2

When adding sectors you can choose to add 'sectornames' but you can also choose for example to bundle a group of professions under a good recognizable name.

Example from Ireland where professions are bundled in groups with a specific name.

 IE

▼

New sector +

Sectors

Professions

Specialisms

Courses

Institutes

Accreditations

Sources

Name	Professions
Registered Building Professionals - BC(A)R Certifiers	3
Construction Professionals	5
Craft Workers	5
Specialised workers	5
General Operatives	5
Property & Building Professionals	4

Example from the Netherlands where professions are grouped by sector.

NL

New sector +

Sectors

Professions

Specialisms

Courses

Institutes


Accreditations

Sources

Name	Professions
Construction	11
Installation	11
Completion	3
Real estate	7

4.5 REGIO ADMIN: CREATE A SOURCE

In the Course catalogue it is possible to create subsets of courses. For example all courses for blue collar workers, or all courses related to a specific skills-project. This is done by working with 'sources'

 IE

New source +

Sectors

Professions

Specialisms

Courses

Institutes

Accreditations

Sources

Name	Description
------	-------------

Click the 'New source +' button

Sectors

Professions

Specialisms

Courses

Institutes

Accreditations

Sources

en

nl

es

de

sk

hu

fr


It

Name

Construction Worker Skills

Add a name

Logo



Add a logo

Bladeren...

Construction-Worker-Skills-Register.png

Website

<https://www.constructionworkerskillsregister.ie/>

Add a link to a website

Description


The Construction Worker Skills Register encourages engagement in training and skills development within the building sector.

Add a description

Save

Fill in the information required

Click 'Save' and then the result will be showed.

 IE

New source +

Sectors

Professions

Specialisms

Courses

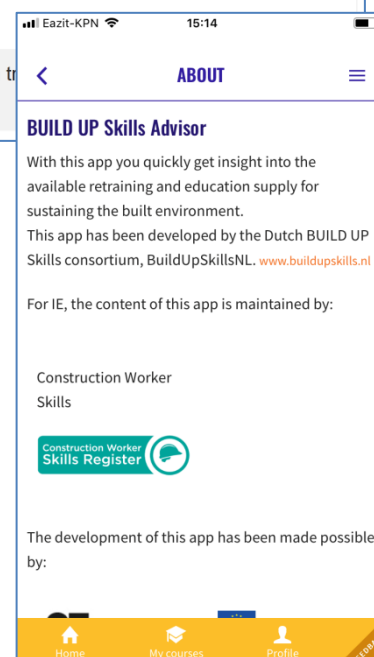
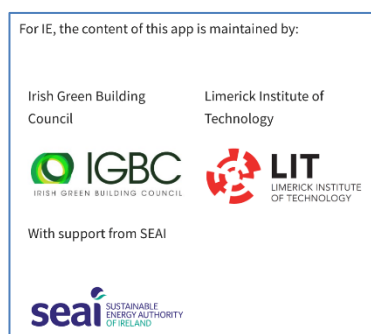
Institutes

Accreditations

Sources

Name	Description
Construction Worker Skills	The Construction Worker Skills Register encourages engagement in training and skills development within the building sector.

In the BUILD UP Skills advisor app the sources are shown in the ABOUT screen. As you see it can also be used for **adding 'supporters'**



4.6 REGIO ADMIN: CREATE AN ACCREDITATION & OPTIONAL SKILL-CARD SETTINGS

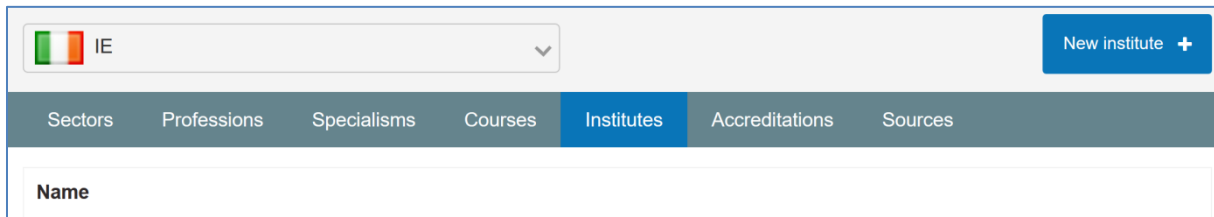
If accreditations or recognitions for courses or course providers are available, they can be added. An accreditation can be linked to a qualification by linking it to a published qualification (see 7.7). When linked to a published qualification scheme personal recognition cards can be issued.

Click on the button 'New accreditation +' and fill in the required fields.

When an accreditation is linked to a recognition a Skills-card can be added.

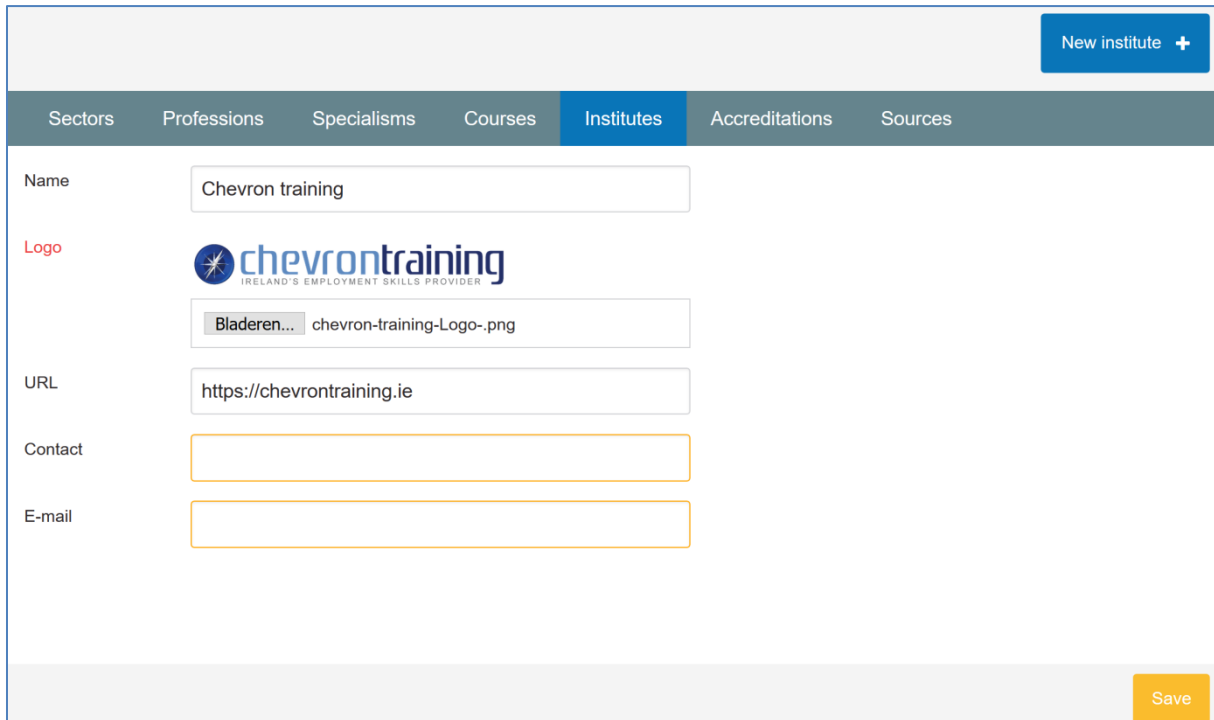
4.7 REGIO ADMIN: CREATE AN INSTITUTE

The last step before courses can be created is adding one or more institutes (e.g. course provider, exam provider, recognition issuer).



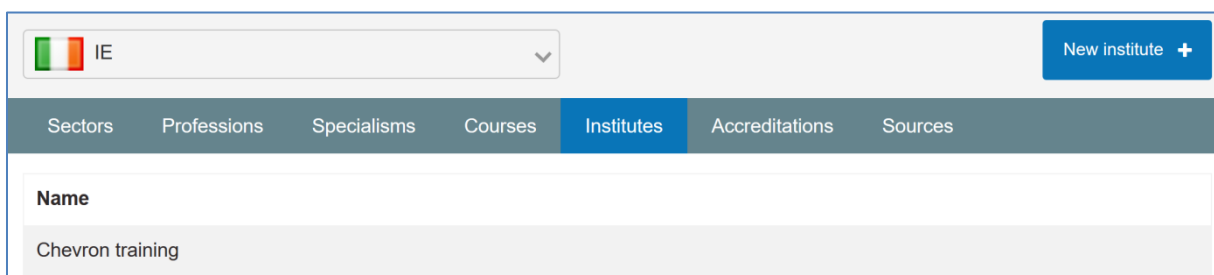
This screenshot shows the 'New Institute' form in the Regio Admin interface. At the top, there is a dropdown menu for the country, currently set to 'IE' (Ireland). To the right of this menu is a blue button labeled 'New institute +'. Below the country menu is a horizontal navigation bar with tabs for 'Sectors', 'Professions', 'Specialisms', 'Courses', 'Institutes' (which is currently selected), 'Accreditations', and 'Sources'. Below the navigation bar is a single text input field labeled 'Name'.

Click on the button 'New institute +' and fill in the required fields.



This screenshot shows the 'New Institute' form with the following fields filled out: 'Name' is 'Chevron training'; 'Logo' is a blue and white logo for 'chevrontraining' with the tagline 'IRELAND'S EMPLOYMENT SKILLS PROVIDER'; 'URL' is 'https://chevrontraining.ie'; 'Contact' and 'E-mail' are empty text input fields. A 'Save' button is located at the bottom right of the form. The 'New institute +' button is still visible at the top right.

Click on Save and the result is shown



This screenshot shows the 'New Institute' form after the 'Save' button has been clicked. The 'Name' field now contains the text 'Chevron training'. The 'New institute +' button is still visible at the top right.

4.8 REGIO ADMIN AND COURSE PROVIDER: CREATE A 'COURSE' OR 'EXAM'

IE

New course +

Sectors
Professions
Specialisms
Courses
Institutes
Accreditations
Sources

Type
Name
Institute

Click on 'New course' to create a new course item.

Fill in the details needed. When a course is published by a course provider, then the region admin needs to approve

IE

New course +

Sectors
Professions
Specialisms
Courses
Institutes
Accreditations
Sources

Status **DRAFT**

Language English

Select a language the content has

Name Solar installer

Add a name

Description The purpose of this award is to equip you with the relevant knowledge, skill and competence to implement micro scale solar photo-voltaic (p-v) projects, up to 11 kilowatt, according to the applicable standards, legislation, guidelines, and manufacturer's specifications, whilst working autonomously.

Add a description

Type Course

Select a course type

Collection ☐ Construction Worker Skills
The Construction Worker Skills Register encourages engagement in training and skills development within the building sector.

Select a Collection

Institute Chevron training

Select a training institute

Website https://chevrontraining.ie/solar-pv-course/

Add a link to the website

Accreditation SEAI

Select an accreditation, when applicable
If a qualification is linked it can be downloaded

Specialisms and technologies Design solar power systems

Link to Specialisms
Based on the links the professions list is populated

Professions Service monteur E-installatie
Service Mechanic E-installation1

Unlink professions not within the target group AND/OR link to professions not linked to the specialisms selected

Exam

When applicable add a link to an exam

Points For completing course 400

Enter the number of retraining points

0.5 day = 50 points
1 day = 100 points
2 day = 200 points
3 day = 300 points
max 900 points for 9 days or more

Add a number of XP

Save or publish

Save Publish

4.9 REGION ADMIN ACCEPT A CREATED OR MODIFIED COURSE

A region provider will get a notification if a course institute has added a new course of edited essential fields. This to prevent abundant linking to make a course item visible everywhere The essential fields are: Linked specialism's and Linked professions.

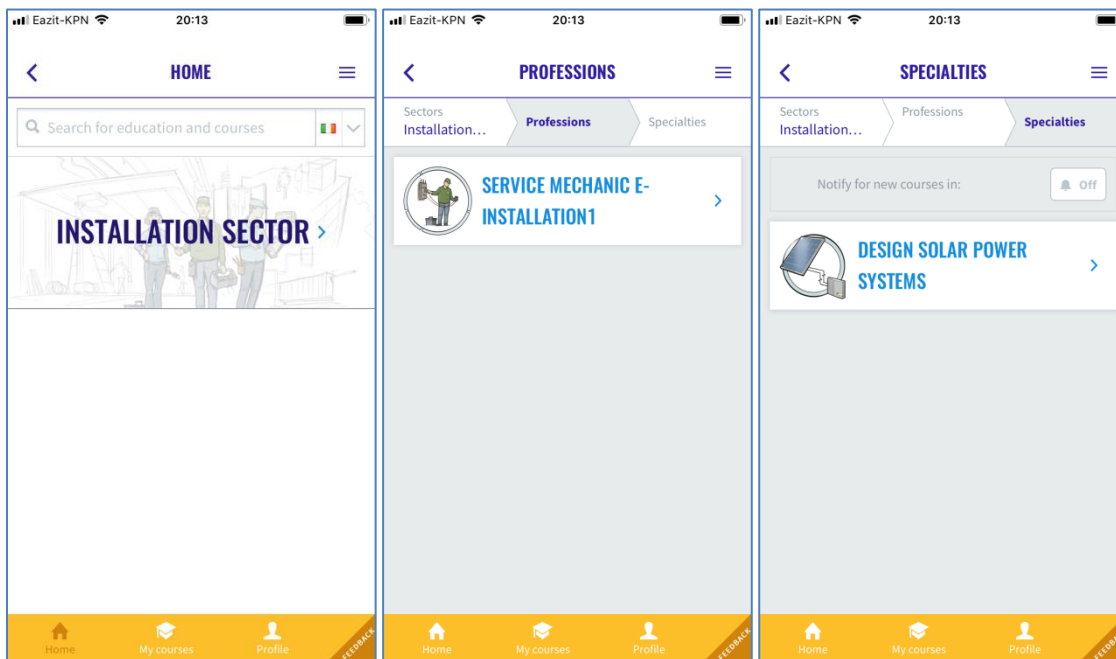
If needed a region admin can make the required changes.

