



14th BUILD UP Skills EU exchange meeting - November 2022



Session 2B on the role and function of Digital ecosystem(s) in BUILD UP Skills projects

14th BUILD UP Skills EU-Exchange
November 2022, Jan Cromwijk

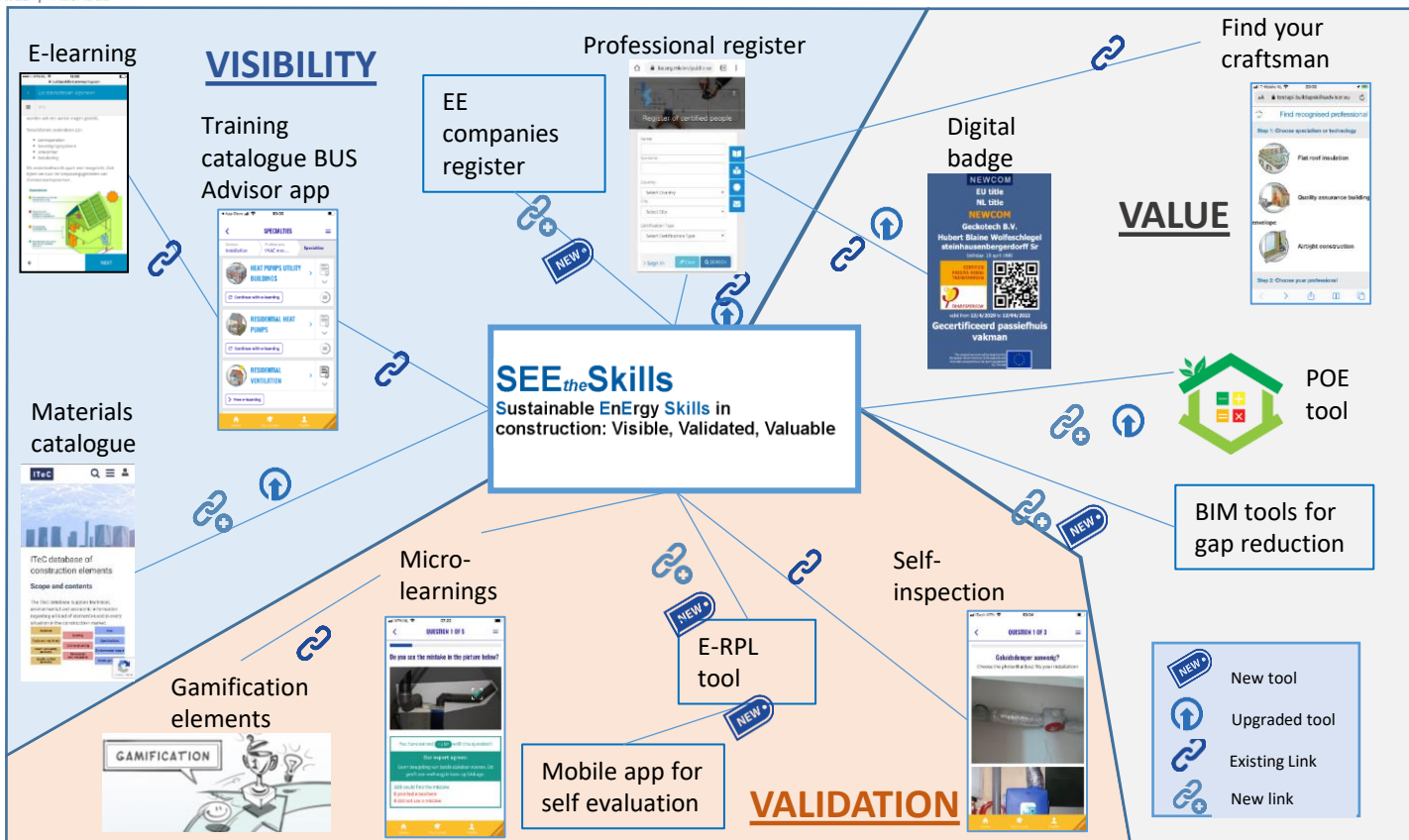


ISSO

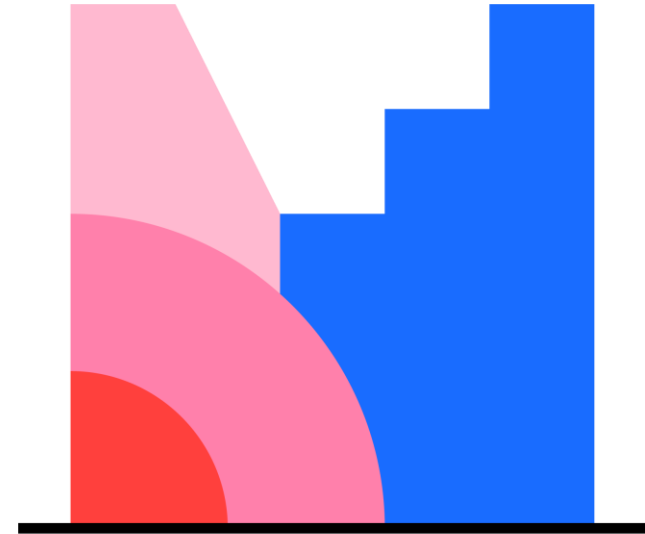
What is a digital Learning Ecosystem?



"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033743"



Digital means for upskilling



Mentimeter

Learning Management Systems

Many projects... Many Systems

Construye 2020  Mensaje[Personalizar esta página](#)

Vista general de curso

 En progreso Último accedido Tarjeta
Online Training
Aislamiento térmico de edificios

34% completado


Online Training
Rentabilidad de la eficiencia energética de ...

26% completado


Online Training
Glosario
Online Training
Instalación de ventanas de aluminio y PVC

50% completado


Online Training
Instalación de sistemas de geotermia

48% completado


Online Training
Instalación de sistemas de calefacción y aire ...

21% completado


Online Training
Instalación de sistemas de hidrógeno

Aislamiento térmico de edificios

[Área personal](#)[Mis cursos](#)[Aislamiento](#)[Presentación y contenidos](#)[Uso de la plataforma](#)[Unidad 1 - Conceptos básicos](#)

Progreso en la disciplina

33%

[Unidad 3 - Normativa y recepción en obra](#)

Progreso en la disciplina

40%

[Unidad 5 - Ejecución de diferentes soluciones constructivas](#)

Progreso en la disciplina

22%

[Unidad 7 - Nociones básicas de BIM y LEAN Construction](#)[Metodología](#)[Evaluación](#)[Unidad 2 - Materiales de aislamiento](#)

Progreso en la disciplina

40%

[Unidad 4 - Pautas básicas sobre la instalación de los materiales de aislamiento](#)

Progreso en la disciplina

40%

[Unidad 6 - Hacia el Edificio de consumo de energía casi nulo](#)

Progreso en la disciplina

33%

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Aislamiento térmico de edificios

[Área personal](#) [Mis cursos](#) [Aislamiento](#) [Unidad 5 - Ejecución de diferentes soluciones constructivas](#)

UNIDAD 5 - EJECUCIÓN DE DIFERENTES SOLUCIONES CONSTRUCTIVAS

Objetivos:

- Soluciones constructivas de la parte ciega de la fachada.
- Soluciones constructivas para cubiertas.
- Soluciones constructivas de techos.
- Soluciones constructivas de suelos.
- Soluciones constructivas de los elementos de contacto con el terreno.
- Soluciones de aislamiento de redes de distribución para equipos en la edificación (tuberías y conductos).

