



European  
Commission



BUILD UP  
**Skills**

*An initiative to boost  
the energy skills  
of Europe's building workforce.*

February 2014

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*This publication provides an overview of the activities and achievements realised during the first phase (pillar I) of BUILD UP Skills. It is based on the reports and information provided by the BUILD UP Skills national project teams. Thirty national teams received financial support from the Intelligent Energy Europe (IEE) programme, managed by the European Commission's Executive Agency for Small and Medium Size Enterprises (EASME, formerly EACI).*

*This document was written by Carry Hergaarden and Nathalie Cliquot from the EASME, with the support of Johannes Haas, Irena Kondratenko and Karin Drda-Kühn, who worked as external experts contracted by the EASME. Besides supporting the development of this publication, the experts also worked together with the EASME team during five European Exchange Meetings organised within BUILD UP Skills Pillar I. These experts were very positive about the focus on cooperation that characterises the initiative. "We could see how the full potential of the BUILD UP Skills initiative was unlocked with every Exchange Meeting. How people started to work with each other and how many benefits arose for all. We predict that this spirit of mutual support and advice will proceed in the future and will create added value for the crucial national implementation effort" (Johannes Haas, Irena Kondratenko and Karin Drda-Kühn, external experts).*

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## Disclaimer

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*More details on BUILD UP Skills can be found at <http://ec.europa.eu/energy/intelligent>*

# BUILD UP Skills

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## About the BUILD UP Skills Initiative

*BUILD UP Skills is a strategic European initiative to stimulate the training of craftspeople and other on-site workers in the building sector on the topics of energy efficiency and renewable energy. It is part of the European Commission's Energy Efficiency Plan and is funded by the Intelligent Energy Europe (IEE) programme. IEE is a European Union funding programme to promote energy efficiency and renewable energy in Europe.*

As currently buildings account for about 40% of the EU's final energy demand, the building sector has a key role to play in meeting the European energy 20-20-20 objectives, and in contributing to the [Europe 2020](#) strategy. Specifically, the building industry needs to deliver new and renovated buildings with a very high level of energy efficiency and use of renewable energy sources. Jānis Ikaunieks, a Latvian BUILD UP Skills project team member from Riga Technical university, adds that *"the achievement of the 20 20 20 objectives are impossible without highly qualified and knowledgeable workers."*

*As today's workers are the main builders of 2020, the focus of BUILD UP Skills is on continuing the vocational education and on the immediate needs of the building workforce.*

As today's workers are the main builders of 2020, the focus of BUILD UP Skills is on continuing the vocational education (rather than initial education) and on the immediate needs of the building workforce.

Within the Europe 2020 strategy, **the objective of BUILD UP Skills** is twofold:

1. To identify which skills are needed among building craftspeople and on-site workers (such as installers of building equipment) to enable them to carry out the necessary renovations and new building works.
2. To facilitate the planning of a national strategy for the large-scale training of building workers in Europe by 2020.



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The BUILD UP Skills initiative consists of two phases. The first phase, called Pillar I, was a strategic phase, and it was completed between November 2011 and December 2013. The objective was to identify specific training needed by workers in each participating country and elaborate a strategy (National Roadmap.) Project teams from the 28 European Member States, Norway and the Former Yugoslav Republic of Macedonia participated in Pillar I.

The second phase, Pillar II, is based on putting these National Roadmaps into practice. It facilitates the creation or improvement of qualification and training schemes. Pillar II started in November 2013, with projects running in 11 European countries. More projects are expected to start in 2014.

During the whole BUILD UP Skills initiative, regular exchange activities among the participating countries are organised to underline the European dimension and to foster learning among countries.

Now that Pillar I has been completed, this publication will focus on the process and achievements from that first phase.



### National Qualification Platforms and Roadmaps

Pillar I

### Qualification and Training Schemes

Pillar II

### European Exchange Activities

## National Qualification Platform

- Each project team brings together national key stakeholders from the energy, education & training and building sector.
- **Together they form a National Qualification Platform.**

*Pillar I project outline*

## Status Quo Analysis

- Mapping of existing workforce and existing qualification programs.
- Identification of future needs for 2020.
- Analysis of which gaps and barriers must be overcome in order to train the workforce and reach the 2020 targets.
- **Results are bundled in National Status Quo reports**

## National Roadmap

- Formulation of measures to overcome gaps and barriers in coordination with national key stakeholders. **This document is the National Roadmap.**
- Endorsement: national key stakeholders confirm that they will contribute to the implementation of the National Roadmap.