By hitting the publish button, the region admin accepts the changes.

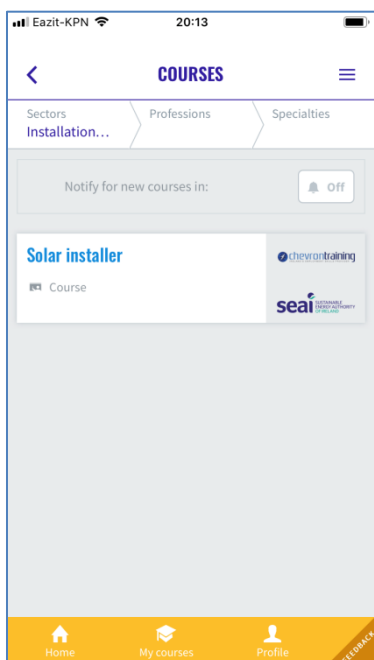
Save

Publish

4.10 RESULT IN THE APP

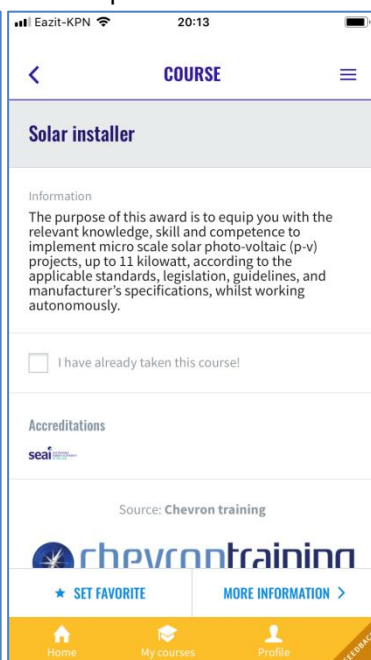


Select a sector



The course supply

Select a profession



Information about the course

4.11 ADD COURSE PARTICIPANTS

4.11.1 With Excel imports

As course institute it is possible to upload an Excel with course participants

A template for this can be found in the Dropbox

“BUILD UP Skills advisor-app implementations\Information for course providers”

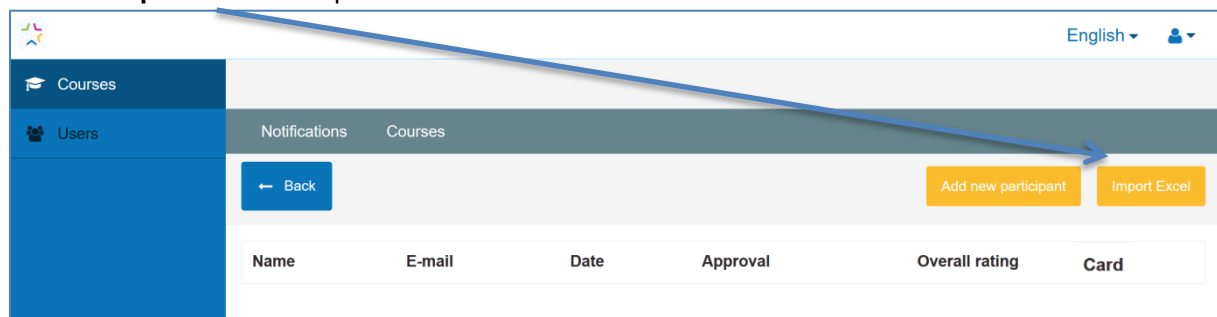
First fill in the Excel template with the following information.

The fields Name, Email and Completed are required. The others are optional.

Grade and Birthday are only used for personal recognitions earned by passing exams.

Name	Email	Company	Completed	Grade	Birthday
new_participant2	new_participant2@example.com	Company A	2019-10-01	8	15-12-1977

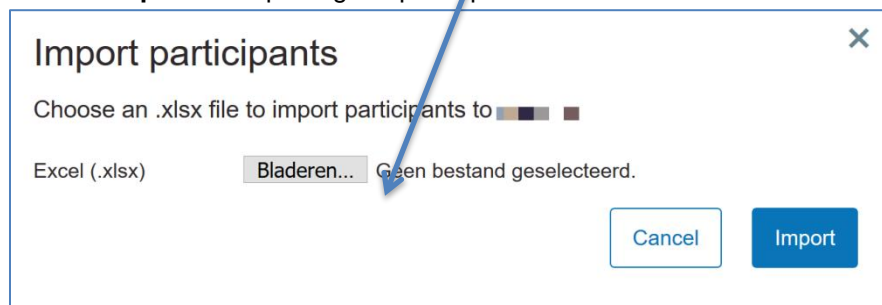
Click on **Import Excel** to import the Excel file



The following pop-up appears

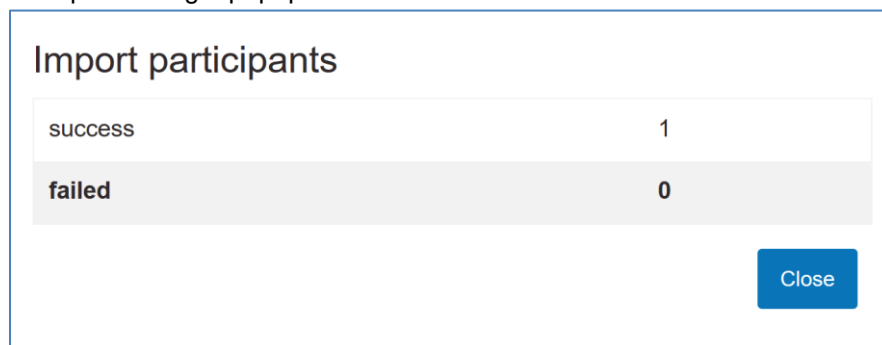
Select the Excel file by clicking on ‘**Bladeren**’

Click on **Import** for importing the participants.



Uploading and processing takes a while **(do not refresh or click again)**

After processing a popup shows with a results overview.

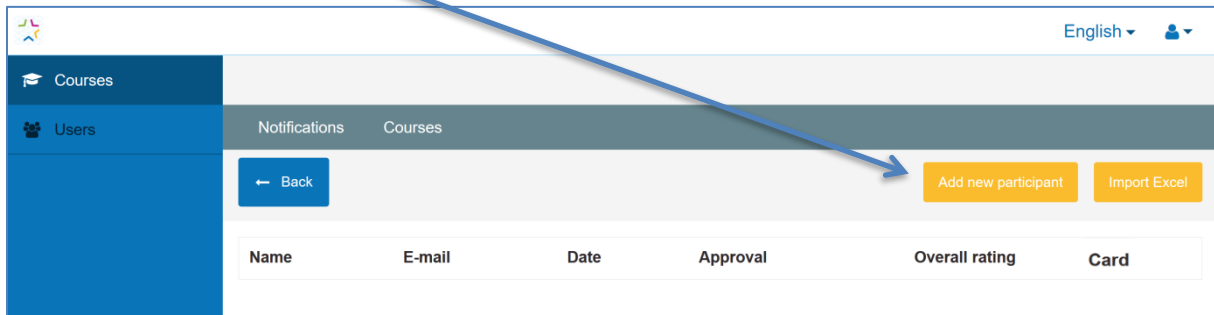


If import fails partly or fully, then detailed error information is added to this pop-up.

4.11.2 Individual

It is also possible to add an individual course participant

Click on **Add new participant**



A popup to fill-in the details opens.

Fill in the required information and click 'Add participant'

Add participant to nZEB ventilation

Name: Jan Cromwijk

E-mail: [redacted]

Date: 28-09-2020

Grade: 7

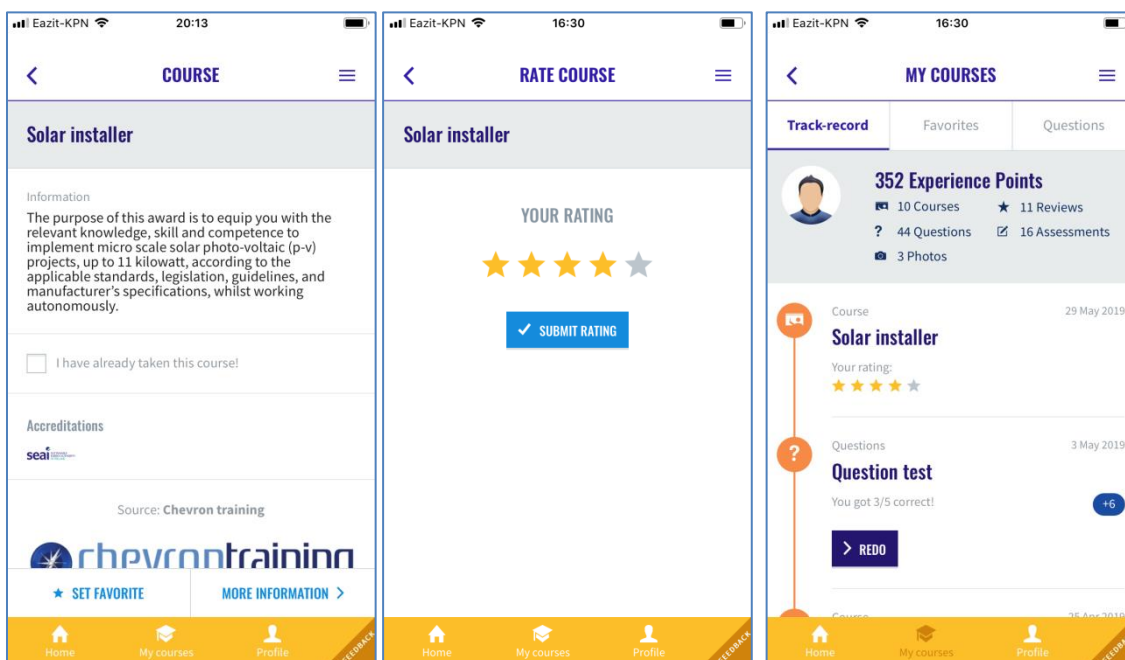
When Coursetype is an exam, then a Grade can be added

Cancel

Add participant

4.12 ACKNOWLEDGE COURSE PARTICIPATION

When a user of the BUILD UP Skills advisor app clicks on 'I have already taken this course' a screen to rate the course is shown.



I have taken this course

My rating

Rating shown in personal track record

When the rating is approved also the number of earned XP is updated.

Participation can be approved or rejected by the course provider. After acceptance the user rating is shown to the course provider. See an example of this screen below.

The screenshot shows a web application interface for course providers. On the left is a blue sidebar with navigation links: 'Courses', 'Vragensets', and 'Gebruikers'. The main content area has a top bar with 'Nederlands' and a user profile icon. Below this is a sub-header with 'Notifications' and 'Courses'. A 'Terug' button is visible. The main table lists participants with columns for 'Name', 'Approval', 'Overall rating', and 'Card'. Annotations with blue boxes and arrows point to specific features: 'Add a new participant' points to a yellow button; 'Rating available' points to a star rating; 'No rating done by the user' points to a row with no rating; 'Approve or reject' points to green and red circular buttons; and a larger box at the bottom explains that a recognition card can be downloaded from the 'Card' column.