En casaEn claseCrea

SECCIÓN ANTERIOR

Unidad 4 - Pautas básicas sobre la instalación de los materiales de aislamiento

Ir a...



Unidad 6 - Hacia el Ed



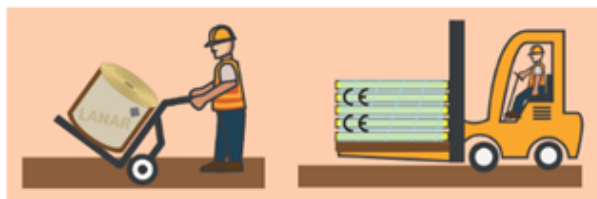


Figura 3.5. Utilización de medios mecánicos para el transporte de materiales

consecuencias relacionadas con los defectos del material aislante que se recepciona en la obra son:

tos que presenten daños en su embalaje pueden causar una merma en sus propiedades aislantes cuando son colocados.

ifican las características principales del aislamiento de acuerdo con lo especificado en el proyecto, puede que no se cumpla con las exigencias del CTE y la certificación energética prevista.

irda

nprobar que el producto llega a la obra con el embalaje original y en perfectas condiciones. Asimismo, hay que verificar que las características del producto servido cumplen con las especificaciones del proyecto.

¿a lo que has aprendido

Marca la opción que corresponda con la actuación correcta. Recuerda que el correcto transporte, descarga y acopio del material suministrado a obra es imprescindible para garantizar que no sufre daños.

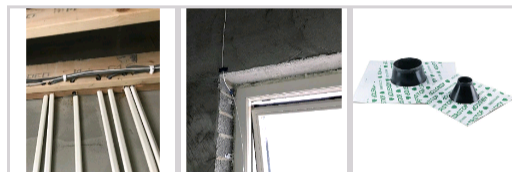




Kvíz - Vzduchotěsnost 2

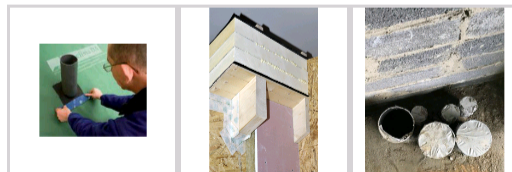
Manžeta pro vzduchotěsný průchod konstrukcí

Klikněte na obrázek zobrazující uvedený prvek



Vzduchotěsné uzavření spoj mezi nosnou konstrukcí stropu a obvodového pláště

Klikněte na obrázek zobrazující uvedený prvek



Nevzduchotěsné zhotovený detail

Klikněte na obrázek zobrazující uvedený prvek/provedení





CEN EPB Standards Certified Experts

[Ben je je gebruikersnaam of wachtwoord
vergeten?](#)

Cookies moeten aanstaan in je browser [?](#)

☐ Gebruikersnaam onthouden

Login

Is dit de eerste keer dat je hier bent?

Om volledige toegang tot deze site te krijgen, moet je een account maken.

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Je bent niet ingelogd

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[Samenvatting gegevensretentie](#)

[Beleid](#)



BIM ready

Free self-study and knowledge diagnosis tool to introduce you to BIM and/or provide assessment and recognition of prior knowledge



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Module 2

Lorem Ipsum is simply dummy text of the printing and typesetting industry.



[LEARN MORE](#)



Module 3

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Module 4

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awakening | relevant | innovative | scalable | equitable



BIMcert Training Catalog

PROJECTS-LOCAL PROJECTS ED TOOLS CSS My

BIMCERT

DASHBOARD AVAILABLE COURSES PERSONAL DATA

Hello Paulo

Rank: **Serious Learner**
XP Level: **4**
Modules: **4**
Training plans: **2**

XP 4

240/400

★

36/41

🌟

36 badges

MY MODULE LIST

<div>XP 50/60</div> <div>★ 10/24</div> <div>🌟 2/2</div> <div>BIM ready</div> <div>★★★★★</div> <div>72% complete</div>	<div>XP 50/60</div> <div>★ 10/24</div> <div>🌟 0/2</div> <div>BIM ready</div> <div>★★★★★</div> <div>72% complete</div>	<div>XP 50/60</div> <div>★ 10/24</div> <div>🌟 0/2</div> <div>BIM ready</div> <div>★★★★★</div> <div>72% complete</div>	<div>XP 50/60</div> <div>★ 10/24</div> <div>🌟 0/2</div> <div>BIM ready</div> <div>★★★★★</div> <div>72% complete</div>
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MY TRAINING PLANS



Learning Management Systems

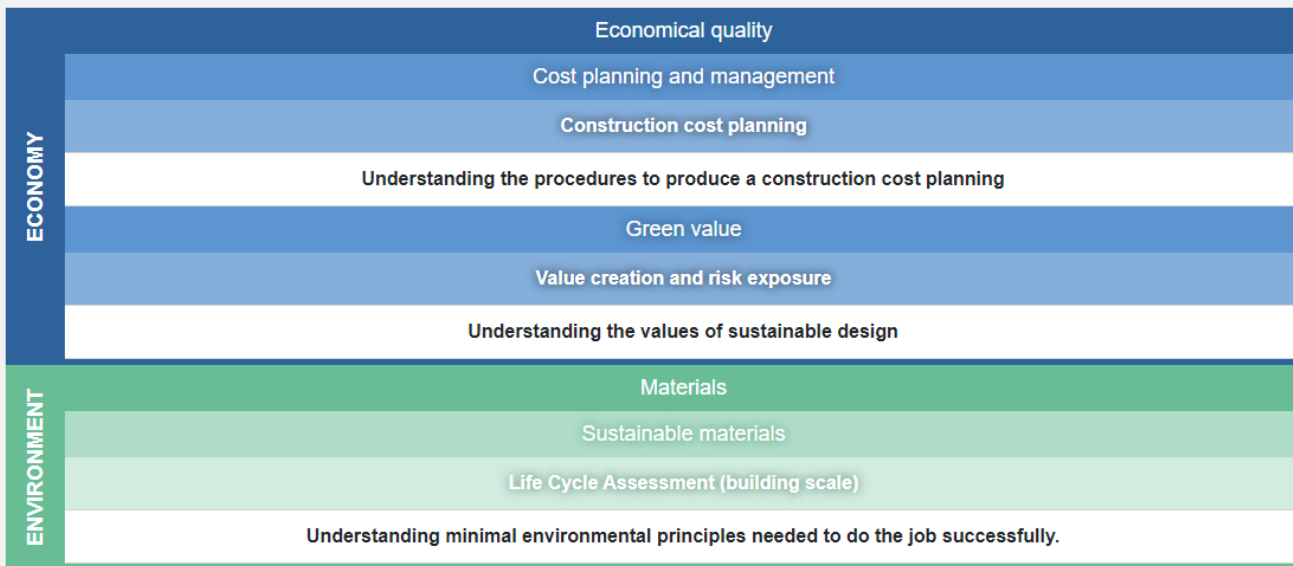


Unit of Learning Outcome databases

1. **Train4Sustain**
2. **BUILD UP Skills**
3. ...

