



## Reno-VLAMT

### A strategic skills forecast in the construction industry

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Constructiv is a service organisation by and for the construction industry. As fund for livelihood security set up by the social partners of the Construction industry, the organisation works to ensure that talent finds its way to the industry and can thrive there throughout a career. This involves an attractive social status, the necessary skills and safe working conditions on construction sites.

Constructiv's services are primarily aimed at construction companies and their workers. These organisations are funded via social security contributions. The advice, services and financial support offered by Constructiv to construction companies and their workers cover 4 areas:

- attribution of additional social benefits
- support in the fight against social fraud and unfair competition
- stimulating skills management and inflow into the industry

- promoting safety on construction sites and well-being at work



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IDEA Consult provides independent advice to organisations and governments at various levels: local, intermediary, the regions and communities, federal and European.

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- Sustainable solutions to current societal challenges.

As a networking organisation, IDEA has links with a broad group of experts. IDEA's services include research and analysis, vision development, strategic planning and advice, policy evaluation and monitoring, process guidance and project management. The shared ambition of IDEA's staff is to translate the latest knowledge and insights into actionable solutions for pressing societal challenges. We strive to make a unique contribution to important transformations in the socioeconomic domain, innovations in the area of governance and organisatio, and regional dynamics.



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This study was conducted in the context of ESF call 511 SCOPE 2020 - Strategic Skills Forecasts. This call was launched within Operational Program (OP) 2014-2020 of ESF Flanders. ESF-Flanders falls under the remit of the Flemish Minister for Work and Social Economy.



<https://www.esf-vlaanderen.be/nl/esf/europees-sociaal-fonds>

The forecast was carried out in 2021 (start: 1/01 – end: 31/12).



## 1 / What prompted this skills forecast

### RENOVATION IS HIGH ON POLICY AGENDA

To work towards producing a smaller climate footprint, the Flemish government has committed to increasing the level of renovations. The Flemish coalition agreement translates the European ambitions into the Flemish context. Indeed, the policy pursued by the European Union in its [Green Deal](#) emphasises the importance of [renovation projects](#).<sup>1</sup> The Flemish housing policy also encourages the renovation of homes, to scale back their energy use and CO<sub>2</sub> emissions. There is also a focus on renovating non-residential buildings, including school buildings, detention centres and cultural centres, as well as renovating social housing.

### CHANGES IN SOCIETY ARE BEHIND THE RISE OF RENOVATIONS

The policy is therefore responding to various changes that are prompting a rise in renovation and reconstruction<sup>2</sup>: building land is becoming scarce, there are many vacant buildings, and the existing housing stock is outdated and does not meet current standards (for example, in terms of safety, comfort and energy performance). Renovation is one of the measures taken to make living in urbanised areas more attractive. One important advantage over new construction is that the effort and cost of a renovation project can be spread over several years, while the building remains usable.

### STRATEGIC SKILLS FORECAST WITH A FOCUS ON THE RENOVATION SECTOR

In this study, the renovation sector is delineated on the basis of societal trends, which are supported by European and Flemish policies. This will make significant demands on the companies and workers active within this subsector of the construction industry. This is also acknowledged by the Government of Flanders, as reflected in the Flemish coalition agreement (p.199 - freely translated): "*We are working with the construction sector to draw up an action plan to guarantee a supply of skilled workers, to ensure the quality implementation of ambitious renovation objectives.*"

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<sup>1</sup> The 2020-2024 federal coalition agreement links climate goals to European objectives.

<sup>2</sup> The Flemish term 'vernieuwbouw' means renovating a building in such a way that it is comparable in quality to a new building.

