

BUILD UP Skills NETHERLANDS Factsheet	
BUILD UP skills activities of the country	
BUS Pillar I project title (contract number) ¹	Dutch BUILD UP Skills (DuBUS) IEE/11/BWI/477-SI2.604355
BUS Pillar II project title (contract number)	BUILD UP Skills Netherlands At Work (BUILD UP Skills N@W) IEE/12/BWI/335/SI2.659666
Horizon 2020 Construction skills project title (contract number)	BUSToB Project ID: 649737 PROF / TRAC (PROFessional multi-disciplinary TRaining and Continuing development in skills for nZEB principles) Project ID: 649473
BUILD UP Skills N@W	
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Project Partners	<ul style="list-style-type: none"> . Stichting Opleidings- en ontwikkelingsfonds voor het Technisch Installatiebedrijf (OTIB) (<i>Consortium coordinator</i>) . SBRCURnet . Dutch Building Services Knowledge Centre (ISSO) . MBO-Services <ul style="list-style-type: none"> . ROC Nijmegen . ROC Twente . ROC Central Netherlands . Koning Willem I College . Kenteq (Centre of Expertise) . Fundeon
Project website	https://buildupskills.otib.nl/
Keywords	Building, workforce, qualifications, train-the-trainer, nZEB, cross-craft, interdisciplinary
Duration	Start date: 01/10/2013 End date: 30/09/2015
Budget ²	EUR 602,096 (EU contribution: 75%)
Context	
Summary description ³	The analysis of the status quo of the Dutch construction and installation industry carried out BUILD UP Skills Pillar I in the country concluded that there is a lack of coordination, information, interdisciplinary schemes and a gap between existing vocational

¹ <https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-nl>

² <http://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-nw>

³ https://buildupskills.otib.nl/Upload/BUS-NL_Report%20BUS_N@W_EN.pdf

	<p>education and training (VET) qualification structure and post-initial education. BUS N@W is set out to reach cooperation between the most important actors and stakeholders in order to complete the schemes for post-initial training and to unlock the available courses and trainings for the workforce. These actions are needed to facilitate the involved market actors for massive roll-out of their up-skilling activities.</p>
Objectives ⁴	<ul style="list-style-type: none"> . The development and implementation of official accreditation and endorsement of existing post-initial training schemes . Preparation for funding of post-initial training courses . Monitoring of the progress and results of the actions . Taking care of the continuity of the National Qualification Platform BuildUpSkillsNL . Development and implementation of a qualification structure for post-initial training with a feedback loop to the qualification structure for initial education . Development of missing qualifications . Development and implementation of multi- or interdisciplinary schemes and training courses . Adding the developed schemes and the inventory of courses made in Pillar I to existing course catalogues
Target skills/ professions	<ul style="list-style-type: none"> . Glazier . Various construction related professions (floors, roofs, walls, building envelope) . Carpenter (facades, renovation, frames, windows, doors, finishing) . Mason/bricklayer/cladder . Plasterer . Ceiling and wall installer . Roofer . Workers involved in wood (pre) fabrication . Electrical installations mechanic (lighting, power, home automation) . Service engineer for electrical installations (lighting, power, solar power, home automation, energy monitoring) . Mechanical engineering installations specialist (heat pump, ventilation, low temperature heating, solar power, energy generation) . Service engineer for mechanical installations (heat pump, ventilation, low temperature heating, solar power, energy generation, energy monitoring, EPA)

⁴ https://buildupskills.otib.nl/Upload/BUS-NL_Report%20BUS_N@W_EN.pdf

	<ul style="list-style-type: none"> . Cooling installations mechanic (ventilation, high temperature, solar power) . Service mechanic for cooling installations (ventilation, high temperature, solar power, energy monitoring) . Roof mechanic (solar power, urban wind energy)
Project's results and impact	
Results ⁵	<p>Qualitative results:</p> <ul style="list-style-type: none"> . Increased demand for training courses and unlocking of potential financing sources. . Schemes and courses have been developed, including train the trainer. . The developed material is based on the NL-QF and the European Qualification Framework (EQF). . A network of trained teachers, trainers and HR-advisors. . The existing potential is unlocked for the market by several communication activities, including two . National work conferences. <p>Quantitative results:</p> <ul style="list-style-type: none"> . 10.000 upskilled employees in 2015 . 89 trainers trained . 39 HR-advisors trained . 140 workplace trainers trained . Clear view on available courses and their quality . Good training materials for interdisciplinary craftsmanship . A flexible monitoring system . Unlocked €40.000.000 of additional funding
Lessons learnt ⁶	<ul style="list-style-type: none"> . Endorsement is key for upscaling upskilling actions BUS_N@W did not foresee enough time for endorsement activities. Luckily the involved branch-organisations are gearing up, creating room for endorsement activities. . Regional approach Most craftsmen in the Netherlands will not travel a long distance to training. Therefore, for massive upskilling of the workforce, the regional infrastructure must be upskilled first. This takes a lot of effort and endorsement. . Create synergies between National initiatives and BUILD UP Skills By creating synergies between BUILD UP Skills and national initiatives, a broad recognition of the value of craftsmanship is created. This recognition is needed to enhance the demand for upskilled craftsmen.