# National Qualification Platforms

*A prerequisite for participation in BUILD UP Skills Pillar I was to involve stakeholders from several sectors: education and training, building and energy. This involved stakeholder organisations such as relevant public authorities, leading institutions in continuing vocational education in the building sector, social partners, building industry federations and professional chambers, equipment manufacturers, renewable energy system producers and installers, architects and sustainable buildings experts, accreditation and certification bodies, and potential financing bodies.*

Together, these stakeholder organisations formed National Qualification Platforms in each country. These platforms played a crucial role in Pillar I as they were established to ensure the inclusion of all stakeholders in the national Status Quo Analyses, and in the National Roadmaps developed on the basis of the outcomes of these Status Quo Analyses. Furthermore, involving stakeholders from the beginning facilitated their commitment to the proposed training measures in the Roadmap at the end of Pillar I.

**“***BUILD UP Skills entails a demonstration of commitment among those involved in the building sector along with the future of it: companies, trade unions, the administration, technological centres etc.***”**

Enrique Corral Álvarez from the Spanish Construction Labour Foundation (FLC) emphasised that the stakeholder involvement was vital for this initiative. *“BUILD UP Skills entails a demonstration of commitment among those involved in the building sector along with the future of it: companies, trade unions, the administration, technological centres etc.”*

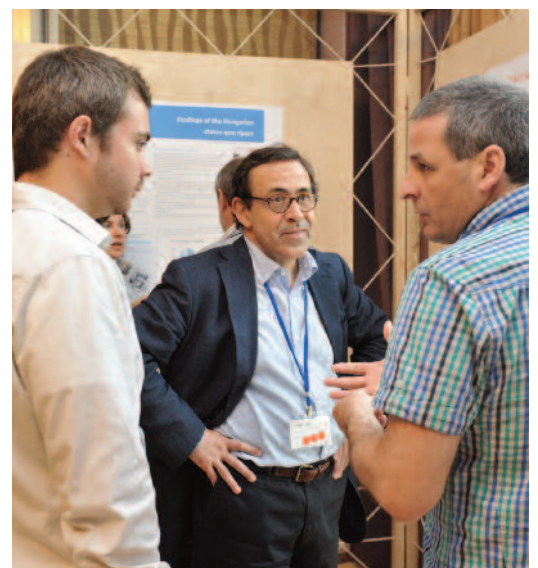
The starting point for setting up National Qualification Platforms was different for each country. For example in Lithuania *“it was the first time that so many different organisations - related to workforce training business, associations, education, research and government – sat down around the table and worked together in the investigation of needs and the development of a National Roadmap for building workforce qualification,”* said Vaidotas Šarka, Lithuanian builders association.

Christine Bernt Henriksen from the Confederation of Danish Industry in Denmark also stressed the uniqueness of the formation of the Danish platform and the

fruitful cooperation that followed. *“Key persons from different sectors within energy efficient buildings had the opportunity to meet each other and have thorough dialogues on challenges and solutions. It has been a serious debate that has created some collaborative interfaces and relationships, which will certainly continue.”*

BUILD UP Skills project teams engaged over 1800 organisations in National Qualification Platforms. In Greece for example, the project team managed to gather and engage almost all relevant actors from different sectors. *“For us this was a tremendous effort and a clear success. We have achieved their commitment to work on a sound and strong foundation for the design of a sustainable process of continuous improvement in the provision of needed qualifications for the Greek building sector,”* said Charalampos Malamatenios, from the CRES Centre for Renewable Energy Sources, in Greece.

The National Qualification Platforms' support played an important role in improving the scope and significance of the national BUILD UP Skills initiatives. *“With the BUILD UP Skills consortium we managed to get together over 500 participants. Their support enabled us to legibly create a Roadmap which also became a reference for many official documents,”* claims Henri Le Marois, from the French National association of local governments for training, integration and employment (Alliance Villes Emploi.)



