

BUILD UP Skills Slovakia Factsheet	
BUILD UP skills activities of the country	
BUS Pillar I project title (contract number)	BUILD UP Skills SK (IEE/12/BWI/426/SI2.623226)
BUS Pillar II project title (contract number)	BUILD UP Skills Setting up Qualification and Training Scheme on Energy Efficiency and Use of Renewables for Craftsmen (BUILD UP Skills STAVEDU) (IEE/13/BWI/698)
Horizon 2020 Construction skills project title (contract number)	Coordinator of H2020 Construction skills project ingREeS (Project ID: 649925)
BUILD UP Skills STAVEDU	
Project coordinator's full name	Association of Construction Entrepreneurs of Slovakia (Zväz stavebných podnikateľov Slovenska)
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Project Partners	Institute for Education and Services The Slovak Innovation and Energy Agency Institute for Lifelong Learning
Project website	http://www.stavedu.sk
Keywords	energy efficiency, buildings, crafts, renewables, training
Duration	Start date: 18/07/2014 End date: 17/07/2017
Budget	EUR 841.923 (EU contribution 75%)
Context	
Summary description	The Project started the implementation of the Roadmap established and endorsed under Build Up Skills Pillar I. The project covers over 30 blue-collar professions in the construction and energy sector relevant to energy efficiency and use of renewable energy sources in buildings. These professions are divided into 9 groups for which training programmes were developed. The project identified skills and knowledge relevant to these groups of professions in energy efficiency and use of renewables in buildings and developed qualification standards that define the skills and knowledge on which the training programmes are focused. Based on these qualification standards, the project developed curricula of these training programmes. The project also aimed at facilitating investment into skills and aimed at launching green growth in the construction sector and setting up a network of companies underpinning the qualification and further training scheme.

Objectives	<ul style="list-style-type: none"> • Set-up a framework for the national qualification and training scheme for on-site workers in the field of buildings with national network of supporting employers • Develop 9 training programmes for on-site workers with defined matrix of learning outcomes and testing for validation of the learning outcomes and certification • Network of trained trainers for delivering training programmes for on-site workers in the field of buildings and testing the learning outcomes • Network of on-site trainers and internal assessors of issues to be addressed in on-site inception training • Recommendations for financial measures to be established to encourage the participation of craftsmen and other target groups to cross-trade training programmes and SMEs to invest in further education. These recommendations will be addressed to the Slovak Government.
Target skills/ professions	Over 30 blue collar professions in the construction and energy sector relevant to energy efficiency and use of renewable energy sources in buildings.
Project's results and impact (max 500 characters without spaces per bullet point)	
Results	<ul style="list-style-type: none"> • A joint workshop of working groups for qualification and assessment standards and the main stakeholders was organised on 19 November 2014 to validate the groups of professions for which the training programmes would be developed, to validate the training framework in respect of technologies and building materials, to develop draft qualification standards for groups 1 to 7, to review the project objectives with stakeholders and discuss priority measures, the scope, content and the expected outcomes of the qualification and training scheme; • 9 qualification standards were produced, reviewed and approved by the internal quality review team; these qualification standards have defined learning outcomes of the training programmes and were included in the National Qualification Framework (NQF) linked to the European Qualification Framework (EQF); • A Joint StavEdu, ingREeS, Train-to-nZEB and CrossCraft conference and workshops were organised during the exhibition Coneco/Racioenergia 2016 on 7 April 2016 in Bratislava, Slovakia to disseminate outcomes of the projects; • 9 curricula were developed for Groups 1 to 9 of craftsmen and on-site workers in the sector of buildings on EE and use of RES;