⁵ <http://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-nw>

⁶ <http://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-nw>

Success factors ⁷	<p>I: Working together with the National Qualification Platform was essential in realizing the upskilling.</p> <p>II: Integrating results in national programmes.</p> <p>III: Working towards the next generation curriculum in 2020 by writing up the needed changes in craftsmanship and integrating them in education incrementally as experiments and modules that can be chosen.</p> <p>IV: Providing workers with training centres in the region as craftsmen are unwilling to commute long for training.</p> <p>V: Integrating results in tools is key. Reports are not effective in tackling the skills problems and that what is needed at present are tools, such as the 'BUILD UP Skills advisor app' they created, through which the HR workers at a construction company can identify suitable trainings for their workers.</p> <p>VI: To target trainings at frontrunners enables creating a movement by making them ambassadors for other to join.</p> <p>VII: Providing regional operating consortia with advice on how to acquire the needed funding by helping them to write good proposals.</p>			
Barriers ⁸	The level of nZEB knowledge and skills of trainers working at training institutes and in regular education.			
Key needs ⁹	Excellent basic training materials on nZEB subjects that are easy to implement in upskilling initiatives.			
Recommendations to similar projects ¹⁰	Endorsement is Key, dedicate enough effort in building a strong networked platform/movement.			
Replicability ¹¹	The chosen approach is replicable.			
Project Common Performance indicators				
Common Performance Indicators	Ex ante target	Interim results	Final result	Target 2020
Number of training courses triggered by the action	~2,000 (incl.in-company and on-the-job courses) (15 students)	n/a	~1000 trainings ¹² (10 students each course)	~11,500

⁷ Trinomics, 2016. [8th EU Exchange Meeting report](#) (report commissioned by EASME)

⁸ Input from Jan Cromwijk, November 2016

⁹ Input from Jan Cromwijk, November 2016

¹⁰ Input from Jan Cromwijk, November 2016

¹¹ Input from Jan Cromwijk, November 2016

¹² This number only regards trainings subsidised by educational funds. Trainings not included due to lack of data: trainings non-subsidised by educational funds, in-house trainings by the larger installation / building companies, free trainings by suppliers, free trainings by national initiatives, e-learning activities

	each course)			
Number of people that will be trained	~30,000 (15 students per course)	n/a	~10000 ¹³	150,000-225,000
Number of hours taught in the frame of the courses triggered	~24.000 hours (2x6 effective learning hours per course)	n/a	9.000 hours (3000 building sector; 6000 installation sector) ¹⁴	~150.000 hours
Estimated specific cost to qualify each trainee	€350 per day ¹⁵	n/a	€350 per day ¹⁶	€350 per day ¹⁷ When e-learning is broadly adopted, decrease of costs foreseen
Renewable Energy production triggered	25,75 PJ/year	n/a	20% of 4,5% = 0,464 PJ/Year = 11.070 toe/Year	206 PJ/year
Primary energy savings compared to projections	Equivalent of 0,9375 Mton CO2 /year	n/a	20% of 4,5% = 8438 ton CO2/Year = 26.367 toe/Year	Equivalent of 7.5 Mton CO2
Reduction of greenhouse gas emissions	0,9375 Mton /year	n/a	20% of 4,5% = 8438 ton CO2/Year = 26.367 toe/Year	7,5 Mton
BUStoB				
Contact person's name	Peter Smulders			
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Project's website	www.buildupskills.nl			
Keywords	e-learning, qualification, skills, RES, energy-efficiency			
Duration	Start date: 2015/03/01 End date: 2018/02/28			
Budget ¹⁸	EUR 1,392,562.50 (EU contribution 100%)			

¹³ This number only regards trainings subsidised by educational funds. Trainings not included due to lack of data: trainings non-subsidised by educational funds, in-house trainings by the larger installation / building companies, free trainings by suppliers, free trainings by national initiatives, e-learning activities

¹⁴ This number only regards trainings subsidised by educational funds. Trainings not included due to lack of data: trainings non-subsidised by educational funds, in-house trainings by the larger installation / building companies, free trainings by suppliers, free trainings by national initiatives, e-learning activities