Name	Approval	Overall rating	Card
Jan Cromwijk	Approved	★★★★★	
Jan Cromwijk	Approved		
Martijn Deurloo			

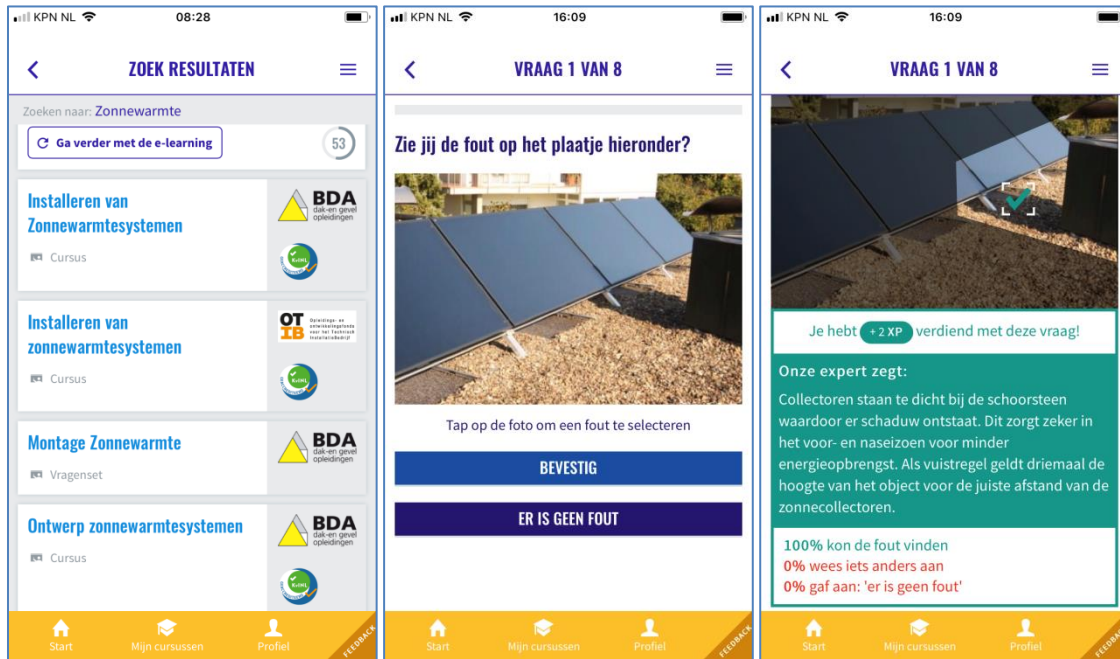
5 BUILDING ERRORS INTERACTION

5.1 OVERVIEW OF THE LEARNING FROM BUILDING ERRORS INTERACTION

In this chapter a complete graphical overview is given of the developed extension (the last available version). For each screen a small explanation is given about the screen itself.

5.1.1 Overview of the front-end

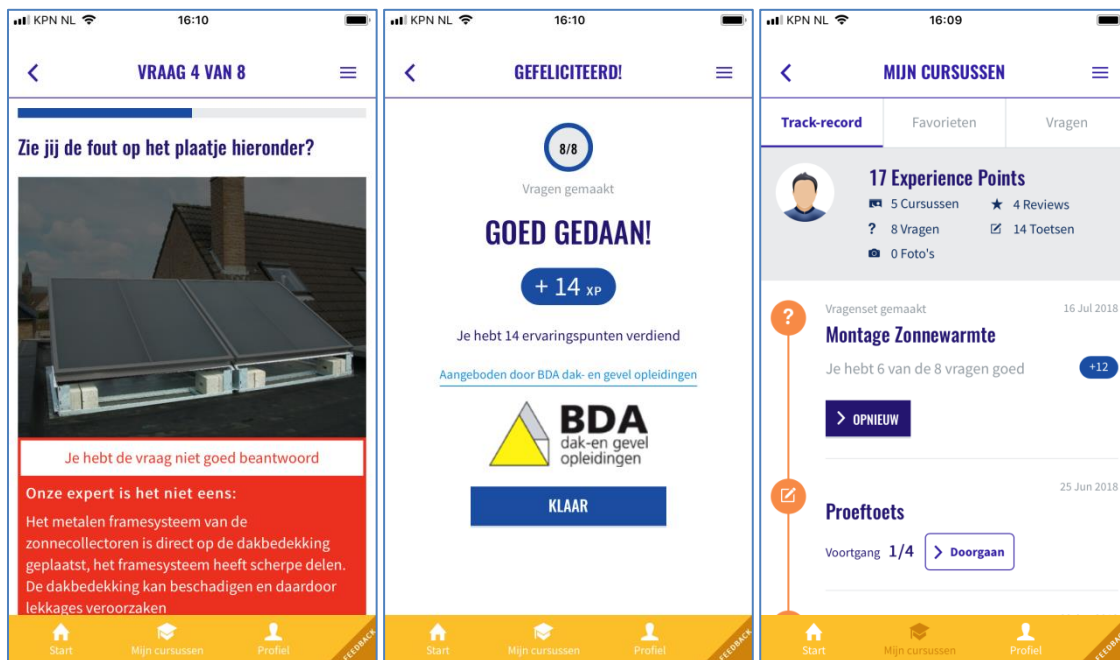
In this overview the user does not get a notification, but finds a 'Vragenset' by using search.



Questionset 'Montage Zonnewarmte'

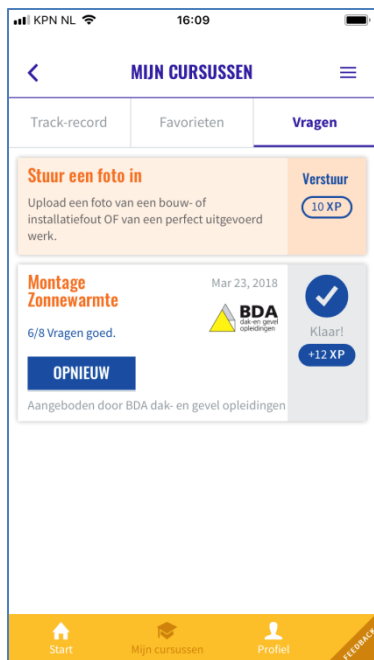
First Question

Good answer with expert feedback



Example of a wrong answer

Earning experience points and 'branding' The learners breadcrumb-path



The users collection of questionsets

5.2 OVERVIEW OF THE BACKEND FOR QUESTIONSETS

The QuestionSets are created by training providers, manufacturers and knowledge institutes. Before that is possible the user needs to get an account and a proper role-setting (see Manage users).

The list of 'Institutes' is derived from the BUILD UP Skills advisor-app course catalogue (see Regio Admin: Create a).

5.2.1 Create a new Questionset

Click on create to **+create** to create a new questionset

The screenshot shows the 'Question sets' overview page. On the left is a sidebar with navigation links: Manage, Regions, Courses, Questions, List sets, Create set, and Feedback. The main area displays a table of question sets. A blue arrow points from the '+ Create' button in the top right corner to the text 'Click on create to +create to create a new questionset'.

Status	Title	Created	Updated	Published	Provider	Participants
PUBLISHED	PV-montage	2018-03-19 11:33	2018-03-22 14:40	2018-03-19 14:21	[Logo]	7
PUBLISHED	Montage Zonnepanelen	2018-03-23 14:45	2018-03-24 07:00	2018-03-23 15:16	[Logo]	5
PUBLISHED	Veilig werken op hoogte	2018-08-13 16:11	2018-08-15 07:16	2018-08-15 07:16	[Logo]	4

In the screen that follows **enter a name** and **select the institute** the questionset is 'sponsored' by. And click on **Create** to add the new questionset.

The screenshot shows the 'Create question set' form. Two blue arrows point to the 'Title' input field and the 'Institute' dropdown menu. A third blue arrow points to the 'Create' button at the bottom right.

Title *

Institute

- (none)
- (none)
- aNewSpring (NL)
- AREPA (NL)
- BDA dak- en gevel opleidingen (NL)
- Betatest (NL)
- BNA Academie (NL)

Create

The new Questionset opens and is ready for editing
Click on **Create Question** to add a first question.

The screenshot shows the 'New Questionset' editing screen. A blue arrow points to the 'Create Question' button.

New Questionset ⚠️ Why can't I publish?

ⓘ This set does not contain any questions yet. Start by creating the first question.

Create Question

The screen to add questions opens.

Edit question in 'New Questionset'


Title *
(not visible to users)

Question
(optional)

Photo *

Expert feedback *

Point where you see a mistake.


☐ No mistake

Browse

Browse server

Give the question a name

If needed add a custom instruction. For example "tap the PV-panel". Default text works perfect for building errors

Upload or select a photo
Needs to be landscape

If selected the image shows a correct performance

Type short expert feedback

Click on Save to save the new question.

Example of a question

Edit question in 'New Questionset'

Title *
(not visible to users)

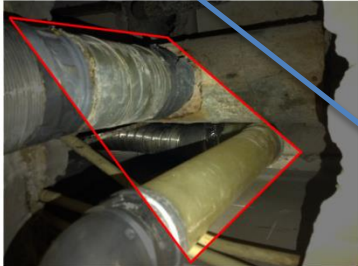
Question
(optional)

Photo *

Expert feedback *

New Question

Point where you see a mistake.


☐ No mistake

Browse

Browse server

Reset hotspot

Please mark a hotspot in the image. You can do this by clicking with your mouse.

Three different materials mixed. This leads to corrosion and leakages

Save

The saved question appears in the questionset

New Questionset

Why can't I publish?


Edit

Status: DRAFT

Participants: 0

Provider: Betatest

BETA TESTING

#	Title	
1	New Question	

Create Question

5.2.2 Publish QuestionSet

When at least five questions are added a QuestionSet can be published to the BUILD UP Skills advisor-app catalogue. This by pressing the 'Publish'-button in the right corner of the screen.

Publish {0} to BUS-beheer

Are you sure you want to publish this question set to BUS-beheer? This action cannot be undone.

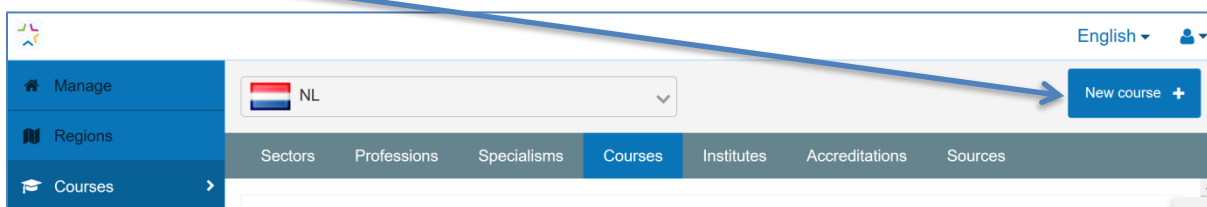
BackPublish

After publication the QuestionSet becomes visible in the BUILD UP Skills advisor-app catalogue

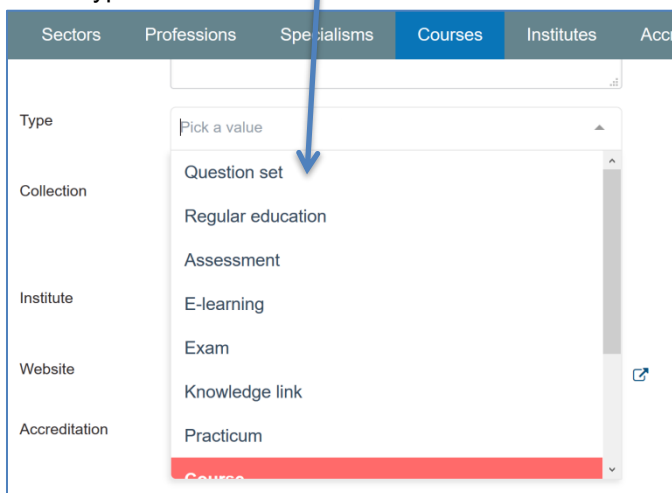
5.2.3 Adding a Questionset in BUS-app catalogue

In the BUILD UP Skills advisor-app catalogue the right metadata has to be added for linking with specialisms and professions. After this the QuestionSet becomes visible in the BUILD UP Skills advisor-app & users with notification on for the subject(s) a QuestionSet is linked to are notified.

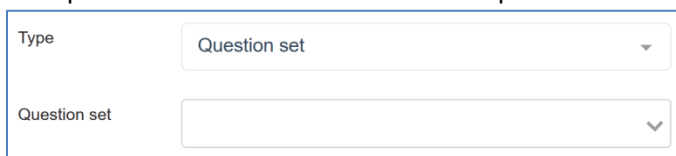
Click 'New Course'



Select type 'Question set'



A dropdown with available Questionsets opens. Select the newly published question set



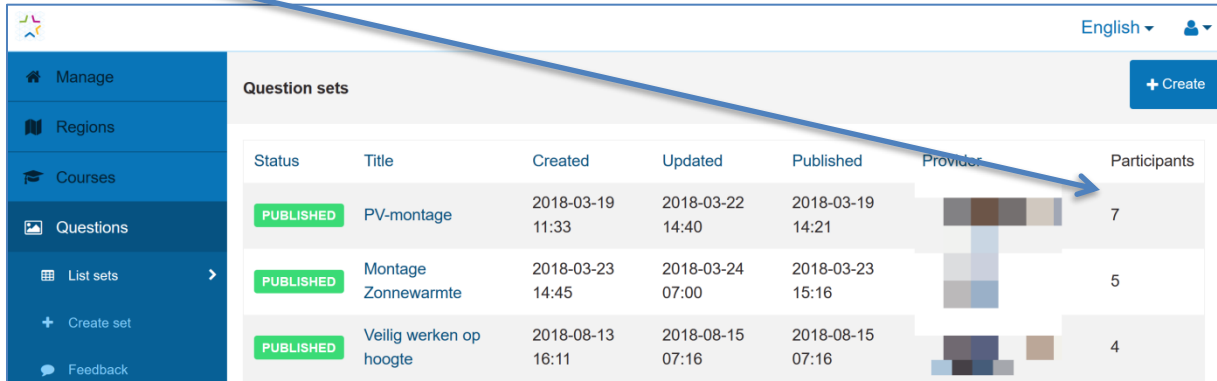
Each Question Set can be added once!