# National Analysis

*After the formation of the National Qualification Platforms, all national teams conducted a Status Quo Analysis. The objective of the analysis was to identify skills needs and gaps in the building workforce, and to provide additional data on the scope of the issue of qualification and training of building workers (craftspeople and on-site workers.)*

All national project teams gathered data to calculate the number of workers to be trained, and estimate the relevant qualification statuses and the projected labour market developments. For some countries this was the first opportunity to assemble this data, and to create a common understanding among stakeholders about the scope of the issue. In Hungary, for example, *"BUILD UP Skills provided an excellent opportunity for studying the current situation of the construction industry and to make this transparent to all stakeholders,"* says Eszter Karvázy from the Hungarian National Labour Office. *"Furthermore, the analysis demonstrated what sort of in-service training concerning energy efficiency and renewable energy issues is necessary to obtain the 2020 objectives. Based on the analysis we could make policy recommendations for decision-makers in the affected sector".*

## More than 3 million workers require training by 2020

The cumulative results of the Status Quo Analyses show that by 2020 more than 3 million workers in Europe will require training on energy efficiency or renewable energy sources. Furthermore, data in the Status Quo Analysis Reports indicates that the need for continuing vocational education of the current workforce is much stronger than the estimated need for additional workers. This confirms the importance the focus of BUILD UP Skills, on training for the current workforce, rather than on initial education of potential workforce.

The BUILD UP Skills Status Quo Analysis reports produced important insights on where and to what extent skills gaps are present in the workforce. Titia Siertsema, from the Association for the installation sector and electro-technical retail, UNETO-VNI, in the

Netherlands, believes that the data produced on the skills gap was "one of the most positive aspects of BUILD UP Skills. The programme has led to a clear picture of the areas in which extra training is needed"

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Furthermore, the Status Quo Analysis reports were useful beyond the project teams, as national governments adopted the information. Greg Barker, Minister for Energy Efficiency and Climate Change in the United Kingdom argues that *"it is crucial that any skills gaps in the UK workforce are identified and addressed, as the energy efficiency sector grows in order to meet our carbon targets in 2020 and beyond."*

All National Status Quo Analysis reports can be found in the [project database](#).





## Occupations with the highest number of workers to be trained

Each BUILD UP Skills project identified the occupations with the highest numbers of workers requiring training on Energy Efficiency and Renewable Energy. The following occupations were the most frequently mentioned:

- electricians
- plumbers (incl. Installers of heat pumps boilers, biogas systems, central heating, sanitary and thermic equipment)
- carpenters and joiners
- bricklayers
- technicians (including Heating, Ventilation, and Air Conditioning)

## Main barriers to the training of building workers

The National Status Quo Analysis reports identified the most important barriers in the training of the building workforce. The most reported barriers are:

### Administrative, legal and institutional barriers

- e.g. different regulations, lack of coordination, absence of adequate regulatory framework, etc.

### Structural barriers

- e.g. fragmentation of the market, dominance of SMEs and micro-companies with specific needs to balance working and training time and difficulties for financing, low demand for energy efficiency and renewable energy, etc.

### Economic and financial barriers

- e.g. lack of public support to training, financial crisis, discontinuity of (energy) policies, high cost of training, etc.

### Education and training related barriers

- e.g. training courses do not keep up with technical developments, quality of trainers and infrastructures are insufficient especially for practical training.

### Cultural and linguistic barriers

- e.g. low education level of the workforce and migrant workers due to high mobility of the workforce.





# National 2020 Roadmaps

All BUILD UP Skills projects identified priority measures to overcome the barriers identified in the Status Quo Analysis reports. These priority measures were compiled for each country in a single strategic document, the BUILD UP Skills National Roadmap. The Roadmap is meant to pave the way for national and European 20 20 20 energy targets. Sean Armstrong, Department of Environment Community and Local Government in Ireland, says that “the BUILD UP Skills Ireland Roadmap is an important component in Ireland’s progress towards its 2020 energy targets”. Maarit Haakana from the Finnish Ministry of Environment claims that the same is the case for Finland. “Buildings use 40% of Finland’s energy consumption. Improved competence of building workers, as described in the Finnish BUILD UP Skills Roadmap, contributes to reaching ambitious national and European targets”.