BIM MANAGER (SP)

What does the level of competence mean?



BUILD UP Skills advisor ULO-database

Publish qualification scheme ?

Country

Choose country x v

Profession

Choose profession x v

en

nl

es

de

sk

hu

fr

it

Name

Heat pumps

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

☒ Advise about heat pump installation

☒ Advise on the technical aspects of climate control systems

☒ Checks whether the hydraulic circuit of the installation concept is satisfactory

☒ Identify the main components of the heat pump in order of operation and briefly explains their operation

☒ Identify points for attention and risks surrounding the heat pump system

☒ Identify the points for attention and risks, advise solutions and how bottlenecks can be solved

☒ Advise solutions around the heat pump system

☒ Identify the points for attention and risks, advise solutions and how bottlenecks can be solved

☒ Advise on the heat pump installation (work manager)

☒ Advise on the operation and interaction of different types of heat pumps and their areas of application

☒ Determine which heat pump system is suitable for which architectural and technical preconditions

☒ Investigates in the event of complaints (not hot, high energy consumption) whether a heat pump system is suitable

BUILD UP Skills advisor ULO-database

Tasks and subtasks
addressing all phases in
construction covering the
whole valuechain

New task ?

en

nl

es

de

sk

hu

fr

It

Title

Advise about heat pump installation

Subtasks

☐

Advise on the technical aspects of climate control system

☐

Identify points for attention and risks surrounding the he

☐

Advise solutions around the heat pump system

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

BUILD UP Skills advisor ULO-database

Learning goals related
to the subtask

New subtask ?

en

nl

es

de

sk

hu

fr

It

Title

Advise on the technical aspects of climate control sysi

ULO

Checks whether the hydraulic circuit of the installation

Identify the main components of the heat pump in ordi

Q

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

Professions

Specialisms and technologies

BUILD UP Skills advisor ULO-database

What competence is expected for performing the subtask?

ULO ?

en
nl
es
de
sk
hu
fr
it

Competence
Responsible for

Identify the main components of the heat pump in ord

Assessment

☐ Theoretical test
☐ Practical test
☐ Silhouetted by colleague

What skills does one need to be competent in the subtask?

Skills
Able to

Explain the operation of the main components of the t

Q

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

What Knowledge does one need to apply skills for showing competence with regards to the subtask?

Knowledge
to know

Main components of the heat pump: compressor, con

The mutual and sequential functioning of the main cor

BUILD UP Skills advisor ULO-database

New subtask ?

en

nl

es

de

sk

hu

fr

It

⚠ This subtask is used in 2 tasks. Changes are applied to all tasks!

Title

Identify points for attention and risks surrounding the I

ULO

Identify the points for attention and risks, advise soluti

🔍

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

ULO ?

en

nl

es

de

sk

hu

fr

It

⚠ This ULO is used in 3 subtasks. Changes are applied to all subtasks!

Competence
Responsible for

Identify the points for attention and risks, advise soluti

Assessment

☐ Theoretical test

☐ Practical test

☐ Silhouetted by colleague

Skills
Able to

Dealing with points of attention and risks

Indicate how bottlenecks in heat pump systems can b

🔍

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

Knowledge
to know

Points of attention and risks in heat pump systems

🔍

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

Unit of Learning Outcome Database



Inventories of Courses and Learning Materials

In many projects...
In custom made databases

KNOWLEDGE HUB



YouTube CZ

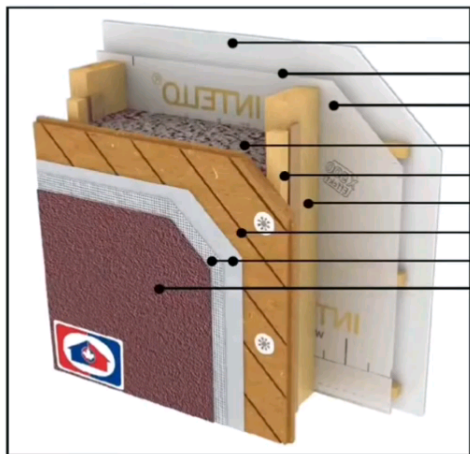
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Difúzně otevřené skladby



- Sádkartonová nebo sádrovláknitá deska 12,5 mm
- Instalační dutina 30 mm
- Parobrzda INTELLO PLUS 0,2 mm
- přelepené spoje páskou TECON VANA
- Foukaná celulózová izolace CLIMATIZER PLUS® 260 mm
- Expandér UE105
- KVH hranol 140/80 mm
- Dřevovláknitá izolační deska UdiSPEED® 40 mm
- Stěrka UdiGRUNDSPACHTEL® s armovací tkaninou 5 mm
- Vnější omítka UdiPERL® 1,5 mm

Součinitel prostupu tepla U [W/m².K]			
U - konstrukce	ČSN 73 0540-2 listopad 2011		
0,17	0,3	U _{n,30}	– požadovaná
	0,2	U _{req,20}	– doporučená
	0,18 – 0,12	U _{pas,20}	– pasivní domy

POZN. Dimenze nosné konstrukce objektu nutno posoudit statickým výpočtem.

CraftEdu - S6 Vzduchotěsnost budovy



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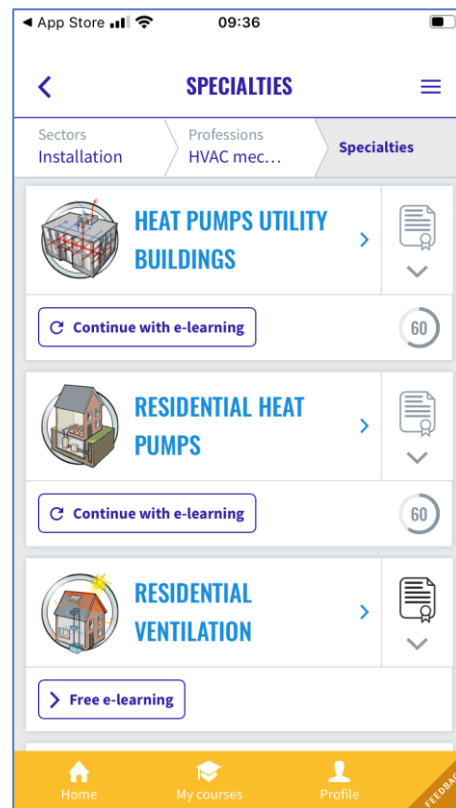
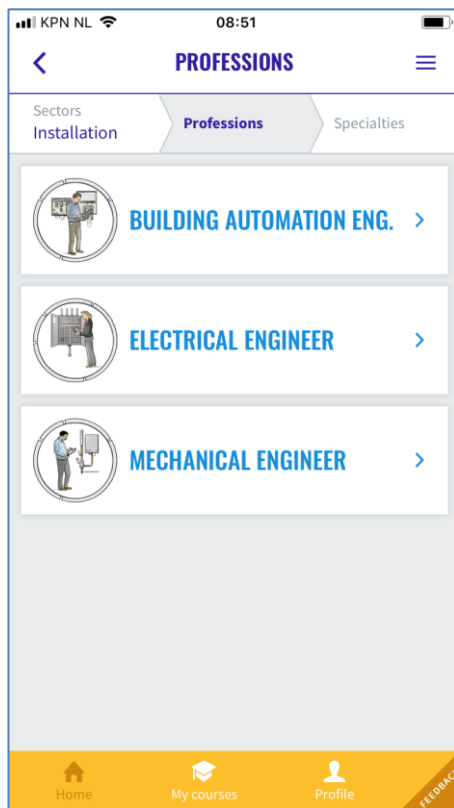
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Technician for programming and management of the building process, BIM and green oriented