## ROLE FOR CONSTRUCTIV AND THE SOCIAL PARTNERS

To achieve the renovation objectives, the industry faces 4 major challenges:

- ▶ Win people over and guide them towards renovation: work on the image and attractiveness of the construction industry, occupations and training.
- ▶ Training: work to provide sufficient state-of-the-art construction training at secondary schools and in higher education. New inflow (graduates from education or lateral entrants from other (sub-)sectors) must have the right skills to be rapidly employable;
- ▶ Upskilling: work to strengthen the skills of professionals in the renovation sector. Current workers must evolve with the times;
- ▶ Re-skilling: work on occupational mobility in the construction sector and between sectors.

Based on its commitment to lasting employment, the industry focuses on improving the inflow of qualified workers into the construction industry and keeping their knowledge and skills up-to-date. This is based on the realisation that skilled workers are crucial for the successful completion of construction projects. As such, it is advisable to draw up a skills forecast specifically for this sub-sector of the construction industry.

## THE NEED FOR THIS STRATEGIC SKILLS FORECAST

As is the case in other sectors, the work in the renovation sector is becoming increasingly complex and innovations are advancing at an ever faster pace. Workers therefore need to evolve with the times if they are to remain employable in the sector. This is vital, given the lower student numbers that are putting pressure on the inflow of graduates, and the ageing population, which means that many workers will be leaving the workforce in the near future. It is therefore high time to translate these transitions to the various subsectors and construction professions.

Up until now, there has been no structured feedback and trickle-down in the professional competence profiles. That is why a skills forecast at the micro level is so urgent. A fascinating [European study](#) presents a skills forecast for the construction industry up to 2020. It therefore appears to be the ideal time to examine what the evolutions in Flanders will mean for the coming years, more specifically up to 2030.

## CONCRETE ACTION PLAN AS A RESULT OF RENOVLAMT

RenoVLAMT is intended to Constructiv to gain insight into the emerging trends in the renovation sector and the impact of these trends on skills and training needs within renovation companies. There is a specific focus on the impact of the COVID crisis, the ever-growing digitalisation and the evolution toward a circular economy. In addition, the training offering is also analysed, so that the extent it responds to the identified skills needs can be assessed.

The insights from this forecast can help ensure that the services of Constructiv and other stakeholder organisations evolve in the right direction. The sectoral covenant agreed on by the sector with the Flemish Government for the period 2021-2022, for example, includes various actions in this context (including awareness-raising, company visits, follow-up of new skills, focusing on the role of mentors, providing a broad offering, organising in-house training, providing skills-oriented support to companies with their transitions). Moreover, it is crucial to be able to demonstrate that the training offering is responding to innovation, developments and trends, to make the sector more attractive.

To allow the results of the forecast to have an effect in practice, the analysis results are translated into specific commitments, which are integrated into an action plan.



## 2 /Forecast according to proven methodology

The skills forecast is drawn up on the basis of Interactive, high-quality, in-depth research in accordance with the VLAMT methodology<sup>3</sup> (Flemish labour market of the future). This methodology has already proven its worth in previous SCOPE studies and incorporates research methods used by international bodies including Cedefop, ETF, OECD, ILO for skills forecasting.

Specifically, the methodology goes through the following four phases:

### ► Preparation

In the first, preliminary phase, the planning, timing and detailed phasing of the study are worked out. The content is delineated and an accompanying steering board is set up to provide input into the research project from start to finish. Annex B.1 / shows the composition of the steering board.

### ► Preliminary study

The preliminary study is intended to get an overview of the evolutions happening within the sector, with a particular focus on digitalisation, the circular economy and the corona crisis. The intended outcome is to obtain an initial picture of the skills needs and the subsequent focus for the study. To this end, the available expertise is built on as much as possible:

- Through desk-based research, the available figures and documents were analysed (see Annex B.2 / for a reference list)
- In-depth interviews were conducted to gather targeted input from experts on their experience with given evolutions and the impact on the sector. Annex B.3 / contains an overview of the experts consulted.
- An exploratory workshop was set up to validate the evolutions/trends and their impact on the sector in Flanders that were identified during the desk-based research and interviews.

The results of the preliminary study were published in an interim report and are summarised in Chapter 3 /.