The National Roadmaps were considered innovative by national ministries, many of whom described the Roadmaps as possible bases or incentives for national policy. Stefka Limanska, Head of Professional Qualification for the Ministry of Labour and Social Policy in Bulgaria agrees that “the Roadmap gives a solid basis not only to training institutions, but also to state authorities and their social partners”. She goes on to explain that, besides National and European targets on Energy Efficiency and Renewable energy, a general decline in the building sector also served as a strong incentive to reform national policy on this matter. “Although the general decline in the building sector is a fact, we know from our own projects that there is already a demand for quality building works. We believe that public spending and delivery of quality buildings will bring the building sector back to the level of 2007-2008 and with that, the high rates of employment. In order for this to happen, new and improved skills are needed and we need action now”.

Kristof Van Roy, from the Fund for Professional Training in the Construction Industry fvb-ffc Constructiv, and a member of the Belgian team, agrees that quality improvement is vital, emphasising that “valuing the competences of building workers in the domain of energy efficiency and renewable energy can leverage quality in the building industry. Quality of execution and quality in training is key.”

## Overcoming barriers: main measures

The main measures proposed by all 30 National Roadmaps can be divided into four topics: training, incentives, financing and awareness.

### Training

BUILD UP Skills roadmaps generally propose the **upgrade of training schemes** and/or the **development of new training schemes** as well as **training for trainers**. Training measures include for instance setting up **training for new roles in the building sector** (quality coaches, mentors), **adapting training content for craftspeople** (e-learning, practice oriented, short duration, winter or evening courses), developing **specific trade training** where there have been gaps but also encouraging **cross-trade training**.

### Incentives

Alongside the training measures, BUILD UP Skills roadmaps propose to boost incentives for a qualified

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workforce through **improvements in quality control**. They also suggest linking several instruments such as **public tenders, subsidy schemes for renovation and the energy performance of buildings** to the use of skilled workers. Companies working with skilled workers could also benefit from **tax and insurance premium rebates**.

Making the skilled workers more visible on the market thanks to **certification schemes** or **skills cards** is also frequently proposed to attract workers to training schemes while the **recognition of informal on-the-job training** should also be facilitated.

### Financing

To finance training and other measures, BUILD UP Skills roadmaps have identified several possibilities such as the use of **specific training funds** (for instance **existing subsidies for the self-employed or paritarian funds** i.e. funds established, funded and managed by social partners themselves), and European funding such as the **European Social Fund**. **Training by professional associations**, sometimes based on membership fees, is also proposed.

### Awareness

To facilitate the implementation of the roadmaps, **awareness raising campaigns** both for **workers and employers**, as well as for **building owners**, could encourage the use of a skilled workforce.



# Stakeholders' commitment

*The members of National Qualification Platforms were involved in the different stages of BUILD UP Skills Pillar I, with the level of participation depending on their national situation. After the finalisation of the Roadmap, the national project teams needed to involve their key stakeholders in such a way that these stakeholders would demonstrate their commitment to implementation of the Roadmap. Accordingly, project teams had to seek endorsement and provide evidence through letters of support from main organisations involved in each field.*

In Slovakia, the key for success of this endorsement process was to motivate and mobilise the employers to take the initiative and deliver training. *“The involvement of employers is crucial for further education and training of workers to be launched in the future”* (František Doktor, Congress and Education Centre Bratislava, Slovakia).

**“** *The project team is very positive that the endorsement commitments will come to practice, as many institutions were supportive and have an interest. They see that they can benefit. Eventually everybody is aware that this is the direction that we should stride to.* **”**

In many countries, national authorities and Ministries supported the Roadmap by writing letters of commitment to undertake the measures proposed by the Roadmap. In Croatia the Ministry of Construction and Physical Planning was even in charge of the en-

dorsement. This *“facilitated endorsement from other ministries”* says Ivana Carević from the Faculty of Civil Engineering at the University of Zagreb. Team member Boris Pavlin (United Nations Development Programme) adds that *“the project team is very positive that the endorsement commitments will come to practice, as many institutions were supportive and have an interest. They see that they can benefit. Eventually everybody is aware that this is the direction that we should stride to”*.