🕒 800

📍 Italy

The construction site management technician coordinates the construction process and / or restructuring process; oversees the planning, management and control aspects of the execution of the works, with a view to optimizing the resources used. He recognizes and faces unforeseen events and variations relat...

[Load more](#)

Inventories of Courses and Learning Materials



Personal Recognition

In many projects... in multiple ways

Green skills accreditation system

Pathways for a worker to get the Green Tag

Path 1



Construye 2020+ courses
(online, blended, face to face)

Path 2



Experience accreditation
(practical exam based on Construye 2020+ courses' learning outcomes)

Green Tag A

Green Tag B

Green Tag C



Green skills accreditation system

Green Tag integration within Construction Professional Card (TPC)



A green skilled worker...



... goes to a TPC office with a Construye 2020+ diploma, where it is verified and included within TPC's worker data...



... and new data is totally available and downloadable for the worker !!



Please note this public list contains only the CEN EPB Standards Certified Experts that have given consent to be displayed.

EXPERTS

Course	Country	City	EQF level *						
N 12831-3 HW needs	EN 15316-1 General part	EN 15316-2 Emission & controls	EN 15316-3 Distribution systems	EN 15316-4-1 Generation - Boiler	EN 15316-4-10 Wind turbines (not in mandate)	EN 15316-4-2 Generation - Heat pump	EN 15316-4-3 Generation - Solar, PV	EN 15316-4-4 Integrated cogeneration	EN 15316-4-5 Heating & Cooling
Alberto Fabrici View details						✓	✓		
Alen Ćurin View details		✓	✓			✓	✓	✓	
Ana Matković View details		✓	✓			✓	✓	✓	
Anđelko Medvidović View details						✓	✓	✓	
Angela Simone View details						✓			
Anka Ferić Marković View details		✓	✓			✓	✓	✓	

* EQF level description



Personal recognition



BUS LEAGUE



& LifeLong Development




Diego De Nardi

D-STUDIO - DIEGO DE NARDI ARCHITECT is an architectural firm based in Treviso. The design activity of Diego De Nardi (graduated in Venice - IUAV - in 1996; enrolled in the Order of Architects of Treviso in 1998), spills over into academic activity at the IUAV-Venice (from 1996 to 2016 he held lectures, seminars, and workshops in the courses of Prof. Angelo Villa; co-supervisor of over 30 degree theses) and is intertwined with cultural activity (publications of volumes, essays in international architectural journals, conventions and conferences). A way of 'being an architect', between architecture as a discipline and architecture as a profession. The design activity is mainly focused on themes related to architecture and the city: Restoration of Cultural Heritage, buildings and urban equipment, urban development and recovery projects and plans, declined in public and private works projects also carried out in collaboration with different design groups, sometimes reported in competitions and published in sector newspapers.

Language skills

English - Language level

 October 20, 2022

SKILLS PASSPORT

SOCIETY

Accessibility

Barrier free accessibility

AC1.1	Accessibility of public spaces	5
-------	--------------------------------	---

Comfort and well being

Thermal comfort

CO2.1	Indoor Thermal Comfort	3
-------	------------------------	---

Services

Services for inhabitants

SE2.1	Functional mix	5
-------	----------------	---

PROCESS

Built Environment Certification systems

Building sustainability certification

BE1.2	Building sustainability certification systems	4
-------	---	---

Interdisciplinary Skills

Collaboration and Communication

IS3.1	Motivation and communication - Design Team	5
-------	--	---



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Geonardo Project

2022 May 24 – 25

Short description x

HA1.2 1

CO3.1 4

AC1.1 4

New commercial center certification

2022 Aug 31 – Sep 30

WA2.1 4

Construction of 38 dwellings in the Alfons Comin square - Architecture Team

2019 Jul 19 – 2022 Dec 16

EN3.1 3

EN3.7 3

EN4.1 3

EN4.2 2

EN3.3 3

WA1.2 3

WA2.1 4

WA2.2 4

CO2.1 4

CO3.1 4

CO3.2 4

ID1.1 5

Analysing and addressing SkillGaps

What does the level of competence mean?

×

- 1 Has little knowledge and skills with respect to the thematic area. Understands basic principles and is able to take part in project team discussions.
- 2 Understands basic knowledge and has practical skills within the thematic area, is able to solve simple problems by selecting and applying basic methods, tools, materials and information.
- 3 Has comprehensive, factual and theoretical knowledge and skills within the thematic area, 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.

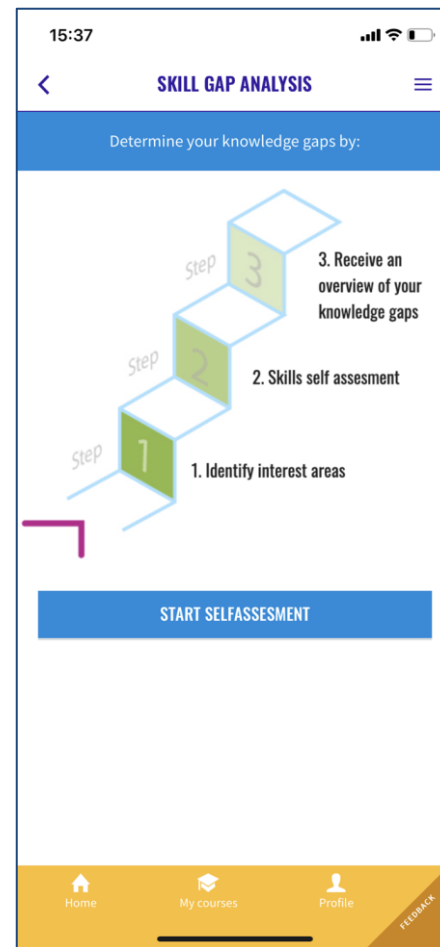
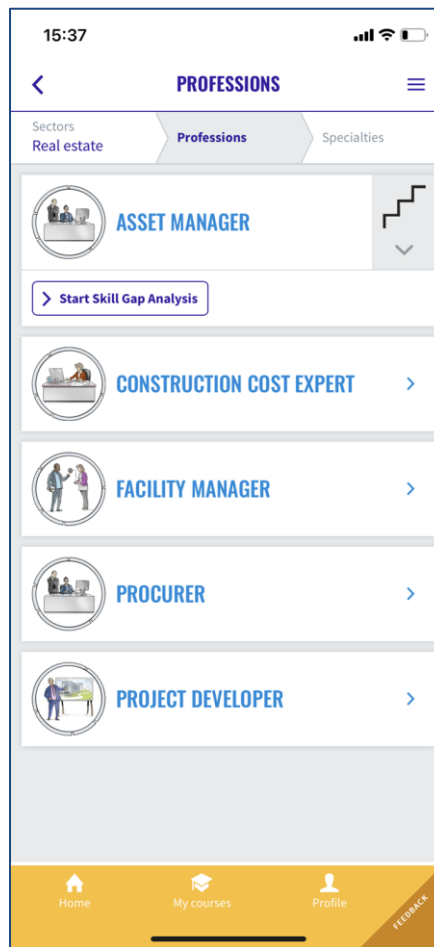
Landscape Architect