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<sup>3</sup> The methodology is the result of the ESF project 'Flemish labour market research for the future' (VLAMT) in which a systems approach was sought in order to identify future labour market needs and training needs. VLAMT is a European project funded by the European Social Fund (ESF) and the Flemish government. It came about through collaboration between the Social and Economic Council of Flanders (SERV), SYNTRA Flanders, public employment service of Flanders (VDAB), and the Departments of 'Education and Training' and 'Work and Social Economy' of the Flemish Government).

### ► Analysis based on company visits

This third phase aims to further explore the identified evolutions and link them to evolutions in skills and training needs, in order to compare the (future) demand for skills with the (available) education and training offering. This is via two parallel analyses:

- Case studies are used to estimate the impact of trends on jobs, tasks and skills. The case studies consist of in-depth interviews with 'pioneers', who are (ideally) familiar with skills-oriented thinking, and who are already going through what the 'followers' will only face in a few years. Annex B.3 / contains an overview of the interlocutors.
- An analysis of the training offering makes it possible to identify potential gaps based on current and future skills and training needs identified through the case studies. The training offering was primarily analysed via desk-based research focused on existing skills-building initiatives in the sector. Where necessary, additional interviews were organised to solicit additional information, to ascertain whether the training programmes are sufficiently focused on developing future-oriented skills.

The results of this analysis were reported in an interim report. The conclusions from the case studies are summarised in Chapter 4 /. Chapter 5 / summarises the results of the analysis of the training offering.

### ► Decision-making

In the final phase, the information gathered is aggregated to translate the conclusions from the previous phases into concrete actions in an action plan. To arrive at the action plan, a workshop was organised with members of the steering board, to identify potential commitments in first draft of action plan, and flesh them out. Following a written feedback phase, the action plan was finalised at the last steering board meeting, to ensure that it enjoyed the support of all members.

The full action plan is included in Chapter 6 /.

Finally, it is important to share the results of the study with relevant organisations and agencies, and with policy actors, businesses, and education and training providers. This reporting therefore provides an accessible overview of the expected skills needs in companies and the focus on future-oriented skills in the training offering.



### 3 /Dynamism in the renovation sector through interplay of trends

By analysing the available literature (included in Annex B.2 /), a number of trends impacting the construction industry were identified. These trends were assessed against the practical experiences of the respondents involved during interviews with experts, and further supplemented based on their experience. This provided insights on how important the identified trends were, including specific points for consideration for the renovation sector. The aim is therefore to try to obtain an overview of what construction sites will look like in the future.

The sector in a few key figures

#### ► Employment

The construction sector is an engine of economic growth and employment in every EU member state. It accounts for 8.2% of GDP and 18 million jobs across the EU. More than 90% of construction companies are small and medium-sized enterprises<sup>4</sup>.

Forecasts by Cedefop (from 2016) suggested that employment in the construction sector would increase from 2015-2025 and that Member States would need to replace an ageing working population. Around 1 million new workers will be needed by 2025. For Belgium, Cedefop estimates employment growth in the sector at 2.5% between 2020 and 2030.

The Cedefop Skills Panorama also predicts how job vacancies will evolve between 2020 and 2030. As such, 49,800 blue-collar jobs are likely to disappear and 46,900 will likely be created in their place. This results in a negative balance of 2,900 jobs. In contrast, future vacancies for operators and mechanics will rise: here we see a positive balance of 4,900 jobs (118,800 disappearing jobs and 123,700 new jobs).

#### ► Wanted profiles

The sector mainly employs construction workers, but the construction industry also covers a large number of specialised occupations for fields such as building construction, civil engineering and more specialised construction activities (such as plastering, plumbing and parcelling). The work ranges from routine tasks that require considerable physical exertion, to more skilled tasks, some of which require significant levels of education, training and experience.

