



European Construction Sector Observatory

Policy measure fact sheet

Hungary

BUILD UP Skills Hungary (BUSH)

Thematic Objectives 2 & 3

January 2018



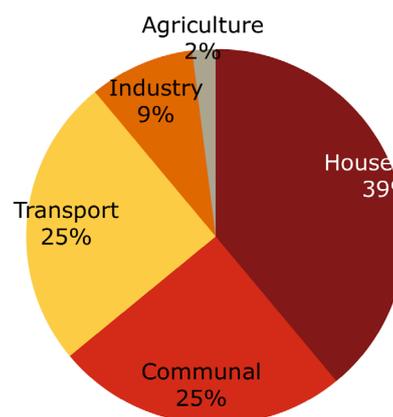
In a nutshell

Implementing body:	ÉMI Non-profit Llc. (Limited Liability Company for Quality Control and Innovation in Building)
Key features & objectives:	A strategic measure that aims to boost sustainable construction in Hungary by (1) upgrading training schemes for building workers and (2) building up demand for skilled workers.
Implementation date:	Pillar I: 16/11/2011 - 16/05/2013 Pillar II: 01/09/2014 - 31/08/2017
Targeted beneficiaries:	Blue collar construction workers, especially HVAC (heating, ventilation and air conditioning) workers
Targeted sub-sectors:	Member organisation of the Sustainable Construction Skills Alliance, training institutions, professional organisations, manufacturer companies, owners and tenants of buildings, general public.
Budget (EUR):	376,136 (EU contribution: 75%)

In 2009, Hungary was placed in the top ten among EU Member States in terms of residential energy consumption, with households accounting for 39% of the fuel and heat energy consumed in Hungary, as shown in Figure 1¹. In 2010, buildings accounted for 40% of total energy consumption, out of which nearly 80% was used for heating, cooling and hot water production².

In addition, almost 70% of Hungary's 4.3 million residential apartments/flats do not comply with current national technical and thermal engineering requirements³. Around 10% of those buildings are outdated to such an extent that they need to be rebuilt⁴. The renovation and modernisation of existing buildings is a national priority and it represents an important business opportunity for the Hungarian construction industry and the national economy.

Figure 1: Proportion of Hungarian sectors in fuel and heat energy end-use in 2009



Source: International Energy Agency, Energy Balance for Hungary 2009⁵

Measures targeting energy efficiency play a central role in ensuring that climate and energy policy targets can be implemented at the lowest possible cost. Despite of an improving situation due to communal energy efficiency projects implemented in the country, the amount of energy consumed for heating of a flat in Budapest is still nearly twice that of a similar sized flat in Vienna⁶.

Improving energy efficiency in buildings is an essential component of the government's work to reduce energy consumption.

Improving energy efficiency is also highly relevant to the Programme of National Cooperation's⁷ job creation objectives, as energy retrofit projects and new constructions require a larger and more qualified workforce.

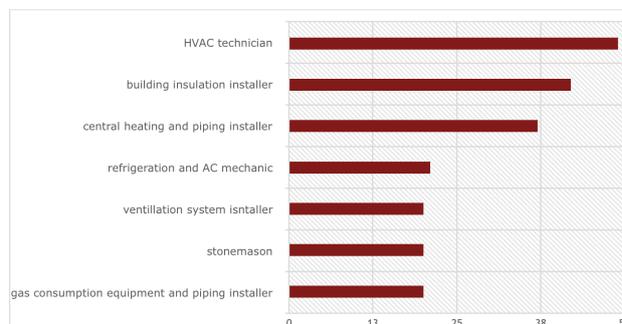
BUSH aims to provide modern and comprehensive education and training schemes to support the supply of a more skilled and qualified construction workforce.

Against this background and in order to contribute to national⁸ and EU 2020 energy targets, a consortium of relevant construction sector representatives launched the BUILD UP Skills Hungary (BUSH) initiative in 2011⁹. BUSH aims to provide modern and comprehensive education and training schemes to support the supply of a more skilled and qualified construction workforce. These schemes are intended to boost sustainable construction and deliver high energy performance renovations in existing buildings, as well as new and nearly-zero-energy buildings.