CODE	TECHNOLOGY, INTERDISCIPLINARY SKILLS AND PROFESSIONS		
	Specific to Circular Economy	C	F
PRR	Prioritise regenerative resources	2	4
PRR1	Bio-Based and regenerative material application	2	4
PRR2	Reusable material application	2	4
PE	Preserve and extend what is already made	2	4
UWR	Use waste as a resource	3	4
UWR1	Deconstruction for reuse	3	3
UWR2	Material Innovation	2	3
UWR3	Reclaiming Energy	1	3
UWR4	Continuous reuse of energy with little or no waste	2	4
DF	Design/Build for the future	3	4
DF1	Design/Build for Reuse	3	4
DF2	Design/Build for repurpose of materials	2	4

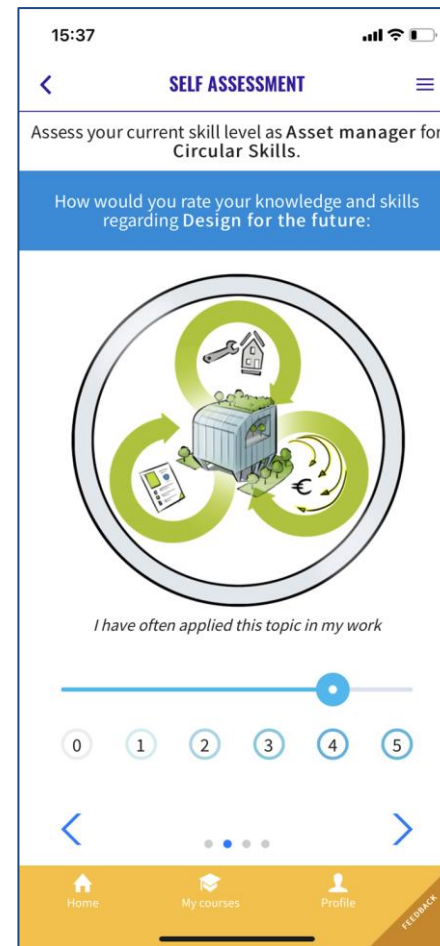
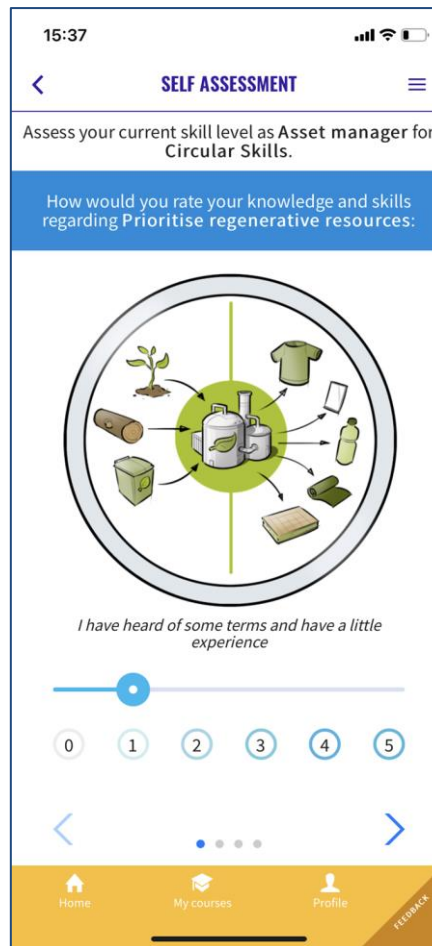


TRAIN4
SUSTAIN

What's next: Personal Skills Assessments



What's next: Personal Skills Assessments




What's next: Personal Skills Assessments

15:37

SELF ASSESSMENT

Assess your current skill level as Asset manager for Circular Skills.

How would you rate your knowledge and skills regarding Incorporate digital technology:



I know what this topic is broadly about and have some experience

<

Home

My courses


Profile

FEEDBACK

15:37

SELF ASSESSMENT

As Asset manager for Circular Skills you currently posses 56 percent of the needed skills.



Below you can see an overview of the topic(s) that are sufficient and topic(s) that could improve.

Prioritise regenerative resources20%

Design for the future133%

Incorporate digital technology50%

<

Home

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FEEDBACK

15:37

SELF ASSESSMENT

Below you can see an overview of the topic(s) that are sufficient and topic(s) that could improve.

Prioritise regenerative resources20%

Design for the future133%

Incorporate digital technology50%

Your skill level looks like the following:

Learn the basics

Build up some experience

3 Be able to do the standard work

4 Be able to solve complex work

Click on the different levels to see courses to upskill yourself to a certain level.