Fill in the rest of the required fields (see: Regio Admin and Course provider: Create a 'course' or 'exam') and press 'Publish'

5.2.4 Evaluation of the use of Question Sets

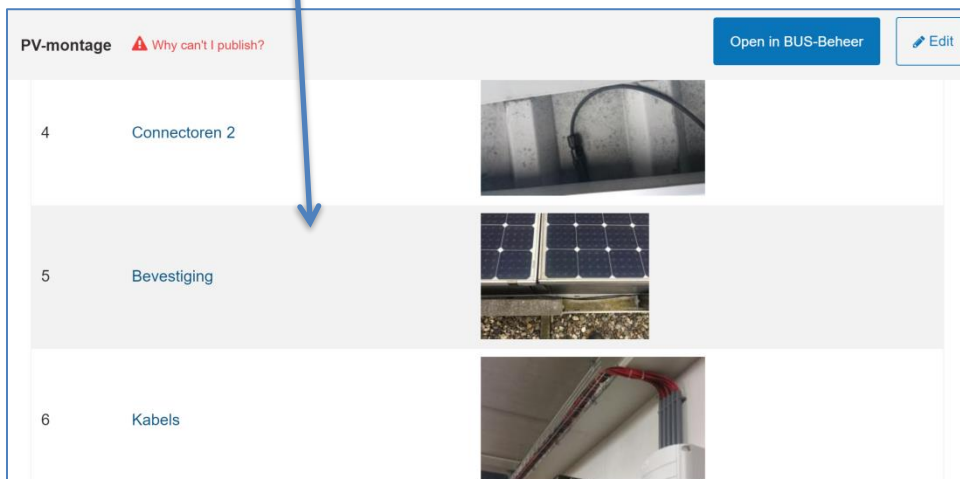
In the back-end for each question in the question set you can view anonymized usage data. It also provides a function to evaluate written feedback.

To view the usage data open the Questions tab. The number of unique users is shown behind the questionset.






Status	Title	Created	Updated	Published	Provider	Participants
PUBLISHED	PV-montage	2018-03-19 11:33	2018-03-22 14:40	2018-03-19 14:21	[Avatar]	7
PUBLISHED	Montage Zonnewarmte	2018-03-23 14:45	2018-03-24 07:00	2018-03-23 15:16	[Avatar]	5
PUBLISHED	Veilig werken op hoogte	2018-08-13 16:11	2018-08-15 07:16	2018-08-15 07:16	[Avatar]	4

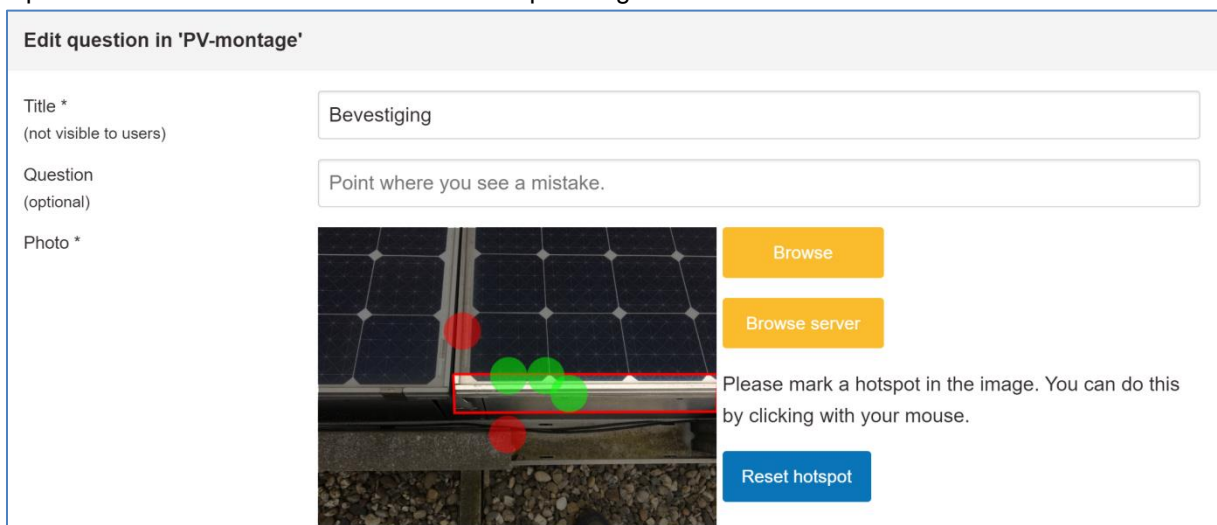
Click on the Question Set you want to analyse. After opening the Question Set click on a question you want to view.



PV-montage ⚠️ Why can't I publish? [Open in BUS-Beheer](#) [Edit](#)

4	Connectoren 2	
5	Bevestiging	
6	Kabels	

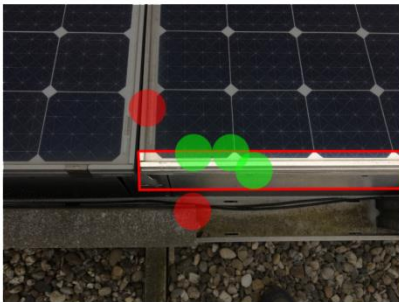
The question opens and shows all different user clicks. This helps to find out if there are more errors in a picture and to assess if the size of the hotspot is right.



Edit question in 'PV-montage'

Title *
(not visible to users)

Question
(optional)

Photo *
 [Browse](#) [Browse server](#) [Reset hotspot](#)

Please mark a hotspot in the image. You can do this by clicking with your mouse.

Users of the BUILD UP Skills advisor-app have the possibility to leave feedback if they do not agree with a question. This feedback can be accessed by clicking on **Feedback**.

Status	Set	Question	Created	Username
OPEN	Question test	Borging ladder	2019-12-12 14:48	
REJECTED	Montage Zonnepanelen	Bouwkundige montage zonnecollector	2019-10-09 14:51	
REJECTED	Balansventilatie	Slagdemper bocht	2019-03-18 13:09	
REJECTED	PV-montage	Omvormer	2019-03-15 22:56	

The feedback screens opens. Click on the **feedback item** you want to evaluate.

The feedback screen opens. Click on **Reject** to reject OR on **Accept** to accept.

Feedback

Title * Borging ladder

Question Wijs de borging voor de ladder aan

Submitted by * Jan Cromwijk

Feedback * This is absolutely not right

Photo ☐ Show answers from other users

Back Reject Accept

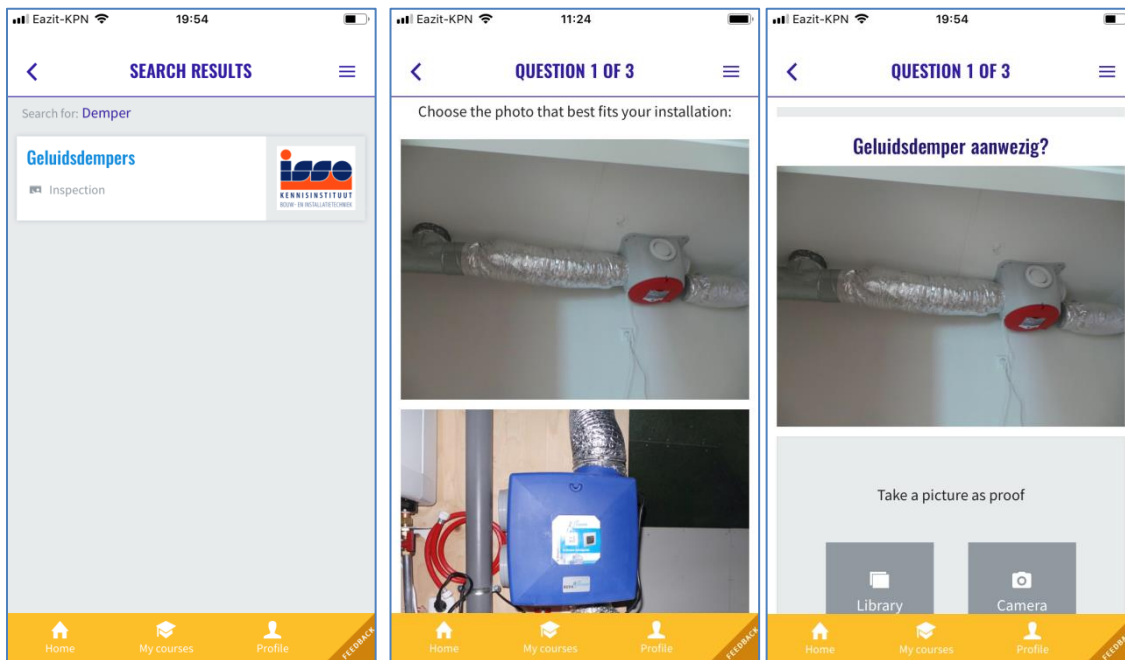
6 BUILDING INSPECTIONS INTERACTION

6.1 OVERVIEW OF THE BUILDING INSPECTIONS INTERACTION

In this chapter a complete graphical overview is given of the building inspections interaction. For each screen a small explanation is given about the screen itself.

6.1.1 Overview of the front-end

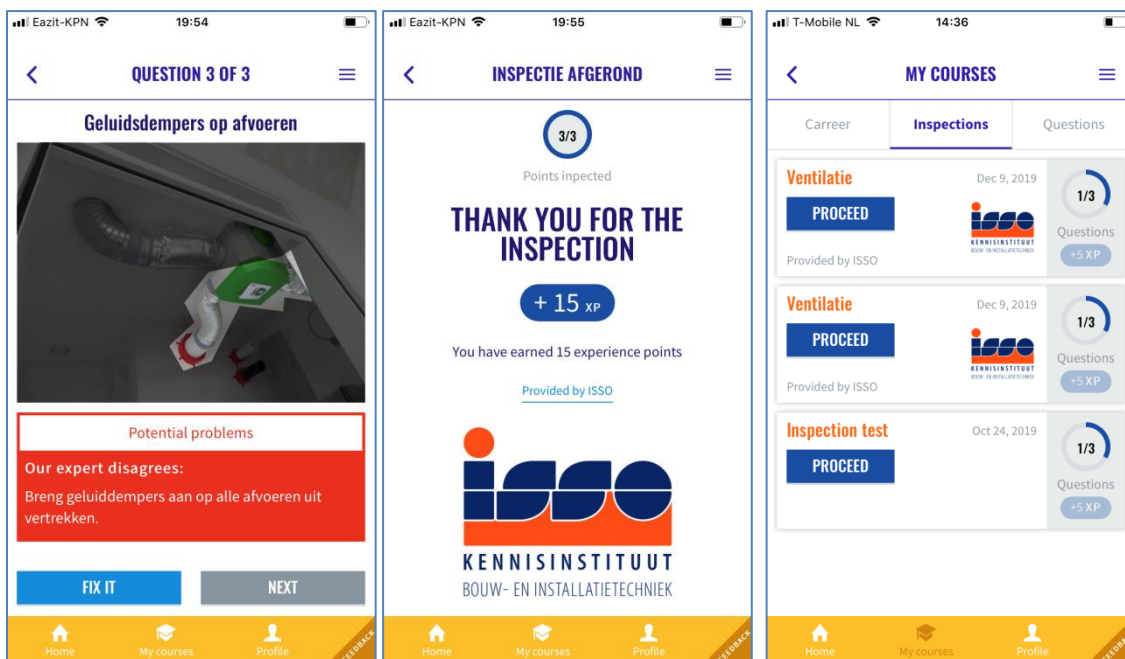
In this overview the user does not get a notification, but finds an inspection by using search.



Inspection

Select most fitting image

Submit proof



Get feedback & fix

Provider & XP

On-going inspections

6.2 OVERVIEW OF THE BACKEND FOR INSPECTIONS

Inspections are created by training providers, manufacturers and knowledge institutes. Before that is possible the user needs to get an account and a proper role-setting (see Manage users).

The list of providers is derived from the BUILD UP Skills advisor-app course catalogue (see Regio Admin: Create a).

6.2.1 Create a new Inspection

Click on create to **+New inspection** to create a new Inspection

Name	Steps	Executed	Updated	Published	User	Provider
Ventilatie	3	7	2019-10-09 11:58	2019-10-09 11:58	admin	ISSO
Zonnewarmte	2	1	2019-10-29 09:31	2019-10-29 09:31	admin	OTIB
Inspection test	3	6	2019-11-04 11:59	2019-10-04 14:20	admin	
Test inspecties	1	0	2019-11-15 13:45		admin	ISSO
Installing Solar panels	2	2	2019-12-05 20:04	2019-10-04 14:21	admin	Test

In the screen that follows **enter a name** and **select the institute** the Inspection is 'sponsored' by. And click on **Create** to add the new Inspection.

Title

Institute (none)

Create


The new Inspection opens and is ready for editing. Fill in the details and click **Save**.

Add Step

Step name *

Check measure tube

Right Photo *




Browse

Feedback *

Right feedback

The measure tube is closed

Wrong Photo *



Browse

Feedback *

Wrong feedback

The measure tube is still open. This means CO can leak out of it. Close the tube after measurement.