The Build Up Skills Hungary initiative and roadmap was based on a survey of building sector stakeholders and training/education experts. 218 completed questionnaires were returned and 30 interviews were conducted. Figure 2 shows the skills and qualifications that are most in need, based on the survey's results.

Overall, the feedback received from the targeted beneficiaries and involved institutions and organisations was positive. BUSH has been appreciated in particular by training institutions,

Figure 2: Need to train more professionals in building sector fields (% of respondents)



Source: BUILD UP Skills, Hungarian Roadmap¹⁰

professional organisations and manufacturers. They view it as a good solution upon which to create a solid basis for the introduction of energy efficiency in buildings and renewable energy into vocational training curricula for construction workers. Nevertheless, the project has faced some challenges related to attracting blue collar workers for voluntary training.

1

General description

To implement the project's objectives, a consortium led by EMI¹¹, a non-profit company for Quality Control and Innovation in Building Hungary, was set up. The other members of the Consortium include the National Labour Office, the Hungarian Building Material Association, the Budapest Chamber of Commerce and Industry, and the Hungarian Association for Plumbers and Technical Contractors. BUSH is divided into two main pillars¹².

	Duration	Objective
Pillar I	2011-2013	Development of the National Roadmap based on the Status Quo Analysis.

Pillar I came to end in 2013 and had an objective to develop the National Roadmap based on the Status Quo Analysis of the national situation. The Pillar I implementation followed four main phases:

- (1) Creation of cooperation framework;
- (2) Analysis & scope of roadmap development, status quo report, mobilisation of stakeholders;
- (3) Roadmap development & stakeholder engagement; and
- (4) Policy endorsement¹³.

	Duration	Objective
Pillar II - TRAINBUD	2014-2017	Introduction of new and/or the upgrading of existing qualification and training schemes.

Defining the main objectives of the project including its target groups, modules of training, the content and the length of training as well as the type and structure of the education materials, the roadmap served as a basis for the **Pillar II – TRAINBUD**. Aiming to create a voluntary qualification system (quality labelling) based on the participatory strategy and actions of the Sustainable Construction Skill Alliance¹⁴, it was launched in the autumn of 2014. More specifically, the primary objectives of TRAINBUD are:

- (1) to reinforce the up-to-date knowledge and skill base of construction workers in building energetics, energy efficiency programmes and use of renewable energy;
- (2) to raise the awareness of property owners in energy efficiency measures; and
- (3) to emphasise on the importance of examination, assessment and installation of energy efficiency measures to boost the demand for qualified, skilled construction workers¹⁵.

The definition of the above objectives as well as the development of a suitable work plan was grounded by the following facts:

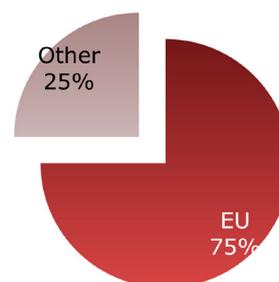
- the training and certification structure is very complex in Hungary, creating a heavy burden especially for SMEs;
- a growing number of SMEs and HVAC workers are employed in the shadow economy;
- it is rather difficult to inspect and monitor the quality of work done in homes due to:
 - the fragmented structure of home ownership (86% of all homes are owner occupied);
 - the habit of not preparing proper contracts between home owners and renovation companies;
 - the lack of knowledge on certification and qualification systems for HVAC workers among the general public;
 - improvidence within financial and taxation issues;
 - the prevalence of short term thinking of the home owners as a result of scarce available financial resources¹⁶.

Besides BUSH consortium members, the work under this pillar was also supported by Hungarian Coordination Association for Building Engineering, Association of Adult Educators, M-12/B and Insomnia¹⁷.