¹⁵ without lost time costs for the employer

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¹⁷ without lost time costs for the employer

¹⁸ http://cordis.europa.eu/project/rcn/194609_en.html

Summary description	BUSStoB builds on the results of DuBUS and BUS_N@W and follow-up the implementation of the National Roadmap actions. By October 2017 in three cohorts and in cooperation with and piloting in six regions 76 e-learning modules will be developed in the form of e-assessments. These e-learning modules will be a unique opportunity to use real-life situations for upskilling in the construction and installation sector.
Context	
Objectives ¹⁹	<ol style="list-style-type: none"> 1. To develop and pilot missing training materials on EQF-levels 2-4, based on the future-ready qualification schemes developed in BUILD UP Skills Pillar II. 2. To construct short skill measurement tests which enables the prevention of mistakes made by unconsciously incompetent workers, the detection of skills gaps and supply of industry relevant upskilling advice to craftsmen and building workers. 3. To organise regional pilots to test the developed materials and enhance regional capacity building. <p>Concrete, quantitative objectives are:</p> <ul style="list-style-type: none"> • Increase the skills of 3000 craftsmen by the end of year 2018 • Increase in RES-production of 11 GWh/year • Decrease of energy consumption of 69 GWh/year (EE) • Increase the employability of the building workforce with 3000 of which at least 5% women • Increase in investments in innovative sustainable energy technologies with €42.7 million • Acquired additional funding of €1.000.000 to sustain the action
Target skills/ professions	Same as BUS N@W (as this project is implementing the trainings developed by such project)
PROF / TRAC	
Project Coordinator ²⁰	Huygen Installatie Adviseurs (NL)
Participants ²¹	<ul style="list-style-type: none"> . Federatie van Verenigingen voor Verwarming en Luchtbehandeling in Europa (NL) . CAE Services GEIE (BE) . Conseil des architectes d'Europe (BE) . Comité Européen de coordination de l'habitat social AISBL (BE) . Stichting Instituut voor Studie en Stimulering van Onderzoek op het Gebied van Gebouwinstallaties (NL) . Instituto Valenciano de la Edificación (ES)

¹⁹ http://cordis.europa.eu/project/rcn/194609_en.html

²⁰ http://cordis.europa.eu/project/rcn/194585_en.html

²¹ http://cordis.europa.eu/project/rcn/194585_en.html

	<ul style="list-style-type: none"> . České vysoké učení technické v Praze (CZ) . Aalborg Universitet (DK) . Danvak APS (DK) . Hrvatska komora inženjera strojarstva (HR) . Fundatecyr (ES) . Nederlandse Technische Vereniging voor Installaties in Gebouwen TVVL (NL) . Ceska komora autorizovanych inzeyru a techniku (CZ) . Zbornica za arhitekturo in prostor Slovenije (SL) . Consiglio Nazionale degli Architetti, Pianificatori, Paesaggisti e Conservatori (IT)
Contact person's name	Peter Op't Veld
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Project's website	http://proftrac.eu/open-training-platform-for-nzeb-professionals.html
Keywords	Skills, training, white-collar, energy-efficiency, nZEB
Duration	Start date: 2015/03/01 End date: 2018/02/28
Budget ²²	EUR 1,499,871.25 (EU contribution 100%)
Summary description	<p>PROF-TRAC has developed a skills mapping methodology (creating inventories of professionals, existing qualifications, available education programmes, accreditation and certification structures and so on) through which estimates of the number of professionals required can be made. One of the results is a implementation of the results in a mobile application that facilitates actors in the construction sector find a suitable training. PROF-TRAC has also resulted in an online database (http://proftrac.eu/training-materials.html) that lists and categorises training projects (e.g. according to target / involved groups, building phase).</p> <p>PROF-TRAC is building upon previous IEE projects (BuildUpSkills, IDES-EDU etc.) and is initiated by the largest European associations for the sector (REHVA, ACE, CECODHAS).</p>
Context	
Objectives ²³	<ol style="list-style-type: none"> 1. Mapping of the required skills and current skills gap of professionals in NZEB 2. Development of an open training platform including methods for a systematic and sustainable access to knowledge 3. Development and testing of a Train the Trainers programme for the developed curriculum and/or qualification scheme 4. Development of a repository of the training material for use in education and post-initial education

²² http://cordis.europa.eu/project/rcn/194585_en.html

²³ http://cordis.europa.eu/project/rcn/194585_en.html

Target skills/ professions²⁴

- Architects
- Engineers
- Building managers
- Other building professionals

²⁴ http://cordis.europa.eu/project/rcn/194585_en.html