Save

Give the step a name

Upload a photo depicting the wanted situation. The photo needs to be landscape

Describe the good aspect you want to highlight

Upload a photo depicting the opposite unwanted situation. The photo needs to be landscape

Draw a hotspot highlighting the unwanted aspect

Type short expert feedback why the aspect is unwanted & how it can be fixed.

Please mark a hotspot in the image. You can do this by clicking with your mouse.

Reset hotspot


After saving the overview of the inspection shows the new created inspection step. Click **Add Step** to add another step to inspect. Click **Ready for publication** to publish.



Inspections

Edit

CO-prevention

Status DRAFT



#	Title	Right	Wrong
1	Check measure tube		

Add Step

Delete

Ready for publication

Save

6.2.2 Publish Inspection

When at least one inspection step is added an inspection can be published to the BUILD UP Skills advisor-app catalogue. This by pressing the 'Publish'-button in the right corner of the screen.

Publish CO-prevention to BUS-beheer

Are you sure you want to publish this question set to BUS-beheer? This action cannot be undone.

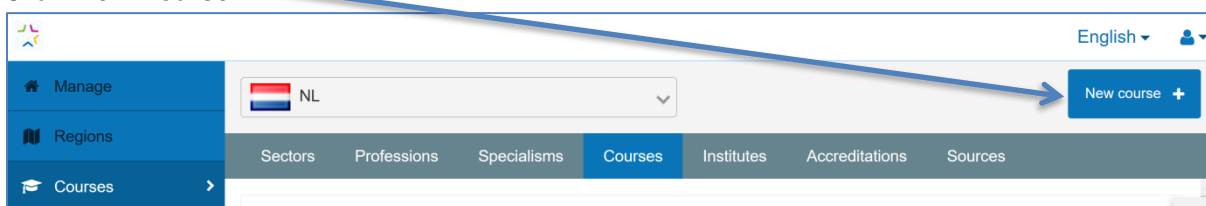
BackPublish

After publication the Inspection becomes visible in the BUILD UP Skills advisor-app catalogue

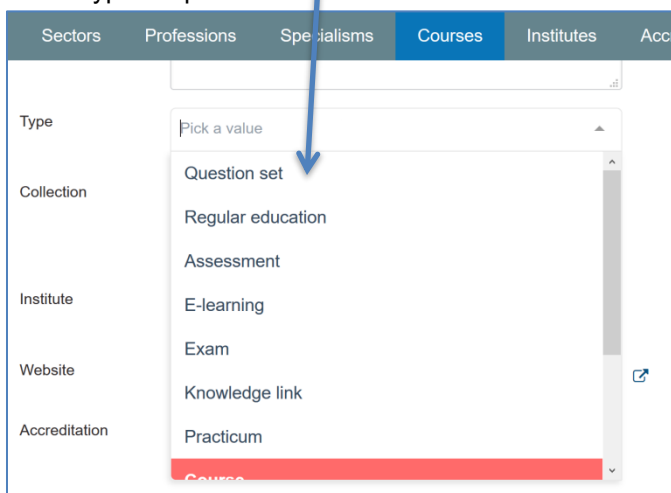
6.2.3 Adding an inspection in the BUS-app catalogue

In the BUILD UP Skills advisor-app catalogue the right metadata has to be added for linking with specialisms and professions. After this the Inspection becomes visible in the BUILD UP Skills advisor-app & users with notification on for the subject(s) an Inspection is linked to are notified.

Click 'New Course'



Select type 'Inspection'



A dropdown with available Inspections opens. Select the newly published Inspection

Type

Inspection

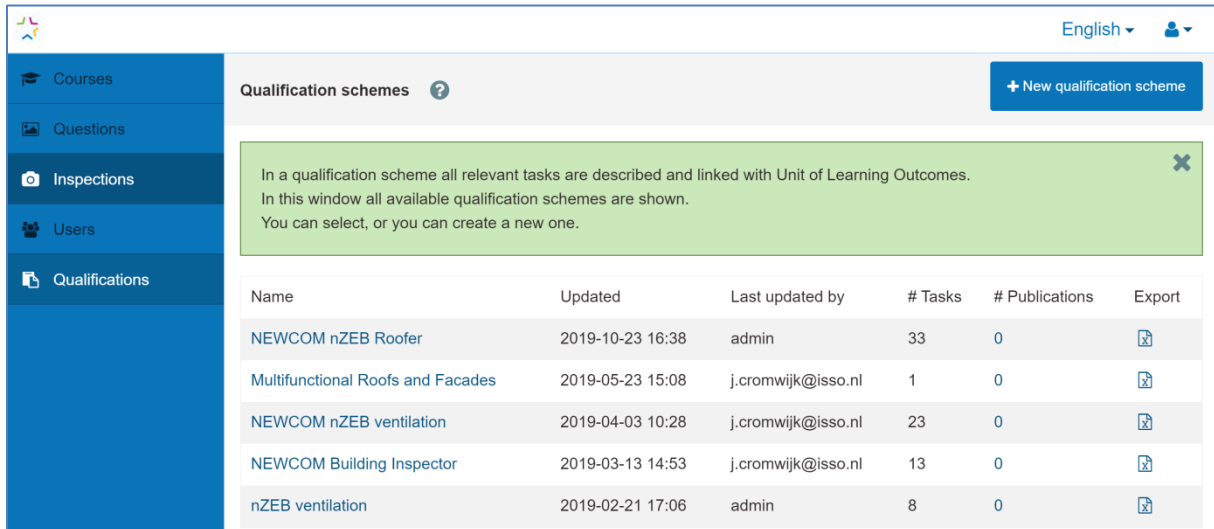
Inspection

Fill in the rest of the required fields (see: Regio Admin and Course provider: Create a 'course' or 'exam') and press 'Publish'

7 THE UNIT OF LEARNING OUTCOMES DATABASE

7.1 INTRODUCTION TO THE UNIT OF LEARNING OUTCOMES DATABASE

The Unit of Learning Outcomes (ULO) database was developed in cooperation with two Horizon 2020 projects: BIMplement and NEWCOM. Starting point was experience gathered by ISSO and partners in former BUILD UP Skills and Construction Skills projects.



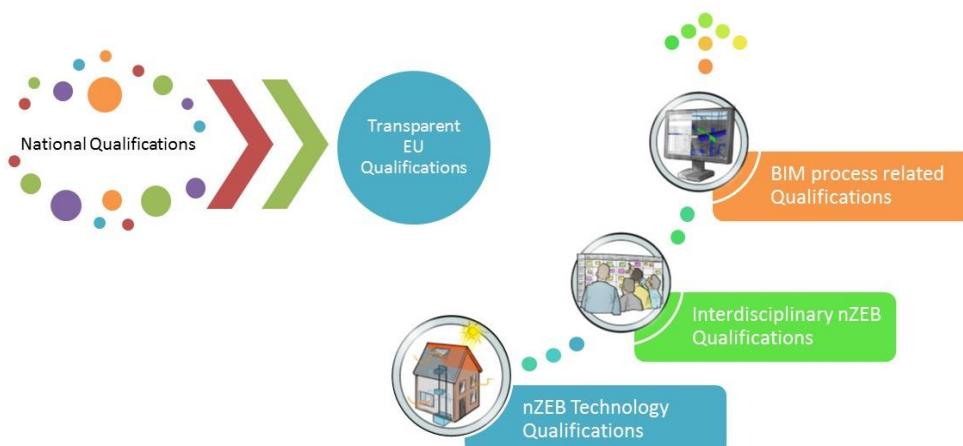
The screenshot shows the 'Qualification schemes' page in the ULO database. A sidebar on the left contains links to Courses, Questions, Inspections, Users, and Qualifications. The main area has a header with 'Qualification schemes' and a '+ New qualification scheme' button. Below this is a green informational box. A table lists several qualification schemes with columns for Name, Updated, Last updated by, # Tasks, # Publications, and Export.

Name	Updated	Last updated by	# Tasks	# Publications	Export
NEWCOM nZEB Roofer	2019-10-23 16:38	admin	33	0	Download
Multifunctional Roofs and Facades	2019-05-23 15:08	j.cromwijk@isso.nl	1	0	Download
NEWCOM nZEB ventilation	2019-04-03 10:28	j.cromwijk@isso.nl	23	0	Download
NEWCOM Building Inspector	2019-03-13 14:53	j.cromwijk@isso.nl	13	0	Download
nZEB ventilation	2019-02-21 17:06	admin	8	0	Download

01 ULO database

The BIMplement Qualification Framework consists of a flexible methodology that allows definition of professional activities, related skills, required competences in order to achieve a desired quality in the field of nZEB. It is composed out of tasks and related subtasks that have to be performed on a certain time in a process and by (a) certain person(s) with a certain skillset.

The BIMplement qualification framework is a multi-layered qualification matrix. It consists of a layer with basic tasks and one or more layers of context specific layers. For example nZEB related tasks, BIM-related tasks. If needed more layers can be added, for example for Indoor air quality (IAQ) tasks or Circular Building tasks. The qualification framework is also suitable for non-nZEB related topics. For example prevention of carbon monoxide when installing and maintaining heating systems.



02 Example of several possible layers of classifications

A task based qualification developed following the BIMplement methodology in general addresses all relevant building/process phases and all professions/actors involved.

For practical use subsets from the qualification can be published in a qualification scheme addressing one or more project phases and one or more professions. For example a subset of tasks and subtasks for a craftsman that installs the converter of a Solar-PV system.

Invoeugen screenshot nZEB ventilation for...

The corresponding BUILD UP Skills advisor-app database identifies for each technology which professions and specialisms are involved in each phase, the needed skills, competences and descriptors, i.e. the related qualifications and which trainings, courses, learnings are available.

7.2 HOW TO DEVELOP A TASK BASED QUALIFICATION

In this chapter a compact overview of steps is given that are needed to develop high quality task based qualifications. When creating a new qualification it is recommended to design it offline using a tool like Excel, with special attention for correct use of verbs. After checking content and quality the new qualification can be entered into and normalized with support of the ULO-database. When entering the Qualification into the database the database shows you comparable items. This to assist in getting a as good as possible Qualification that is also fit for mutual recognition.



The ULO-database is a normalized database.

This means that each item in the database is unique, there are no doubles. When entering the tasks, subtasks, knowledge, skills and competence information, the database shows already existing content that matches with the new content. This to make effective re-use of existing qualification content & to make easy recognition of already earned competence possible.

An Excel template for creating draft versions is available (Empty Qualification Format.xlsx).

7.3 STEP 1: MAKE A LIST OF TASKS TO BE PERFORMED & BY WHOM.



Step 1	
An overview of tasks	Occupation(s) involved
Task 1...	Occupation name(s)
Task 2...	...
Task 3...	...
<ol style="list-style-type: none"> 1. Start each task with a 'verb' in the tasks to make the task active. e.g. <i>Perform a feasibility study</i> 2. Use different wording if tasks are performed in different phases. e.g.: <i>Check attention points on comfort in inner spaces</i> in planning phase <i>Verify attention points on comfort in inner spaces</i> in delivery phase 	

For more information about development of sound ULO's and task definitions you can access the following sources:

1. St Edward's University, Centre for Teaching Excellence (2004). Task-oriented question construction wheel, based on Bloom's taxonomy. Available at <http://www.stedwards.edu/cte/files/BloomPolygon.pdf>
2. University of Arkansas <https://tips.uark.edu/blooms-taxonomy-verb-chart/>
3. University of Arkansas <https://tips.uark.edu/using-blooms-taxonomy/>

7.4 STEP 2: DEFINE THE RELEVANT 'SUB-TASKS TO BE PERFORMED' & BY WHOM

Step 2

An overview of subtasks	Occupation(s) involved
Task 1...	Occupation name(s)
Sub Task 1.1...	...
Sub Task 1.2...	...
Task 2...	...
 Use a 'verb' in the tasks to make them active	
 If the <u>name of a task or subtask is the same for multiple actors</u> , but the competence, skills and knowledge differ, then create separate tasks / subtasks with unique task names for those actors!	

The Excel template for tasks explained


Optional	Regions	Tasks	Sub-tasks	ULO Nr.

- Optional: mark with an X if a task or subtask is optional
- Regions: enter regioncode ([use two letter countrycodes](#)) if the task or subtask is region specific
- Task: enter the task in row 2
- Subtasks: enter the subtasks in the column Sub-tasks
- ULO Nr: make numerical references to relevant ULO's worked out in the next steps (each ULO gets in the database a unique ID)

In NEWCOM and BIMplement we do not describe tasks that are already part of occupations

We assume that it is not needed to describe tasks that are part of occupations, those are in most cases already covered in existing national qualifications for regular education. The qualifications we developed are for upskilling already skilled workers.