The majority of the funding for the project was secured from the Intelligent Energy Programme (IEE)¹⁸ of the European Commission, with the remainder covered by other national and private financial contributions. Out of a total budget of EUR 376,136, the EU contributions amount to EUR 282,102.

The allocation is shown in percentage terms in Figure 3¹⁹.

Figure 3: BUSH budget allocation



Source: Build Up Skills TRAINBUD

2

Achieved or expected results

During the implementation of BUSH, there were no major modifications or deviations. The main objectives of the Pillar I (2011-2013) of the project were successfully achieved.

These include:

- Status Quo Report: an analysis of the situation in Hungary covering all professions involved in the construction sector and all energy efficient and renewable energy sources technologies relevant for the country. The work was conducted through a combination of baseline desk research and a series of large scale surveys and interviews. The final analysis was validated by relevant industry stakeholders;
- 6 discussions were organised to ensure the involvement of stakeholders in the validation of the Status Quo Report and preparation for the development of the National Roadmap;
- 3 conferences were organised with relevant industry stakeholders to evaluate the results of the work of experts;
- National Qualification Roadmap: an elaboration of a work of action following naturally from the Status Quo Report;
- 15 signed endorsement statements by stakeholder organisations to ensure the project's wide acceptance and support. These include the Ministry of National Development, Ministry of National Economy, National Development Agency, Hungarian Passive House Association, Hungarian HWAC Coordinating Association, Hungarian Heat Pump Association and Hungarian Solar Energy Society²⁰.

The National Roadmap, a key result of the Pillar I, takes into account the expected contribution of the construction sector to the 2020 energy and climate change objectives. Primarily, it targets the training of the existing workforce as craftsmen, although it also addresses initial education and a selected number of crafts and professions.

Based on the roadmap, the Pillar II-TRAINBUD of the BUSH project was launched in 2014 and came to an end in December 2017.

The major results of the Pillar II-TRAINBUD include²¹:

- Energy efficient improvements and the use of renewable energy sources by the trained workforce contributed to major reduction of greenhouse gas emissions:
 - 8,054 ton/year within action duration;
 - 370,094 tonnes until 2020;
- Increase in better skilled workforce in sustainable construction;
- Introduction of easy to reach, practical training courses for blue collar construction workers, especially HVAC:
 - Extra 60 hours training for skilled construction workers that have already acquired a HVAC qualification. The HVAC qualification must be recognised by the National Qualification Register²², which is the national register of government-recognised professional qualifications;
 - 7 different types of 20-hour training courses on energy efficiency and the use of renewable energy sources in buildings. The training is not only available for workers with experience but is also included in the curriculum of 13 vocational training institutions nationwide;
- Support to help households and residential building owners to better understand and estimate the concept of a 'value for money investment';
- Providing fundamental information on energy efficiency and the use of renewable energy sources to households and residential building owners;
- Support to help households and residential building owners to locate and select appropriate qualified construction contractors (tradespeople and small businesses) for the work they want to carry out. This support is provided through various events and via the 'Find a Contractor' search facility on the TRAINBUD website²³;
- Establishment of a Sustainable Construction Skills Alliance to ensure the continuation of the proposed and developed training schemes. The members of the Alliance include representatives of the Hungarian building and education sector²⁴.

The above list of results is not exhaustive given that the project was only concluded in December 2017. Some of the results are still being collected and evaluated. Table 1 below summarises the key project indicators for different phases of the project cycle, including the expected 2020 targets.