Each national project team made the decision to either let stakeholders endorse the entire Roadmap, or only specific parts that matched their expertise. Furthermore, for several national projects the endorsement went beyond ministries and depended on the stakeholders, such as buildings federations and educational organisations. What happens next will be different for each national project. *“The future will tell us about the results, but we can say that the proposed Roadmap is good. On the other hand, we think that the accomplishment of the defined goals will depend on the involvement of the stakeholders and the beneficiaries, namely the craftspeople. However, we believe in the capacity to respond to intended goals. In this sense, the BUILD UP Skills initiative is necessarily meritorious”* says Pedro Caroco from the Portuguese Association for the Certification of Electrical Facilities, CERTIEL.







## European collaboration

*In addition to the strategic goals of BUILD UP Skills on a national level, the initiative also sought to encourage international cooperation at the European level between the different national project teams. Within Pillar I, this was put into practice through different types of European Exchange activities:*

- 1) Five European Exchange Meetings at EU level, organised by the EASME.*
- 2) 10 Peer Review Teams each consisting of three countries.*
- 3) Bilateral meetings between countries on their own initiative.*

The European Exchange Meetings were intended to encourage the European dimension to BUILD UP Skills and promote collaboration and trust building between the different national project teams. The meetings proved to be “a unique opportunity to learn from other European countries”, as stated by the Norwegian team (The Low-Energy Program, Norway). Marjana Šijanec Zavrl a member of the Slovenian team and part of the Centre for Indoor Environment, Building Physics and Energy in Slovenia, added that “the exchange meetings were very useful, as we were often inspired by ideas of other national teams, while at the same time we could share and test our own ideas and approaches.”

The Exchange Meetings enabled participants to assess their progress through several activities, such as small group discussions, sessions on priority topics, and taking part in posters sessions.

The participants appreciated the interactive nature of these meetings. Risto Ivanov, from the Association of Business and Consultancy, ABC CREATION and also a participant in the team of the Former Yugoslav Republic of Macedonia, confirms how useful it was to be able to raise and discuss topics based on current concerns and needs. “Someone always had a work-

“ *Someone always had a workable solution for any of the problems we were facing in our country, and everybody was willing to share experiences. It was so motivating to feel well received as a country not yet member of the EU, and to realise we are all confronted with the same challenges.* ”

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Jiri Karasek a Czech team member from the SEVEN Consultants in business development and economically efficient energy use, adds that the Exchange Meetings enhanced the progress of the Czech Status Quo Analysis and the formation of their National Roadmap. For him “the most successful part of the Exchange Meetings was the discussion about measures. We encountered similar barriers as other countries in the building sector, education system and the energy sector. The Exchange Meetings gave us the chance to compare approaches.”





“Setting up peer groups of three countries that are at very different stages of dealing with the same issues proved to be a perfect setting for comparing and sharing our different perspectives and problem solving strategies.”

### Peer Review Teams

In parallel to the five Exchange Meetings, Peer Review Teams between three participating countries were established to encourage an even more in-depth exchange of insights, learning and support between national projects. This was a unique opportunity for individual peer-to-peer support. Georg Trnka from the Austrian Energy Agency said that *“setting up peer groups of three countries that are at very different stages of dealing with the same issues proved to be a perfect setting for comparing and sharing our different perspectives and problem solving strategies.”*

Many participants experienced the Peer Review Team

exchange to be a good way to raise the quality of project reports and increase the variety of proposed measures. BUILD UP Skills Luxembourg made the most out of their Peer Review experience by having regular exchanges and meetings with team members from France and Malta. Thomas Majeres, from the Chamber of Skilled Crafts in Luxembourg, had a positive experience: *“As a field trip we organised a visit to a training institute in Luxembourg and we showed how we train our workers. We will soon also visit France to see how they do this. We will for sure continue to meet in the future as we established very good relationships with both national teams.”*

### Bilateral meetings

As a consequence of the relationships established between national project teams at the European Exchange Meetings and through the Peer Reviewing, individual team members also took the opportunity to organise bilateral meetings on their own initiative. The bilateral meetings proved to be another fruitful way of exchanging knowledge.