	<ul style="list-style-type: none"> • Completed documentation for 9 training programmes, including teaching content of the training for Groups 1 to 9 of craftsmen and on-site workers in the sector of buildings; • Key stakeholders for preparing stakeholders' dialogue were identified and drafting group of stakeholders was set up to produce initial draft of the proposals. • Voluntary green growth initiative of the construction sector "Building Future" was launched to support activities of the sector for promoting sustainable construction, including by reducing carbon footprint of buildings, and to promote education and training on energy efficiency and use of renewable energy sources in buildings. Related network of companies underpinning the national qualification and further training scheme was set up. • StavEdu - the national qualification and further training scheme for craftsmen and on-site workers was launched and pilot training courses were organised to validate the training courses and fine-tuning the curricula.
Lessons learnt	<ul style="list-style-type: none"> • There is a higher interest in training among craftsmen (including self-employed) than it is generally expected; • Working with Units of Learning Outcome (ULO) is rather formal and they are developed after developing curriculum and content of the training programme in order to document content rather than developed as a tool that is defining the content of the programme - the project used ULOs correctly for defining targeted learning outcomes; • Companies in Slovakia start to feel a grave impact of missing qualified craftsmen once the critical generation of craftsmen retires; • Promotion of the training is more effective if it targets directly trainees, for example self-employed craftsmen, and not only employers.
Barriers	<ul style="list-style-type: none"> • Qualification requirements for craftsmen and on-site workers not set adequately in the NQF, access to qualification is limited due to missing certification schemes, prior learning and informal learning recognition; • New licencing/certification requirements relevant to energy efficiency and use of renewable energy sources in buildings are creating barriers through prohibitive pricing of the required training and certification/licencing (for example, for ETICS). Moreover, if applied to be supplier-specific, they restrict competition and are illegal under EU competition law; • Development of NQF without European standardisation and/or harmonisation of qualification standards for the common professions leads to lack of transparency and high complexity

	of the requirements and creates barriers to the free movement of people in the Internal Market and mutual recognition of qualifications - a European action is needed.		
Key needs (relevant to Slovakia)	<ul style="list-style-type: none"> • Embedding training on energy efficiency and use of renewable energy sources also in the vocational education and training for pupils and apprentices; • Support to mass roll-out of the further education and training by ESF; • Review of the NQF in the construction qualification and develop certification scheme for craftsmen and construction professions; • Address new barriers by new licencing schemes (for example ETICS). 		
Recommendations	<ul style="list-style-type: none"> • More European standardisation is needed to harmonise description of required skills and knowledge (for example, through common set of descriptors) or developing European qualification standards that would facilitate harmonisation of the qualification requirements; • Review new certification and/or licencing schemes such as ETICS for compliance with the EU competition law and address prohibitive pricing; • Require from new regulatory proposals on energy performance of buildings an impact analysis how resulting new qualification requirements and certification/licencing schemes will affect mutual recognition and access to qualification, including price capping for required training and relevant certification/licencing. 		
Replicability	High replicability. Prepared project to replicate StavEdu in the Czech republic in setting up their national qualification and training scheme for craftsmen on energy efficiency and use of renewable sources in buildings. Another project proposal will use the project results in embedding training on energy efficiency and use of renewable energy sources in buildings in the vocational education and training courses for pupils and apprentices, as well as for further training of young craftsmen.		
Project indicators			
Common Performance Indicators	Ex ante target	Final result	Target 2020
Number of training courses triggered by the action	10 training courses; 24 on-site company courses; 4	10 training courses; 11 training of trainers courses; 5 on-site courses integrated in pilot demonstration courses.	540 training courses; 240 on-site

	training of trainers courses		company courses
Number of people that will be trained	209	217	11700
Number of hours taught in the frame of the courses triggered	262	360	7740
Estimated specific cost to qualify each trainee (EUR)	952 Euro/trainee; 1647 Euro/trainers	952 Euro/trainee; 1647 Euro/trainer	50 Euro/trainee; 350 Euro/trainers
Renewable Energy production triggered (toe/year)	280 Toe/ year	280 Toe/year	3702 Toe
Primary energy savings compared to projections (toe/year)	400 Toe/year	400 Toe/year	6030 Toe
Reduction of greenhouse gas emissions (tCO ₂ e/year)	1030 tCO ₂ e/year	1030 tCO ₂ e/year	13560 Ton CO ₂
H2020 ingREeS			
Role in the project	Coordinator - The Slovak Chamber of Civil Engineers		
Country organisations involved	VIAEUROPA Competence Centre SRO (Slovakia) Association of Construction Entrepreneurs of Slovakia University of Natural Resources and Life Sciences Vienna (Austria) Association of Building Entrepreneurs of the Czech Republic SEVEEn - Energy Efficiency Center (Czech Republic) National Institute of Lifelong Learning (Slovakia) Faculty of Civil Engineering of the Slovak University of Technology in Bratislava (Slovakia) Graz University of Technology (Austria)		
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Project's website	http://www.ingrees.eu/en/		
Keywords	energy efficiency, continuing training, construction professionals, skills, renewables in buildings		
Duration	Start date: 01/03/2015 End date: 28/02/2018		
Budget	EUR 1.399.622 (EU contribution 100%)		
Summary description	The Project have extended the implementation of the Roadmap established and endorsed under BUILD UP Skills Pillar I project in Slovakia and the Czech Republic to middle and senior level professionals. These Roadmaps identified key measures for setting up a national qualification and training scheme and other measures for ensuring development of skills essential for the field of buildings		