Table 1: Pillar II – TRAINBUD: Summary of key project indicators

Common Performance Indicators	Ex ante target	Interim results	Final result / ongoing courses	Target 2020
N° of training courses triggered by the action	25 for trainees	1 for trainees	15 for trainees	148 trainees
	3 for trainers	2 for trainers	-	4 trainers
N° of people that will be trained	416 trainees	25 trainees	380 trainees	2,428 trainees
	54 trainers	61 trainers	-	68 trainers
N° of hours taught in the frame of the courses triggered	660 for trainees	60 for trainees	600 for trainees	3,560 for trainees
	32 for trainers	16 for trainers	-	40 for trainers
Estimated cost (EUR) to qualify each trainee	678	200	200	116.20
Renewable energy production triggered	344 toe/year	TBD	TBD	15,804 toe/year
Primary energy savings compared to projections	2,006 toe/year	TBD	TBD	92,190 toe/year
Reduction of greenhouse gas emissions	8,054 tCO ₂ /year	TBD	TBD	370,094 tCO ₂ /year

Source: Build Up Skills Hungary Factsheet²⁵

To summarise, BUSH has contributed to the improvement of energy efficiency in Hungarian buildings and in the construction sector. The new demand for more skilled workers is helping Hungarian SMEs involved in the construction industry to become more competitive.

To summarise, BUSH has contributed to the improvement of energy efficiency in Hungarian buildings and in the construction sector. The new demand for more skilled workers is helping Hungarian SMEs involved in the construction industry to become more competitive.

3

Perspectives and lessons learned

From an **implementation perspective**, the Project Coordinator and Deputy Director for Development at EMI²⁶, has identified a number of strengths, weaknesses, opportunities and threats in relation to the BUSH project, as conveyed in Table 2.

Table 2: SWOT Matrix for BUSH

Strengths	Weaknesses
<ul style="list-style-type: none"> • Active and powerful Sustainable Construction Skills Alliance • High quality training materials • Engagement of training institutions in the initiative • Strong acceptance of EMI through its background (Prime Minister's Office, Supervising Authorities, Notified Body) • Effective structures (different type of courses, basic + additional modules) • National pool of trainers; model exams developed can be used later 	<ul style="list-style-type: none"> • Difficulties in finding ways for mandatory requirements • Lack of long term and powerful contact with decision makers • Black market sets back the demand for quality labelling and certifications • Complex, cross cut knowledge proved to be difficult to accredit • 'Missing craftsmen' situation allows lower quality expectation • The popularisation of the training is time consuming • Lack of real motivation
Opportunities	Threats
<ul style="list-style-type: none"> • Participation in other international programmes • Heading towards interactive digital training materials (APPs) • Integration in national/regional grant tender systems • Open for professionals, clients, citizens, young generation and children • Boosting new type performance-based contracts • Implementing mandatory training and certification system • Joining to the existing FGases training, certification and monitoring system 	<ul style="list-style-type: none"> • Fear of losing quality workmanship • Not achieving the ambitious goals by 2020 • Retaining the 'traditional' fragmented, non-transparent, misleading - popular approach

Source: Based on the interview with Dr Károly Matolcsy²⁷

After the first pilot training, it was clear that the project's biggest challenge is how to attract construction workers in employment to attend a 60-hour training course. Due to the fact that the training is voluntary and the workers have limited free time, the overall training attendance was relatively low. In spite of available shorter pilot training courses (12 hours), many workers were still unable to take part in these. Originally, the target group only consisted of workers who have at least 2 years of experience; however, after negotiations with vocational training institutions, the training modules were included in the curriculum of the students completing their last year in the training institution.

From the **perspective of the Sustainable Construction Skills Alliance**, its member organisations have expressed enthusiasm about the project.

The Alliance includes training institutions, professional organisations and manufacturer companies. Due to the lack of a sufficiently qualified workforce in Hungary, it is in their interest to improve quality across the industry. This is mainly because if a product is installed incorrectly by an unqualified person, homeowners usually tend to assume that the product is of low quality, which has a negative impact on product manufacturers and providers. The members of the Alliance view BUSH as a good marketing opportunity for promotion of their products.

From the **perspective of vocational training centres**, the replicability of BUSH trainings is high as they can easily continue the training with the training materials and instructions provided.

From the **perspective of targeted beneficiaries**, the training courses offered by BUSH are of good quality, according to feedback received by BUSH from beneficiaries that completed satisfaction surveys at the end of each course.