# Main achievements and outlook

*The 30 national project teams involved in Pillar I have mobilised over 1800 organisations in relevant fields to promote the continued education of workers in the building sector. The main barriers, their scale and the related necessary measures to achieve the European energy 20-20-20 objectives for the building sector, have been identified. More than 3 million workers need training by 2020, a substantial amount that emphasises the need for widespread action on energy efficiency and renewable energy in the building industry.*

The next step is to put the National Roadmaps into practice. The second phase of BUILD UP Skills, Pillar II, will facilitate this by providing funding for the set up or upgrade of large scale qualification and training schemes. Eleven national projects started with Pillar II in November 2013, and more are expected to start in 2014. The outlooks are positive, as key stakeholders have endorsed the roadmaps, and further endorsement are expected.

The national projects each have their own individual outlook on the transition from Pillar I to Pillar II, but the implementation of the National Roadmaps is widely seen as a big step forward. For Sweden, for example, the Roadmap touched upon the necessity of meetings between different types of workers to increase involvement amongst them and to improve cooperation at the building sites, an issue that has been discussed within the industry for quite some time. Lars Tullstedt, from the Swedish Construction Federation, says that *"if BUILD UP Skills can contribute to create these kinds of meetings, this can improve, not only energy issues, but also many other issues within the building industry. This would be significant to us."*

In Cyprus the identification of the current skills and future needs of building workers was considered as *"the biggest success of BUILD UP Skills Pillar I. Because of this we know where to take the training and the qualification schemes when implementing Pillar II"* stated Anthi Charalambous, from the Cyprus Energy Agency.

In Estonia, high-quality implementation of different regulations on energy efficiency in buildings, including training, is seen as vital for decreasing the consumption of energy in the building sector. Their outlook on the project is positive: *"Although Estonia still faces great challenges in terms of raising the qualification of specialists dealing with these matters and ensuring the functionality of requirements, the BUILDEST (BUILD UP Skills Estonia) project has been a great start of this process,"* says Kevin Vaher from the Ministry of Economic Affairs and Communications in Estonia.

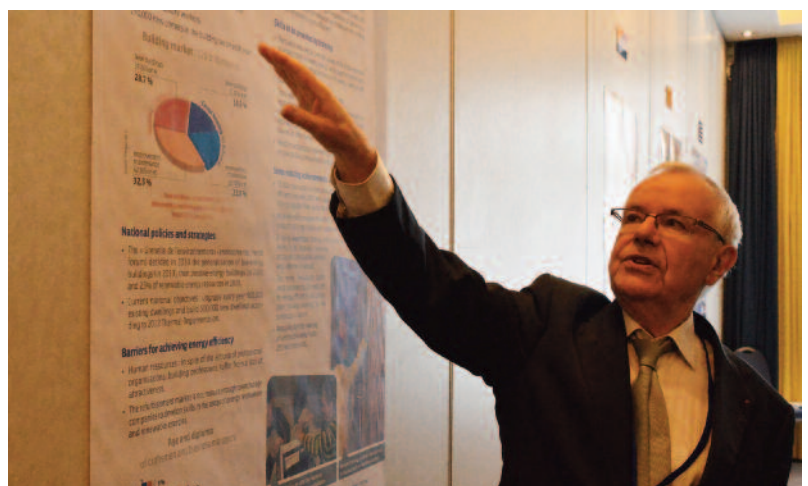
Cristian Stamatiade, working for the Romanian Ministry of Regional Development and Public Administration, agrees with this. *"We positively appreciate the*

*"Although Estonia still faces great challenges in terms of raising the qualification of specialists dealing with these matters and ensuring the functionality of requirements, BUILD UP Skills Estonia has been a great start of this process."*

*activities carried out, and the results reached in this first phase of the action. We consider that BUILD UP Skills Romania can cover the types of necessary training in specific activities in its next phase."*

The experts supporting EASME reported that *"the BUILD UP Skills initiative is a true showcase for stimulating European cooperation"* and foresee a positive future for the national projects. *"The endorsement is on solid ground, as continuous reviewing and exchange added new perspectives and ideas for products and procedures. Additionally, it led to a strong commitment of stakeholders and active inclusion of policy makers and public administration"* said Johannes Haas, Irena Kondratenko and Karin Drda-Kühn in a joint statement.

***There are still ways to contribute to the success of BUILD UP Skills and to the implementation of the National Roadmaps. Funding opportunities are currently available under the Horizon 2020 programme for research and innovation.***





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