DOWNLOAD RESULTS

<

Home

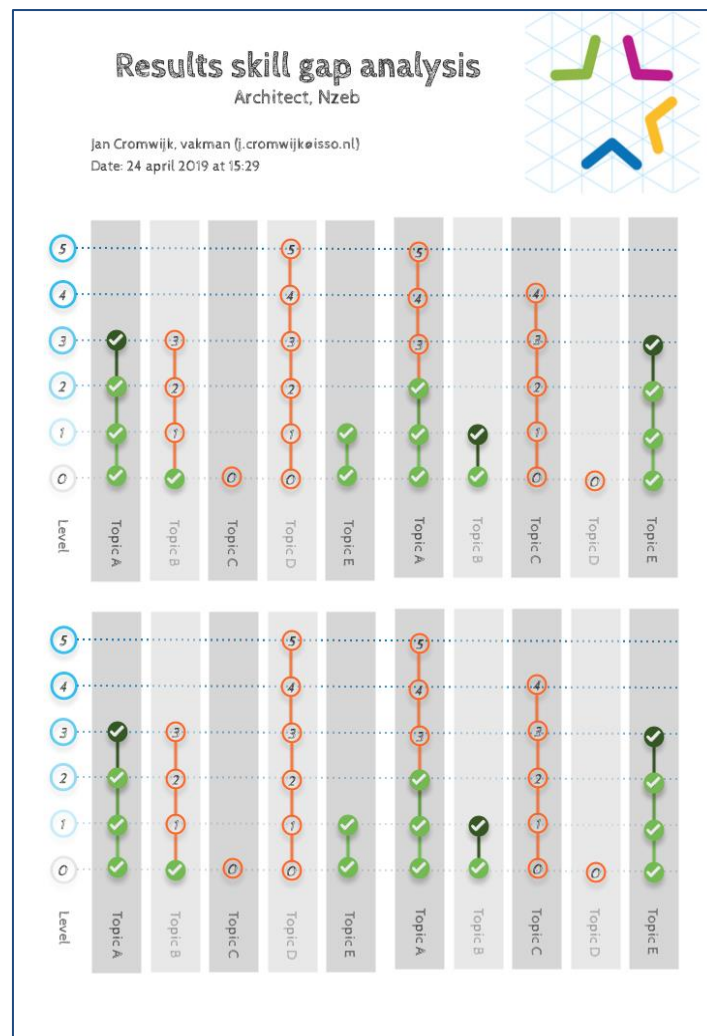
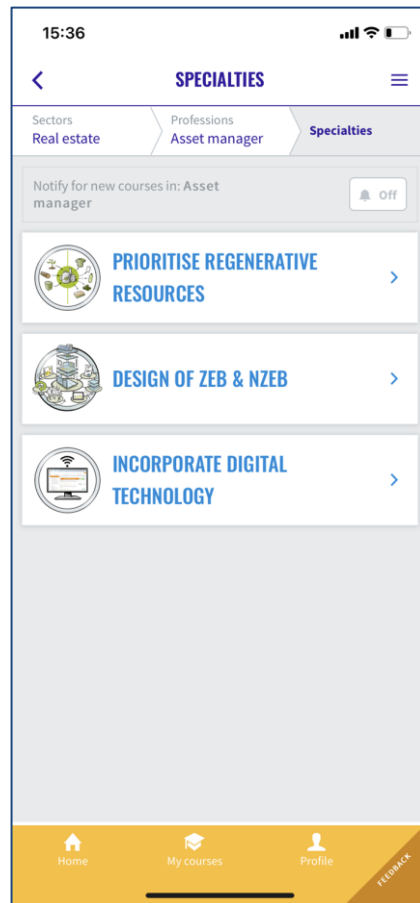
My courses

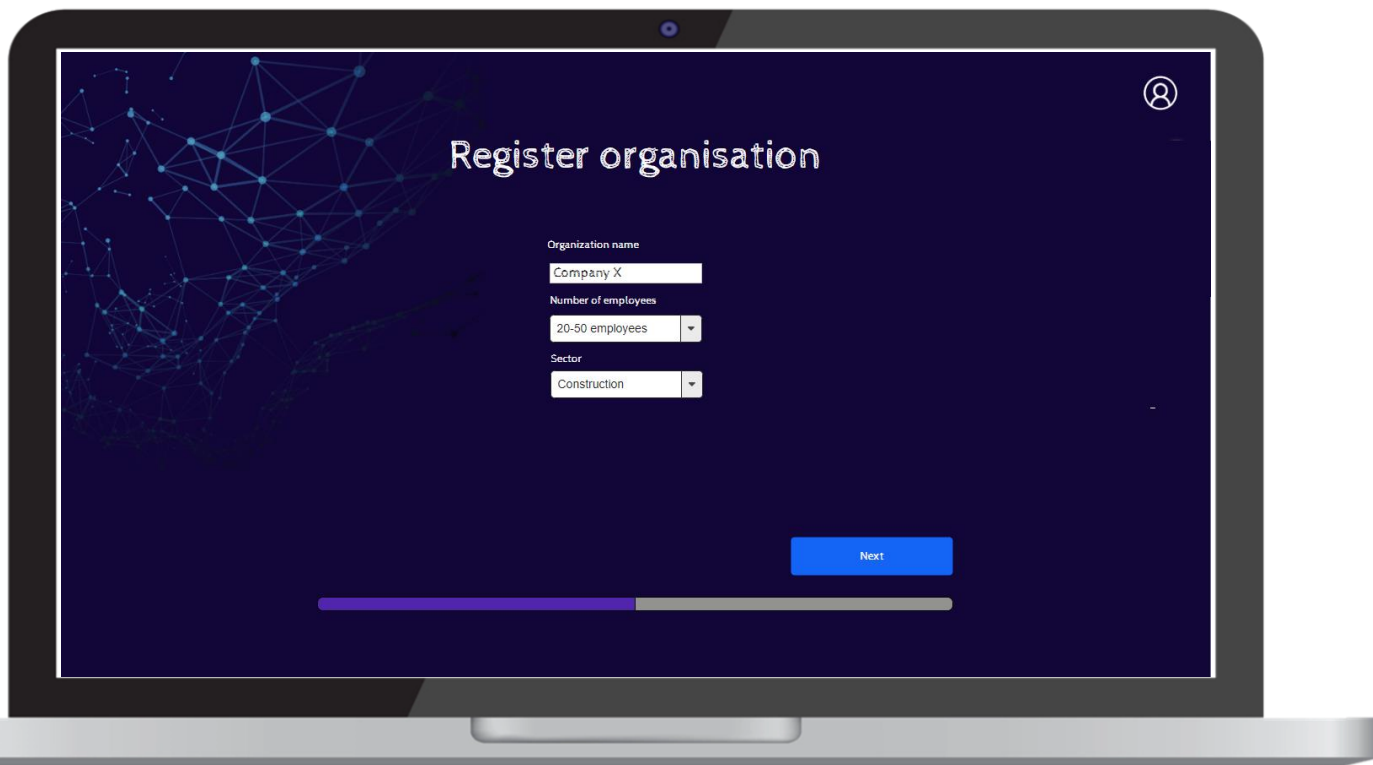
Profile

FEEDBACK

BUS
GoCircular

What's next: Personalised learning pathways



A laptop screen displaying a 'Register organisation' form. The background of the form is dark blue with a network diagram of white dots and lines. The form has a title 'Register organisation' in white. Below the title are three input fields: 'Organization name' with the text 'Company X', 'Number of employees' with a dropdown menu showing '20-50 employees', and 'Sector' with a dropdown menu showing 'Construction'. A blue 'Next' button is at the bottom right. A progress bar at the bottom of the screen is partially filled with purple. A small user icon is in the top right corner of the form area.