7.5 STEP 3: PROVIDE DIDACTICAL DETAILS FOR THE TASKS AND SUBTASKS

Step 4		
Competence involved (responsibility and autonomy)	Skills involved	Knowledge involved
(items separated with ';')	(items separated with ';')	(items separated with ';')
...
 The ability of the learner to apply knowledge and skills autonomously and with responsibility Competences need to be described in active form using verbs from BLOOM's taxonomy Most times you start with the verb	Skills required to successfully carry out the sub-task Skills need to be described in active form using verbs from BLOOM's taxonomy Most times you start with the verb	Knowledge required to successfully carry out the sub-task. Please do not add verbs to them. Lists of keywords are enough!

The Excel template for ULO's explained

ULO Nr.	Competence	Skills	Knowledge

ULO Nr: a ID-number for the ULO

Competence: the formulated competence

ALWAYS ONE

Skills: the formulated skills behind the competence

ONE or MORE

Knowledge: relevant knowledge behind competence and skills

ONE or MORE items

Assessment	Professions	Specialisms

Assessmenttype: Optional (Theoretical test, Practical test, Silhouetted by colleague)

Profession: Occupation(s) involved

Specialisms: Specialisms involved (from the BUILD UP Skills database)

7.6 ENTER THE QUALIFICATION INTO THE DATABASE



Accounts to the QF-database can be requested by Jan Cromwijk at ISSO (j.cromwijk@isso.nl)

Screen 1: Overview and creation of new qualification schemes

Qualification schemes ?

+ New qualification scheme

In a qualification scheme all relevant tasks are described and linked with Unit of Learning Outcomes.
In this window all available qualification schemes are shown.
You can select, or you can create a new one.

Short instruction

Name	Updated	Last updated by	# Tasks	# Publications	Export
NEWCOM nZEB Roofer	2019-10-23 16:38	admin	33	0	
Multifunctional Roofs and Facades	2019-05-23 15:08	j.cromwijk@isso.nl	1	0	
NEWCOM nZEB ventilation	2019-04-03 10:28	j.cromwijk@isso.nl	23	0	
NEWCOM Building Inspector	2019-03-13 14:53	j.cromwijk@isso.nl	13	0	
nZEB ventilation	2019-02-21 17:06	admin	8	0	

In this screen a qualification scheme can be selected or created.

Published qualifications can be opened & compared

Also existing qualification schemes can be exported

Screen 1a – Adding a new qualification scheme

Qualification scheme ?

Step 1: Create a qualification scheme and involved tasks
Give the qualification scheme a name and a short description.
Create or select a number of tasks that are addressed in the qualification scheme.
A task ideally starts with an active verb (the verb used 'to perform the task' e.g. 'measure the temperature of the roof')
To facilitate mutual recognition each unique task is only added once to the database.
If a task is optional you can indicate that by checking the optional checkbox.
If a task is region specific (for example to comply to region specific regulations) you can select the regions in which the task is relevant.
After adding the tasks, in step 2 the subtasks are added or selected.

en nl es de sk hu fr it

Titel

Demonstration Qualification

Omschrijving

A Qualification Scheme for demonstration purposes

Verwijderen

Schema opslaan

The qualification scheme is a collection of tasks that are worked out as Unit of Learning Outcomes (ULO's). For the ULO's the latest Cedefop definitions are applied.

1. <http://www.cedefop.europa.eu/nl/events-and-projects/projects/learning-outcomes>
2. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2017.189.01.0015.01.ENG&toc=OJ:C:2017:189:FULL

Screen 1b – Adding tasks to the qualification

Qualification scheme ?

en nl es de sk hu

Title: Demonstration Qualification

Description: A Qualification Scheme for demonstration purposes

Tasks:

Type here to search for a task or create a new one

Delete Save scheme

Language selector, all qualifications are by default created in English and later on translated

Search an existing task or create a new one

After entering a title and adding a description the Qualification scheme needs to be saved.

Screen 1c – Functions related to tasks and subtasks

Qualification scheme ?

Tasks: ☐ ☐

Demonstrate creation of a task

Type to choose specific regions for this task

Type here to search for a task or create a new one

Delete Save scheme

Unlink the task from the qualification

Edit the Task

Move tasks up and down

Make a task region specific

Make a task optional

1. **A task has to be added in English first**, it can be translated to other languages
2. A task is by default obligatory
3. A task can be made optional
4. A task can be optional for a specific region, for example for regional specific solutions
5. Tasks are linked to the Qualification scheme, in this way they can be re-used in other schemes. Removing the link is possible

Screen 2 – Selecting and creating subtasks

When a task is created the next window for creating subtasks opens automatically.

Type in the search box for linking existing subtasks or create new subtasks.

After selecting an existing subtask it is linked directly.

When entering a new subtask the next screen for adding subtask details is opened automatically.

By clicking **Save** the task is saved and it the overview of tasks will be shown.

The screenshot shows the 'New task' interface. At the top, there's a header 'New task' with a help icon. Below it, a language selection bar shows 'en' (selected), 'nl', 'es', 'de', 'sk', 'hu', 'fr', and 'lt'. The main form has two input fields: 'Title' with the text 'Demonstrate creation of a task' and 'Subtasks' with a search icon. Below the 'Subtasks' field is a hint: 'Type here to search for a subtask or create a new one.' Below the main form, there are two green-bordered boxes. The first box, labeled 'Find existing subtasks', shows a 'Subtasks' section with a search icon, a text input 'Demonstration of a subtask', and a list of results: 'Test' and 'Test subtask'. The second box, labeled 'A linked existing subtask', shows a 'Subtasks' section with a search icon, a text input 'Demonstration of a subtask', and a list of results: 'Test subtask'. At the bottom of the interface, there are two buttons: 'Cancel' and 'Save task'.

Screen3 – Selecting and creation of ULO's

When a new subtask is entered the screen for linking or creation of a new ULO in the subtask is shown.

New subtask

en
nl
es
de
sk
hu
fr
it

Title

Demonstration of a subtask

ULO

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

Screen 3a – Linking and creating Unit of Learning Outcomes

When a new ULO is created by entering a competence the Screen for editing ULO-details is opened.

New subtask

nl
en
es

Title

Assess the feasibility of an energy concept

ULO

Evaluate the project-concept regarding mobility aspect

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

The subtask

From linked ULO's the competence is shown here as information

Search for an existing ULO or create a new one.

To edit the details.
In the details the ULO' content is described

Unlink

Save

Screen 3b – Editing an Unit of Learning Outcome

ULO
?

en
nl
es
de
sk
hu
fr
lt

Competence
to be able to
Creating a task
1. Competence addressed

Assessment
☐ Theoretical test
☒ Practical test
☒ Silhouetted by colleague
2. Optional: advice on Assessment

Skills
to understand
Type here to search for Skills or create a new one.
3. Definition and linking of Skills

Knowledge
to know
Type here to search for Knowledge or create a new one.
4. Knowledge items

Professions
5. Target occupation(s) of the ULO

Specialisms and
technologies
6. Technologies the ULO is related to

Cancel
Save ULO

Screen 5 – Translation example

All content is by default created in English, **this to ensure proper normalization and mutual recognition.**

After creation the content of a Qualification scheme can be created in all languages that are supported in the ULO-database.

ULO ?

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

Competence to be able to

Assessment ☐ Theoretical test ☒ Practical test ☒ Silhouetted by colleague

Skills to understand

Type here to search for Skills or create a new one.

Knowledge to know

Type here to search for Knowledge or create a new one.

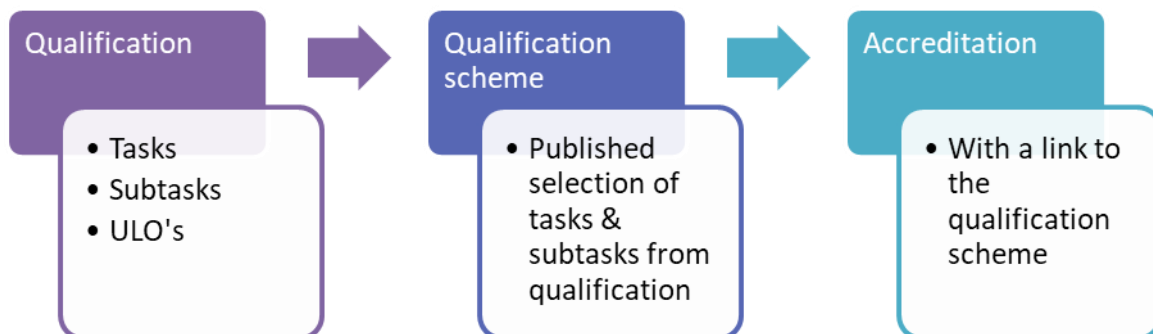
ULO opslaan

After selecting a language the content can be translated.

English text is default and shown below.

7.7 PUBLISH A QUALIFICATION

A qualification can be published as a Qualification scheme. Published Qualification schemes can be linked to accreditations. This in order to make clear the content of an accreditation.



An accreditation can be used for personal recognition.

In order to publish a Qualification Scheme press the **Publish button**

Qualification scheme ?

Step 1: Create a qualification scheme and involved tasks

Give the qualification scheme a name and a short description.

Create or select a number of tasks that are addressed in the qualification scheme.

A task ideally starts with an active verb (the verb used 'to perform' the task' e.g. 'measure the temperature of the roof')

To facilitate mutual recognition each unique task is only added once to the database.

If a task is optional you can indicate that by checking the optional checkbox.

If a task is region specific (for example to comply to region specific regulations) you can select the regions in which the task is relevant.

After adding the tasks, in step 2 the subtasks are added or selected.

en nl es de sk hu fr it

Title: Demonstration Qualification

Description: A Qualification Scheme for demonstration purposes

Delete Publish

Screen 1: Publish a Qualification Scheme

The screen to publish a Qualification Scheme opens. In this screen you can filter on country specific elements on profession specific elements and manually by selecting and/or deselecting tasks and subtasks.

Publish qualification scheme ?

Publish a qualification scheme

By publishing a qualification scheme, a snapshot is made of the current state of the scheme. Your original qualification scheme will continue to be updated as others change tasks, subtasks and ULOs but the published snapshot will always remain the same.

Country: Choose country x v Profession: Choose profession x v

en nl es de sk hu fr it

Name: Demonstration Qualification

Filter on country specific elements

Filter on profession specific elements

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

- ☒ Task 1 without filter
- ☒ Subtask for DE for Commissioner
- ☒ Test ULO
- ☒ Subtask without country filter
- ☒ Creating a task

Select/deselect a Task

Select/deselect a subtask

Screen 2: Select the tasks and subtasks you want to add to the qualification scheme

Publish qualification scheme ?

Country: Choose country x v Profession: Commissioner x v

en nl es de sk hu fr it

Name: Demonstration Qualification

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

- ☒ Task 1 without filter
 - ☒ Subtask for DE for Commissioner
 - ☒ Test ULO
 - ☐ Subtask without country filter
 - ☐ Creating a task
- ☒ Task 2 for DE
 - ☒ Test fiets for Commissioner
 - ☒ Nog een Fiets

Screen 3: Example of a Qualification scheme with only commissioner tasks selected

7.8 COMPARE PUBLISHED QUALIFICATION SCHEMES

Published Qualification Schemes can be exported and compared, this in order to get insight in the differences between Qualification Schemes.

In order to compare or export published Qualification Schemes, click the **link** under the number of publications.



Qualification schemes ?

In a qualification scheme all relevant tasks are described and linked with Unit of Learning Outcomes.
In this window all available qualification schemes are shown.
You can select, or you can create a new one.

Name	Updated	Last updated by	# Tasks	# Publications	Export
Demonstration Qualification	2020-02-20 18:07	admin	3	2	x
Qualification test	2020-02-18 15:44	admin	5	10	x
NEWCOM Building Inspector all	2020-02-18 15:23	admin	3	8	x
Test QS	2020-02-13 12:50	admin	4	0	x
Airtightness	2019-11-15 13:50	admin	4	0	x
Test	2019-11-15 13:43	admin	4	0	x
Flatroofer	2019-10-29 09:55	admin	4	0	x
New QF Scheme	2019-10-28 17:05	admin	4	0	x

Screen 1: Compare & export published Qualification Schemes

The screen to compare published Qualification Schemes opens.
Click on the button **Compare** to compare published Qualification Schemes


Published schemes			
Name	Created	Last updated by	Export
Test QF publication	2020-02-24 12:11	admin	
Qualification Test Publish2	2020-02-24 12:11	admin	

Click on **export** to view a published Qualification Scheme in Excel

Select 2 schemes

Click on the button **Compare**

Differences are **highlighted**



Compare qualifications

Step 1: Choose qualification

Compare versions in qualification **Demonstration Qualification**


Step 2: Choose version(s)

☐ Test QF publication

☐ Qualification Test Publish2

Compare

Step 3: Compare version(s)



Compare qualifications

Step 1: Choose qualification

Compare versions in qualification **Demonstration Qualification**


Step 2: Choose version(s)

☒ Test QF publication

☒ Qualification Test Publish2

Compare

Step 3: Compare version(s)



Compare qualifications

Step 3: Compare version(s)

Test QF publication

Qualification Test Publish2

Task 1 without filter ☒ ☐

Task 2 for DE ☐ ☐

Test fietsen for Architect ☐ ☒

Task 3 for NL ☐ ☐

Subtask 1 for Calculator ☐ ☒

Subtask 2 ☐ ☒

Subtask 3 ☐ ☒

Screen 2: Qualification compare functionality

7.9 LINK PUBLISHED QUALIFICATION SCHEME TO AN ACCREDITATION

Published Qualification Schemes can be linked to accreditations. This to make clear what is accredited. In each accreditation **one Qualification Scheme** can be linked.