	<p>to contribute to the fulfilment of the Europe 2020 energy targets. The project establishes necessary resources and prepare technical, organizational and financial conditions for training and re-training on energy efficiency and use of renewable energy sources for middle and senior level professionals in the field of buildings.</p>
Context	
Objectives	<ul style="list-style-type: none"> • Development of 5 education and training programmes for further education and training of middle and senior professionals in the field of buildings; • Setting up permanent network of trainers delivering the training programmes developed under the project; • Training of trainers for delivery of the programmes; • Proposal for financial measures to be established to facilitate and motivate middle and senior level professionals in participating to training programmes and SMEs to invest into further education; • Proposals to Slovak Government for incentives boosting demand for highly qualified professionals; • Reaching financing agreements using European Social Fund (ESF) for dissemination of training programmes.
Target skills/ professions	<p>Middle and senior level professionals in buildings, skills related to energy efficiency and the renewable energy sources. Target groups: civil engineer - site manager, construction site supervisor, civil engineer - energy counsellor, architects and planners, assessors of the achieved energy efficiency of the buildings.</p>
Results	<ul style="list-style-type: none"> • QS¹ matrix (deliverable D2.1) defining for each training programme and target professionals: <ul style="list-style-type: none"> ○ Competence profile in energy efficiency and use of renewable energy sources in buildings, as required by the Build Up Skills Pillar I Roadmap; ○ Role for the targeted professionals in increasing energy efficiency and use of renewable energy sources in buildings; ○ Goals of the training programmes; ○ Key targeted learning outcomes; ○ Recommended subjects to be included in the training programmes; • Inception workshop for developing ULOs² and validation workshop (deliverables D2.3 and 2.4); • 4 workshops to develop the content of the training programmes;

¹ QS = qualification standard

² ULO = Unit of Learning Outcome

	<ul style="list-style-type: none"> • Draft content for 11 education modules in German and English that was used for training of trainers (deliverable D4.1) and as a basis for developing Slovak and Czech versions (deliverable D3.1): <ul style="list-style-type: none"> ○ AM1 - Energy Certification and Building Certification; ○ AM2 - Life Cycle Assessments; ○ BS1 - Integrated Buildings Design; ○ BS2 - Renewable Energy Technologies; ○ BS3 - Advanced Building Methods and Tools; ○ CD1 - Basic Climate Adaptive Design; ○ CD2 - Advanced Climate Adaptive Design; ○ CD4 - Green Construction Products; ○ LQ2 - Recycling and Waste Management On-site; ○ LQ3 - Quality Control; ○ LQ4 - Legal Requirements. • Draft content for 3 education modules in Slovak that will be used for training of trainers (deliverable D4.1) and as a basis for developing Czech versions: <ul style="list-style-type: none"> ○ CD3 - Internal Comfort and Indoor Air Quality; ○ CD5 - Building Physics and Energy Efficiency; ○ LQ1 - Project Life Cycle Management; • Draft content for 1 education module in Czech (LQ4 - Legal Requirements) that will be used for training of trainers (deliverable D4.1) and as a basis for developing Slovak version. • 3 Workshops of partners with main stakeholders and mobilised key market actors (deliverable D1.2), two on 14 January 2016 and 2 March 2017 in Prague, Czech Republic and one on 4 February 2016 in Bratislava, Slovakia; • Training of Trainers plan was finalised and partners launched the training.
Key needs	<ul style="list-style-type: none"> • Develop and deliver education and training in Building Information Modelling (BIM) for all actors in the buildings construction and energy renovation value chain; • Develop and deliver training on smart concept and technologies brought about by 4th industrial revolution; • Develop and deliver education programmes at tertiary level for renovation managers and specialists; • Develop and deliver training on sustainable construction, reducing environmental footprint of buildings, decarbonise the energy mix for buildings and embed education and

	training on energy efficiency and use of renewable energy sources in building in university curricula.
Recommendations	<ul style="list-style-type: none">• More European standardisation is needed to harmonise description of required skills and knowledge (for example, through common set of descriptors) or developing European qualification standards that would facilitate harmonisation of the qualification requirements.
Replicability	Highly replicable for other countries, translations would be needed from English, German, Czech and Slovak