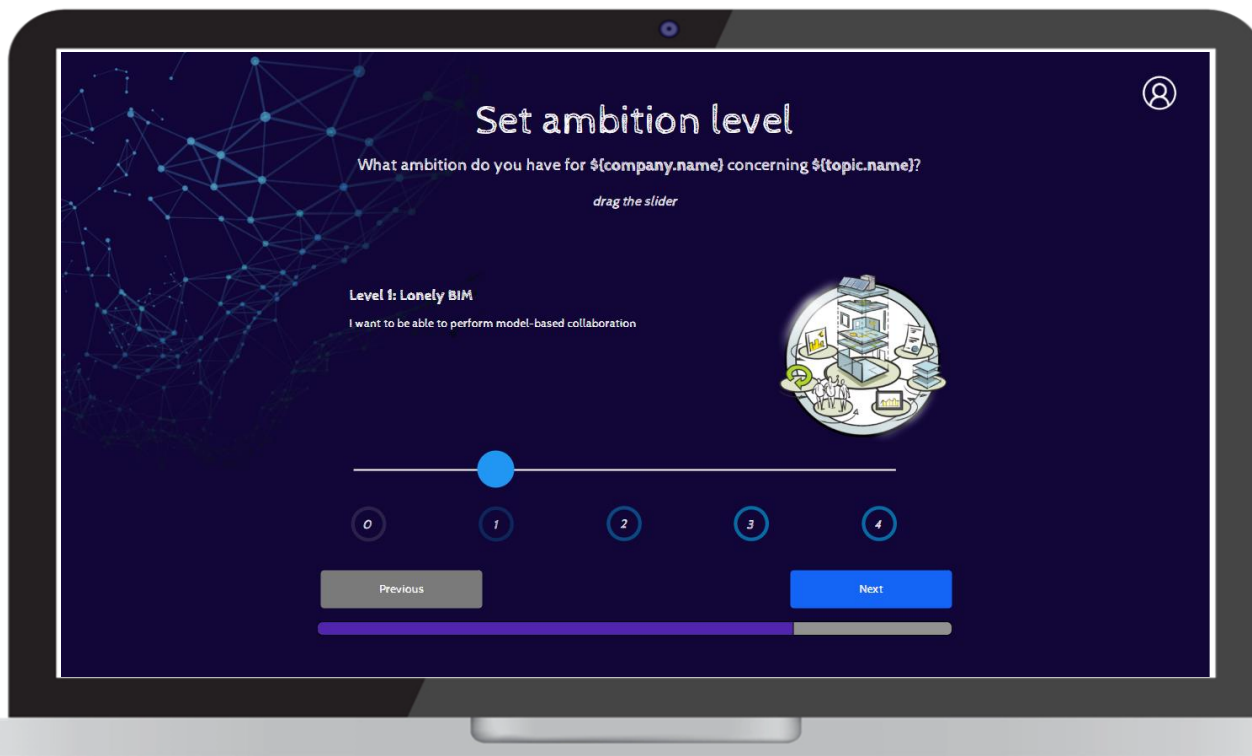
Register organisation

Organization name
Company X

Number of employees
20-50 employees

Sector
Construction

Next




Set ambition level

What ambition do you have for \$(company.name) concerning \$(topic.name)?