To do this open the accreditation with the accreditations tab. In the selection-box after 'Qualification scheme' the right Published Qualification Scheme can be selected.

Sectors Professions Specialisms Courses Institutes **Accreditations** Sources

Name

Picture

Website

Contact

E-mail

Qualification scheme

Screen 1: Link a published Qualification Scheme to an accreditation

A selected Qualification Scheme can be downloaded after selection by pressing the 'Download' button. It will be downloaded as an Excel file.

8 OTHER RELEVANT MAINTENANCE FUNCTIONS

In this chapter an overview of other relevant maintenance functions

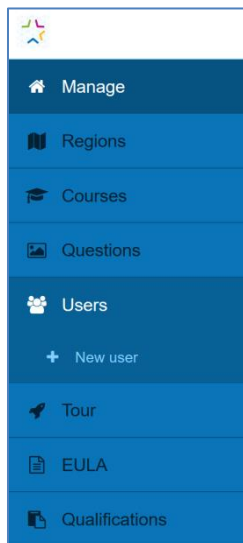
- Delivering a translation of used language strings
- Creating users
- Creating an EULA (end user license agreement)
- Creating a tour
- Translating content for other languages, working in your region

8.1 REGIO ADMIN: DELIVERING A TRANSLATION OF USED LANGUAGE STRINGS

Will be added later

8.2 REGIO ADMIN & COURSE PROVIDERS: CREATING USERS

Creation of new users can be created from the side bar and from the course institute screen



Sidebar

A form titled 'Institutes' with a tabbed interface. The 'Institutes' tab is active. Fields include: Name (Chevron training), Logo (chevrontraining logo), a file upload button (Bladeren...), URL (https://chevrontraining.ie), Contact (empty), E-mail (empty), Courses (show 1 courses), and User accounts (manage 0 user accounts).

From the course institute

Users				+ Add user
Email	Name	Roles	Institute	

Click on '+ Add user'

A form titled 'Add user'. It has a section for 'Authorities' with checkboxes for Admin, Questions (edit), Questions (publish), Courses, Regions, ULOs (edit), and ULOs (view). Below this are input fields for Name, Username (marked with an asterisk), and Email.

Based on your role you can select 'authorizations'

The newly created user will receive an email invitation for the new profile.

A password reset can be done here <https://testapi.buildupskillsadvisor.eu/registration/forgotPassword>

8.3 REGIO ADMIN: CREATING AN EULA (END USER LICENSE AGREEMENT)

Will be added later

8.4 REGIO ADMIN: CREATING A TOUR

Will be added later

9 STEPS TO IMPLEMENT PERSONAL RECOGNITION

In order to implement personal recognition several scenarios are possible. In this guide a scenario for minimal implementation is described. Around May 2020 a scenario with a more elaborated implementation will be added, in this elaboration more functionality will be highlighted. And at the end of 2020 a scenario with maximal details and use of functionality.

9.1 SCENARIO FOR MINIMAL IMPLEMENTATION

In this scenario the back-end of the BUILD UP Skills platform is used to create a region with the minimum of settings needed for issuing personal recognitions. First the roles are explained, then an overview of steps is given and at the end a visual example following the Steps to be performed is given.

ROLES

In this scenario the following roles are distinguished:

1. The BUS admin: Jan Cromwijk as BUS main administrator (j.cromwijk@isso.nl)
2. The Region admin: One or more persons in each region with rights to setup the regional BUILD UP Skills environment
3. The Course/Exam institute:
One or more persons managing the setup of a course institute / exam provider

STEPS to be performed with links to the relevant parts in this Guide

In order to do so the following steps have to be performed:

1. Ask the BUS admin to create a new Region
2. Ask the BUS admin to add a user to maintain the new Region
3. Regio admin: create a specialism you want to recognize
[\[4.24.2 Regio Admin: Create a specialism\]](#)
4. Regio admin: create a profession you want to recognize
[\[4.3 Regio Admin: Create a profession\]](#)
5. Regio admin: create a sector the profession is linked to
[\[4.4 Regio Admin: Create a Sector\]](#)
6. Regio admin: create and/or publish a Qualification scheme
[\[7.7 Publish a qualification\]](#)
7. Regio admin: create an accreditation and select or create a skills-card layout
[\[4.6 Regio Admin: Create an accreditation\]](#)
8. Regio admin: couple the accreditation with a published Qualification scheme
[\[7.9 Link published Qualification Scheme to an accreditation\]](#)
9. Regio admin: create a training institute or recognition/exam provider
[\[4.7 Regio Admin: Create an institute\]](#)
10. Regio admin: create a maintenance account for the created institute
[\[8.2 Regio admin & course providers: Creating users\]](#)
11. Regio admin / account maintaining an institute: create exam & publish it
[\[4.8 Regio Admin and Course provider: Create a 'course' or 'exam'\]](#)
12. OPTIONAL: If a course/exam is created by a course provider the Regio Admin has to agree with publication of the new exam
[\[4.9 Region admin Accept a created or modified course\]](#)
13. Course provider: add one or more participants to the Exam
[\[4.11 Add course participants\]](#)
14. Find a recognized person
15. Access the professional card

WORKED OUT example

1. Ask the BUS admin to create a new Region

Flag	Name
	ES
	DE
	EU

For NEWCOM recognition of trained trainers in nZEB Building Inspection a region EU is created by the BUS admin

2. Ask the BUS admin to add a user to maintain the new Region

The EU region is maintained by Jan Cromwijk, Jan also needs to have rights for ULOs (the qualification database)

3. Regio admin: create a specialism you want to recognize

[4.24.2 Regio Admin: Create a specialism](#)

Name	Professions
Quality assurance building envelope	1

A new Specialism Quality assurance building envelope is created by the Region Admin.

4. Regio admin: create or select a profession you want to recognize


[4.3 Regio Admin: Create a profession]

Notifications Sectors **Professions** Specialisms Courses

en nl es de sk hu fr It

Name Building Surveyor

Picture One of two images is served at random



Bladeren... Geen best: Bladeren... Geen best:

English English

Courses EU New profession +

Users

Notifications Sectors **Professions** Specialisms Courses Institutes Accreditations Sources

Name Building Surveyor

A new profession 'Building Surveyor' is created by the Region Admin.

5. Regio admin: create a sector

[4.4 Regio Admin: Create a Sector]

English English

Courses EU New sector +

Users

Qualifications

Notifications **Sectors** Professions Specialisms Courses Institutes Accreditations Sources


Name	Professions
Test sector	1

Notifications **Sectors** Professions Specialisms Courses Ir

en nl es de sk hu fr It

Title Test sector

Picture



Bladeren... Geen bestand geselecteerd.

Linked professions

Builder

Building Surveyor

Type here to search for a profession.

A new sector 'Test Sector' is created by the Region Admin. And linked to the profession from step 4.

6. Regio admin: create and/or publish a Qualification scheme

[7.7 Publish a qualification]

<div> Courses </div> <div> Users </div> <div> Qualifications </div>	Qualification schemes ?		
	In a qualification scheme all relevant tasks are described and linked with Unit of Learning Outcomes. In this window all available qualification schemes are shown. You can select, or you can create a new one.		
	Name	Updated	Last updated by
	NEWCOM Building Inspection	2020-03-23 12:10	admin
			# Tasks
			3

For this example the qualification for NEWCOM Building inspection is used.

The Region admin needs to open this qualification by clicking on it.

Qualification scheme ?

en

nl

es

de

sk

hu

fr

It

Title

NEWCOM Building Inspection

Description

An example qualification for NEWCOM Building Inspection

Tasks

☐ Give guidance to a comprehensive project development

☒ Comply with Dutch BENG and NOM regulations

☐ Assess the concept design by regarding energy related

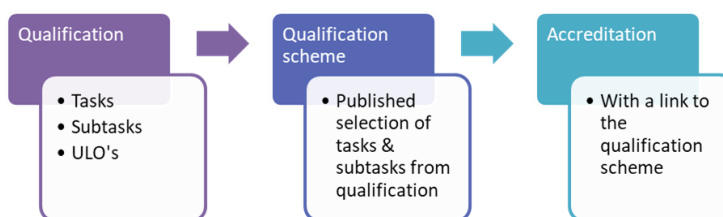
Delete

Publish

By clicking on Publish a selection of tasks within this qualification can be published.

After publishing a published qualification can be linked with an accreditation.

This process is illustrated in the following figure.



For Publishing the Publish Button is pressed.

In the next screen the relevant tasks are selected & a name is given.

The screenshot shows the 'Publish qualification scheme' interface. At the top, there are dropdown menus for 'Choose country' and 'Choose profession'. Below these are language tabs: en, nl, es, de, sk, hu, fr, and it. The 'en' tab is selected. A 'Name' field contains the text 'Example NEWCOM BI'. Below this, a section titled 'Select the tasks, subtasks and ULOs to be included in this publication:' contains a list of tasks with checkboxes. Most checkboxes are checked (yellow), except for 'ULO test' which is unchecked (white). The tasks include: 'Give guidance to a comprehensive project development', 'Optimize and interpret the energy balance forecast', 'Evaluate the functionality of the complete energy concept and the interoperability of all components', 'Assess feasibility of the energy concept', 'Assessment of energy demand and energy gains out of simple key figures', 'Evaluate the functionality of the complete energy concept and the interoperability of all components', 'Evaluate a profitability analysis', 'Roughly evaluate the feasibility for a building certification', 'Review renovation concept in proactive approach following nZEB standards/guidelines', and 'Analyze the concept design according to change in use aspects'. A 'Publish' button is located at the bottom right.

7. Regio admin: create an accreditation → see step 8 for further explanation of the screen.

[\[4.6 Regio Admin: Create an accreditation\]](#) and [select or create a skills-card layout](#)

8. Regio admin: couple the accreditation with a published Qualification scheme

[\[7.9 Link published Qualification Scheme to an accreditation\]](#)

The screenshot shows the 'New accreditation' form. At the top right is a 'New accreditation +' button. Below is a navigation bar with tabs: Sectors, Professions, Specialisms, Courses, Institutes, Accreditations (selected), and Sources. The form fields include: 'Name' (NEWCOM ventilation), 'Picture' (a blue box with 'NEWCOM' text and a file upload button 'Bladeren... NEWCOM.jpg'), 'Website' (empty field with a link icon), 'Contact' (empty field), 'E-mail' (empty field), 'Card' section with 'Qualification scheme' (dropdown menu) and 'Expires after' (dropdown menu set to 'Indefinite'). There is a 'Download' button next to the 'Qualification scheme' dropdown. A 'Save' button is at the bottom right.

The Region admin has added an Accreditation for NEWCOM Building Inspection & has linked it to the Published example from step 5.

9. Regio admin: create a training institute or recognition/exam provider

[4.7 Regio Admin: Create an institute]

The screenshot shows the 'Institutes' tab in the Regio Admin interface. The form contains the following fields:

- Name: NEWCOM
- Logo: A logo with the text 'NEWCOM' and a tagline 'New qualification schemes to build high quality'. Below it is a button 'Bladeren...' and the text 'Geen bestand geselecteerd.'
- URL: https://www.newcomtraining.com/
- Contact: Jan Cromwijk
- E-mail: jcromwijk@...

A 'New institute +' button is located in the top right corner.

The Region admin has created an exam institute for issuing NEWCOM recognitions

10. Regio admin: create a maintenance account for the created institute

[8.2 Regio admin & course providers: Creating users]

The screenshot shows the 'Users' tab in the Regio Admin interface. The table lists the following user:

Email	Name	Roles	Institute
jcromwijk@gmail.com	Jan Cromwijk	Questions (publish), Courses, ULOs	NEWCOM

A '+ Add user' button is located in the top right corner.