Overall, beneficiaries said that they would recommend BUSH courses to their colleagues and other construction workers and they conveyed particular satisfaction with the training materials, which they found to be useful, modern and well-designed²⁸.

Endnotes

- 1 International Energy Agency, Energy Balance for Hungary 2009: <https://www.iea.org/countries/membercountries/hungary/>
BUILD UP Skills, Hungarian Roadmap: http://www.buildup.eu/sites/default/files/bus_projects/poster_roadmap_hungary.pdf
- 2 Ministry of National Development, National Energy Strategy 2030 (2012):
<http://2010-2014.kormany.hu/download/7/d7/70000/Hungarian%20Energy%20Strategy%202030.pdf>
- 3 Ibid
- 4 BUILD UP Skills, Hungarian Roadmap: http://www.buildup.eu/sites/default/files/bus_projects/poster_roadmap_hungary.pdf
- 5 International Energy Agency, Energy Balance for Hungary 2009: <https://www.iea.org/countries/membercountries/hungary/>
BUILD UP Skills, Hungarian Roadmap: http://www.buildup.eu/sites/default/files/bus_projects/poster_roadmap_hungary.pdf
- 6 Ministry of National Development, National Energy Strategy 2030 (2012):
<http://2010-2014.kormany.hu/download/7/d7/70000/Hungarian%20Energy%20Strategy%202030.pdf>
- 7 National Assembly of Hungary, The Programme of National Cooperation, 22 May 2010:
http://www-archiv.parlament.hu/irom39/00047/00047_e.pdf
- 8 National policies and strategies framing the development of Hungarian building sector include: the Programme of National Cooperation, National Energy Strategy 2030, 2nd National Energy Efficiency Action Plan, National Renewable Energy Action Plan, New Széchenyi Plan (National Development Plan until 2020) and Kálmán Széll Plan 2.0.
- 9 BUILD UP Skills Hungary: <http://www.bush.hu/home-2/>
- 10 BUILD UP Skills, Hungarian Roadmap: http://www.buildup.eu/sites/default/files/bus_projects/poster_roadmap_hungary.pdf
- 11 EMI, BUILD UP Skills TRAINBUD: <https://www.emi.hu/emi/web.nsf/pub/research-bustrainbud.html>
- 12 BUILD UP Skills Hungary: <http://www.buildup.eu/en/skills/bus-projects/HU>
- 13 Ibid
- 14 The Sustainable Construction Skills Alliance was established under BUSH project with an aim to support the Consortium by contributing to the development of the training material and holding the additional practical trainings.
- 15 BUILD UP Skills Hungary: <http://www.buildup.eu/en/skills/bus-projects/HU>
- 16 BUILD UP Skills Hungary Factsheet: http://www.buildup.eu/sites/default/files/bus_projects/factsheet_hungary.pdf
- 17 Ibid
- 18 Intelligent Energy Europe: <https://ec.europa.eu/easme/en/intelligent-energy-europe>
- 19 Upgrading training schemes for building workers and building up demand for skilled workers to boost sustainable construction in Hungary (BUILD UP Skills TRAINBUD): <https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-trainbud#results>
- 20 BUILD UP Skills Hungary, Project Presentation: <http://slideplayer.com/slide/6159425/>
- 21 Build Up Skills Hungary Factsheet: http://www.buildup.eu/sites/default/files/bus_projects/factsheet_hungary.pdf
- 22 National Qualifications Register: <http://www.szakkepeshu.hu/>
https://www.nive.hu/index.php?option=com_content&view=article&id=297
- 23 TRAINBUD website: <http://trainbud.hu/>
- 24 Build Up Skills Hungary Factsheet: http://www.buildup.eu/sites/default/files/bus_projects/factsheet_hungary.pdf
- 25 Ibid
- 26 Interview with Dr Károly Matolcsy, the Project Coordinator and Deputy Director for Development at EMI, January 2018
- 27 Ibid
- 28 Ibid