drag the slider

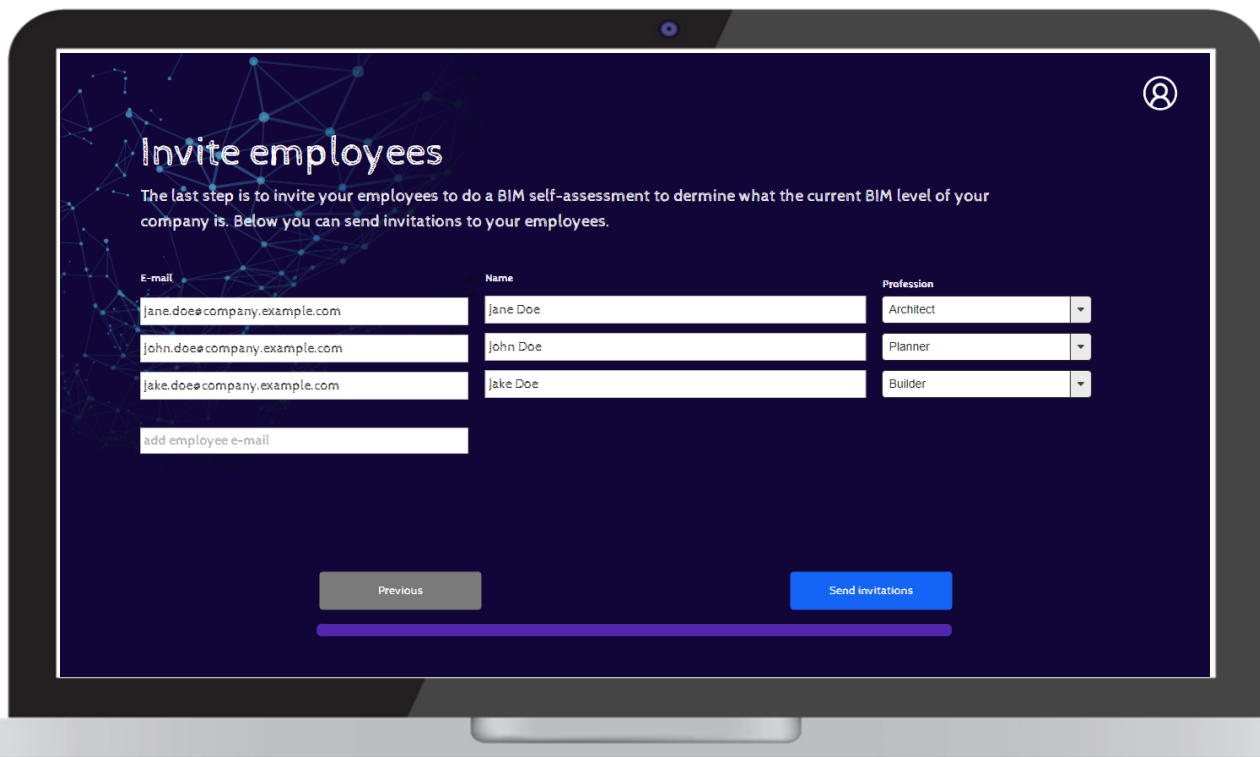
Level 1: Lonely BIM

I want to be able to perform model-based collaboration



0
1
2
3
4

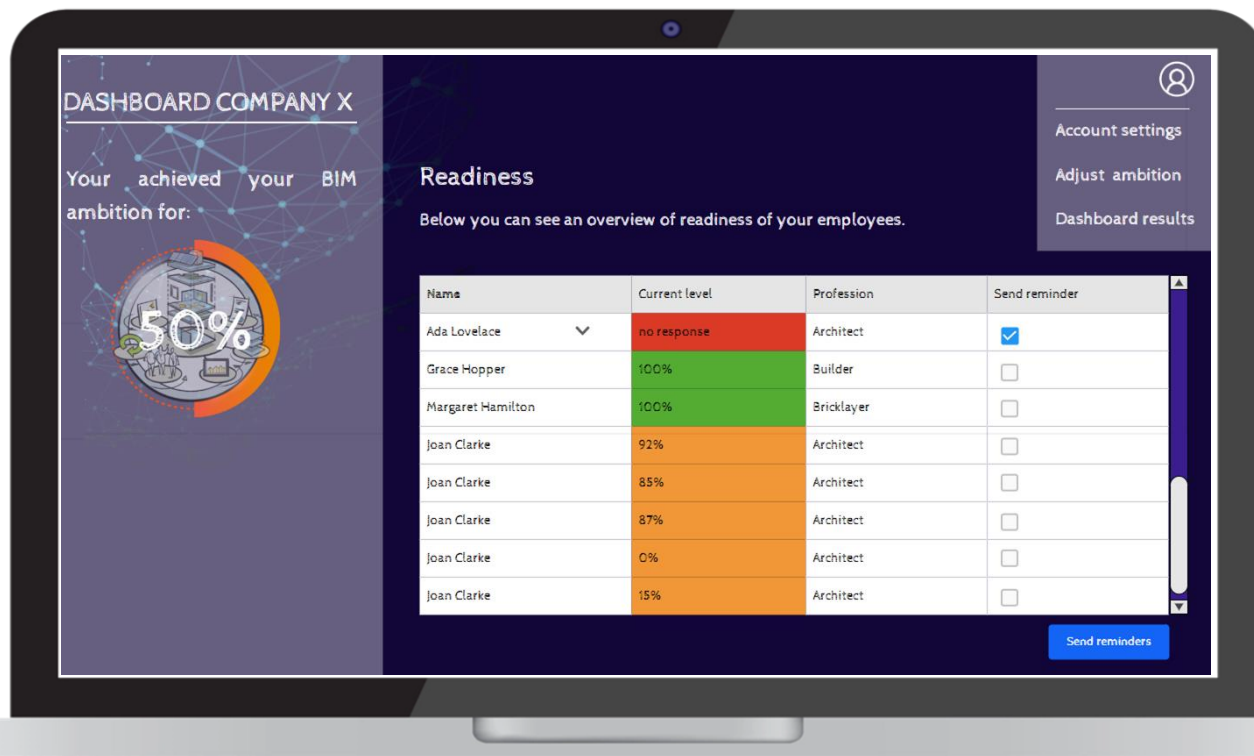
Previous
Next



Invite employees

The last step is to invite your employees to do a BIM self-assessment to determine what the current BIM level of your company is. Below you can send invitations to your employees.

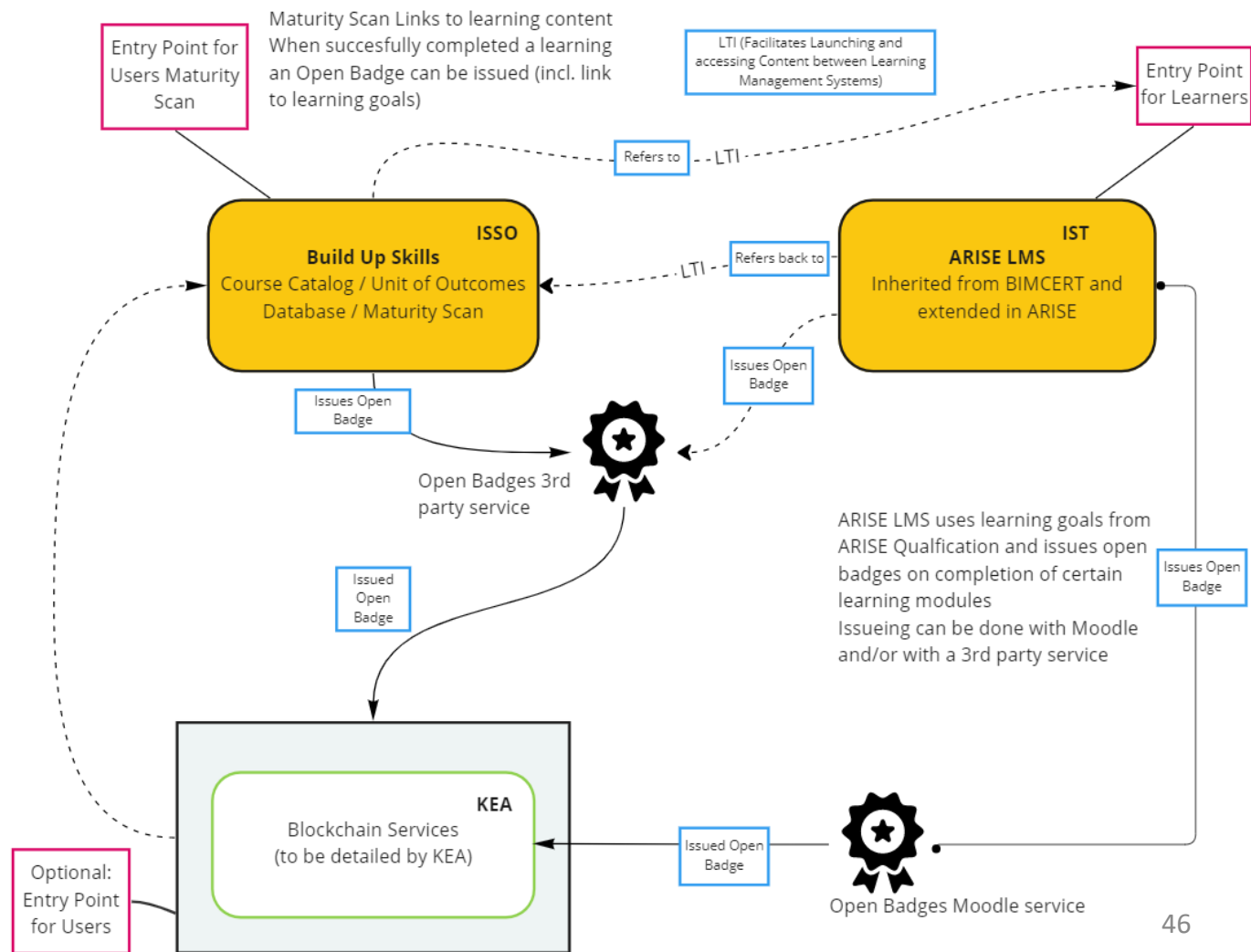
E-mail	Name	Profession
jane.doe@company.example.com	Jane Doe	Architect
john.doe@company.example.com	John Doe	Planner
jake.doe@company.example.com	Jake Doe	Builder
<input type="text" value="add employee e-mail"/>		



Personal Recognition and Skillgap analysis



Interconnectivity



Interconnectivity in Digital Learning Ecosystem(s)



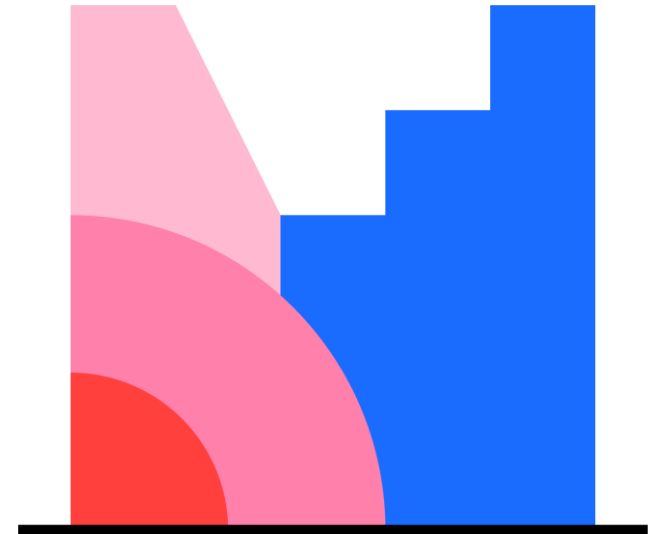
Public Consultation

TRAIN4SUSTAIN CEN Workshop Agreement

Where is harmonization or standardization needed?



How to consolidate and build upon proven outcomes...?



Mentimeter

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This project has received funding from the European Union's h2020 framework programme for research and innovation under grant agreement **no 892894**.

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