The Regio admin added an administrator for the NEWCOM exam institute

11. Regio admin / account maintaining an institute: create exam & publish it

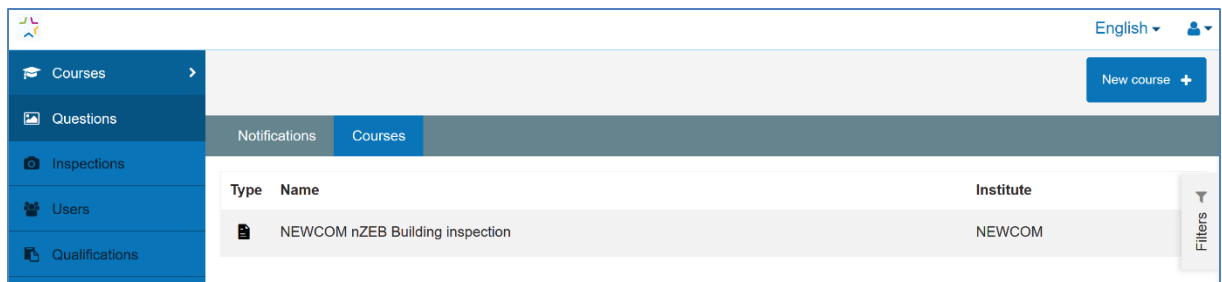
[4.8 Regio Admin and Course provider: Create a 'course' or 'exam']

The screenshot shows the 'Courses' tab in the Regio Admin interface. The form contains the following fields:

- Website: https://www.newcomtraining.com/index.php?id=15
- Accreditation: NEWCOM Building Inspection
- Specialisms and technologies: Quality assurance building envelope
- Professions: Building Surveyor
- Points For completing course: 100

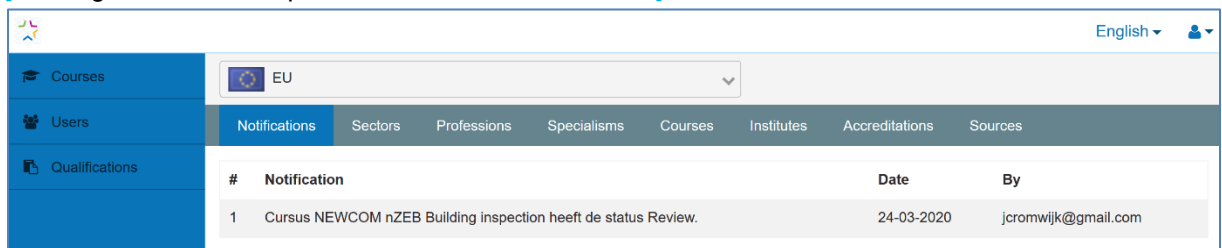
Below the points field, there is a note: 'Enter the number of retraining points you earn for {0}. 0.5 day course = 50 points. 1 day course = 100 points.'

The created course needs to be linked with: the accreditation for Building Inspection, the Profession and the Specialism (If a specialism is selected the linked specialism is filled in automatically)



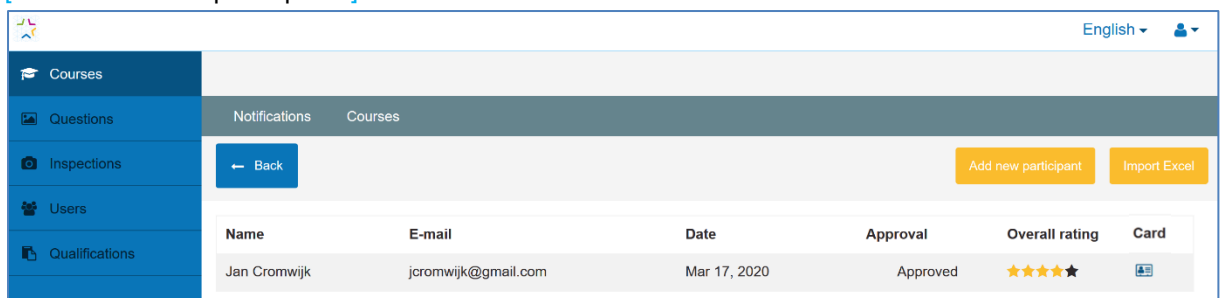
12. OPTIONAL: If a course/exam is created by a course provider the Regio Admin has to agree with publication of the new exam

[\[4.9 Region admin Accept a created or modified course\]](#)



13. Course provider: add one or more participants to the Exam

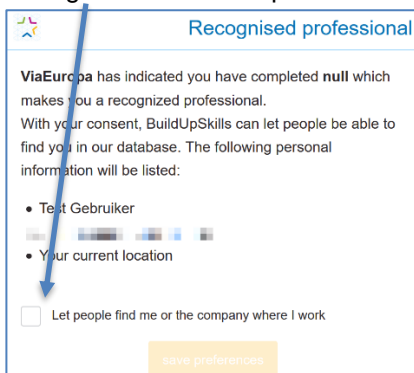
[\[4.11 Add course participants\]](#)



We assume that persons added by exam institutes have given their consent to be added to the register & to be found to the exam-institute.

All registered persons will get an email with instructions on changing this consent if needed. In the current version, the possibility to change consent is facilitated in the BUILD UP Skills advisor-app [\[GivingConsent\]](#).

Giving consent is also possible on the Mobile site for participants not using the BUS-app



14. Find recognized persons

When all steps are done, you can find recognized persons on the mobile app available at:

<https://testapi.buildupskillsadvisor.eu/expertSearch/index/3?language=en>

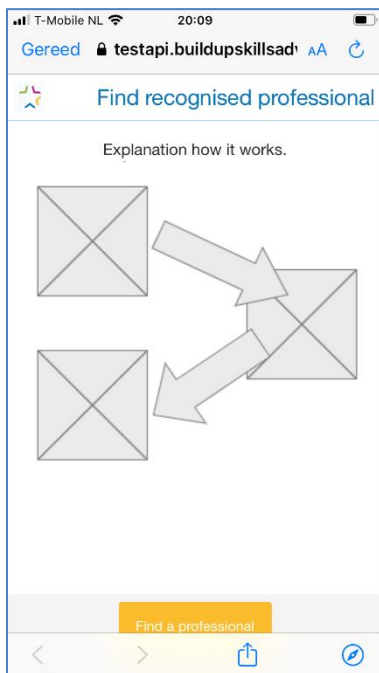
The region number of AT is 363197.

<https://testapi.buildupskillsadvisor.eu/expertSearch/specialisms/363197?language=en>

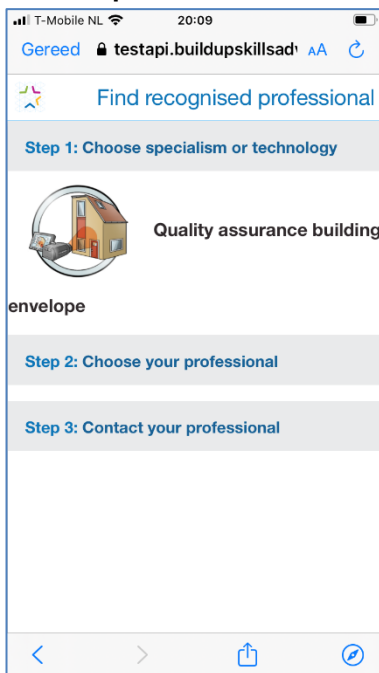
Other region numbers in the TEST environment are:

Ireland	314941
Slovakia	363342
Hungary	363354
The Netherlands	1
Spain	4

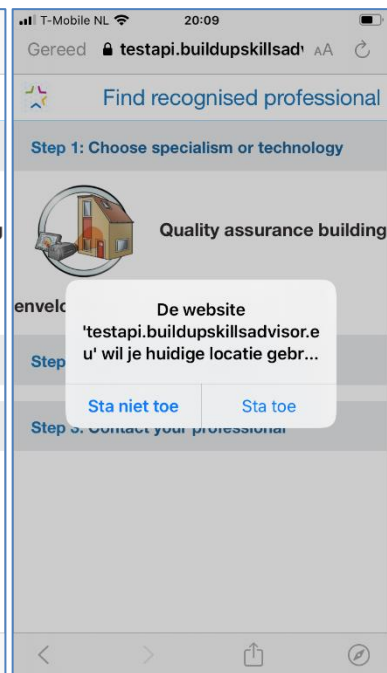
Home screen



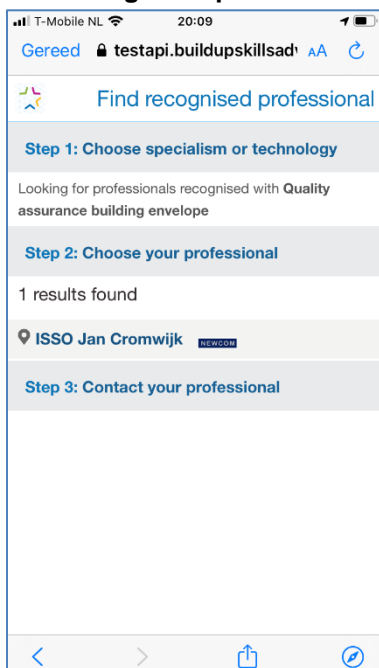
Select specialism



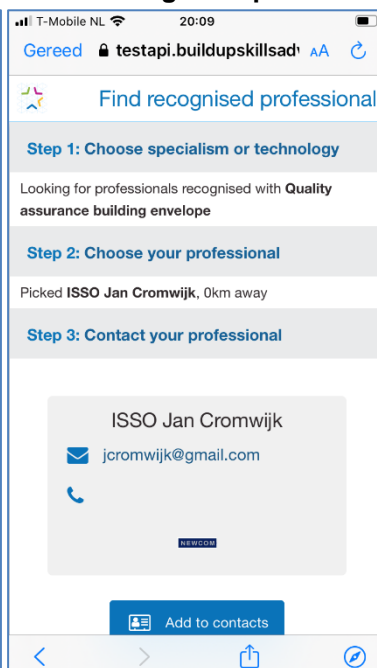
Give access to location



Find recognized person



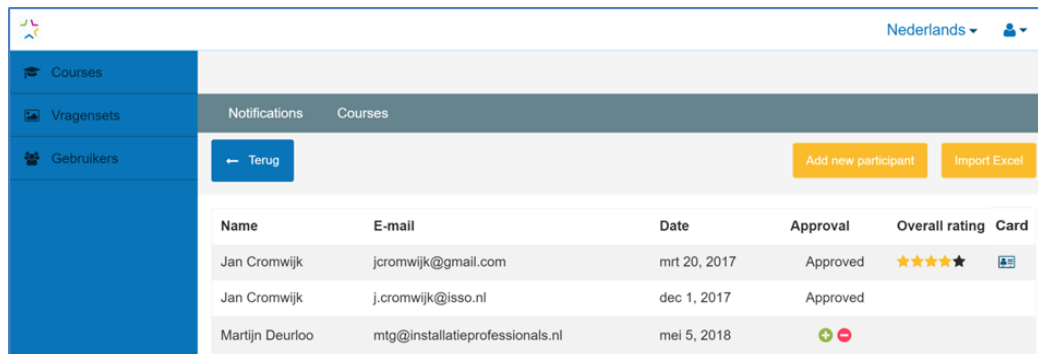
Contact recognized person



15. Access a professional card

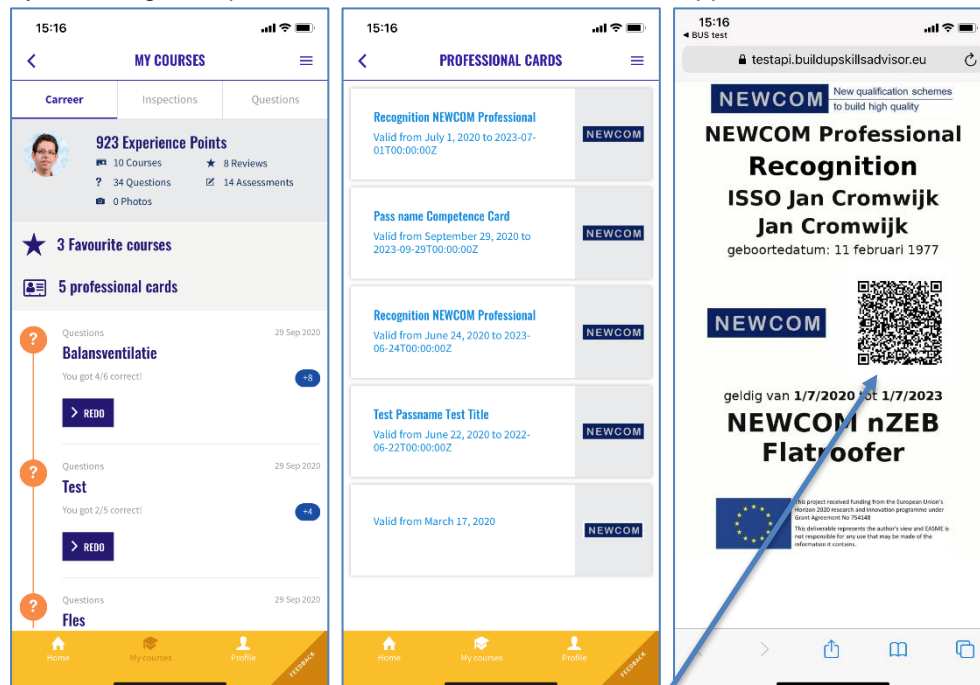
A professional card can be accessed in three ways.

- a. By the exam-institute that has issued the skills-card by adding a person as participant to an exam.



Name	E-mail	Date	Approval	Overall rating	Card
Jan Cromwijk	jcromwijk@gmail.com	mrt 20, 2017	Approved	★★★★★	
Jan Cromwijk	j.cromwijk@isso.nl	dec 1, 2017	Approved		
Martijn Deurloo	mtg@installatieprofessionals.nl	mei 5, 2018			

- b. By the recognized person in the BUILD UP skills advisor-app



- c. By clients or other persons that want to validate a skills-card
This is done by scanning the QR-code of the Skills-card

10 PROFESSIONS & IMAGES OF PROFESSIONS

To be added

11SPECIALISMS & IMAGES OF SPECIALISM

To be added

Workplace with some IMAGES