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<sup>4</sup> European Commission (2018) A Blueprint for Sectoral Cooperation on Skills (Wave II) Construction



## Key trends in the renovation sector

### ▶ Digitalisation

- The introduction of smartphones, tablets and laptops, combined with increasing digitalisation of business administration, is leading to a rise in the use of digital communication and planning tools (for staff, customers, suppliers, partners, etc.).
- Digitisation makes it possible to make heavy work lighter and safer. For example, with a thermographic camera, drones will be able to detect heat losses and fly over large areas of solar panels to check which are no longer functioning. Drones are also ideally suited for visual inspections of hard-to-reach areas (e.g., roofs).
- Connected technologies and the Internet of Things (IoT) are crucial in the industrial (r)evolution, with the technological benchmark being the introduction of Building Information Modeling (BIM), in which digital plans are used much more often. 3D applications, Virtual and Augmented reality (VR, AR) are also increasingly finding their way into the construction industry.
- Blue-collar and white-collar workers will have easier access to the information they need.

### ▶ Automation and increased use of machines and tools that simplify work

- Physically strenuous and repetitive tasks will need to be performed less and less with manual labour. Heavy work is increasingly evolving into operating machinery.
- Principals are increasingly demanding shorter project lead times.
- People are increasingly choosing modular construction and add-ons, and building with prefab elements.
- Construction robots are now mostly in off-site manufacturing plants, but the time when they will be deployed on building sites is getting closer.

### ▶ More focus on sustainability and circularity

- Using natural, ecological or sustainable materials demands more consideration, due to greater awareness of materials that can be used long-term, and renewable resources.
- The concepts of circularity and life-cycle designed buildings are increasingly being applied in construction and renovation projects. There is also more focus on materials use and waste management, and on the sustainable use and potential reuse of building materials.
- Building requirements are becoming increasingly stringent in the context of the climate targets and evolving legislation.
- There is an increased focus on comprehensive building renovation instead of complete demolition and new construction.

### ▶ Innovation is coming at an ever-faster rate

- The developments are coming fast, as many technologies are becoming affordable and are also suitable for construction sites.
- There are increasingly rapid innovations in building materials, construction tools, machinery and construction methods.
- The more pressing need for specialisation is leading to more subcontracting: on the one hand, to bring in specialised manpower, and on the other, for reasons of efficiency (subcontractors often work with cheaper foreign labourers).

### ▶ More focus on safety and ergonomics

Increasing focus on the well-being of workers throughout the industry to enhance inflow and retention.

## Challenges for the sector

These trends present a number of important challenges:

### ► Evolution towards a circular economy

The sector plays a key role in the transition to a low-carbon economy, as buildings account for nearly 40% of energy consumption. Currently, around 75% of the buildings in Europe are energy inefficient, indicating that there is huge potential for new jobs in the green economy. The trend to build 'green' buildings and structures also demands that construction workers have a better understanding of environmentally-friendly materials and technologies which are energy efficient or greener.

The occupations with the largest number workers who will require upskilling in the area of energy are: electricians; plumbers (including installers of heat pump boilers, biogas systems, central heating, plumbing and thermal equipment); carpenters and joiners; masons; and technicians (including heating, ventilation and air conditioning)<sup>5</sup>.

### ► Digitalisation

The current trend toward more intensive use of ICT systems has implications for project management, and creates potential efficiency gains for managing the construction process, including logistics, materials control, design and construction. As is the case in most sectors, ICT is becoming increasingly embedded in the daily work of construction workers, through the use of advanced electronic machinery that requires a generally higher level of technological competence. The development of ICT for so-called smart buildings and energy reduction also means there is more demand for ICT skills in construction. Nevertheless, research by the EU suggests that the construction sector may be the second least digitised of all sectors after agriculture<sup>6</sup>. This is another area where the sector faces a significant challenge.

### ► Impact of the coronavirus crisis

During the coronavirus crisis in 2020, public works proved to be one of the few activities that kept going to some degree. In the area of private housing and non-residential buildings, the situation was different: in the first months of the crisis, it was feared that private individuals, retail and small businesses would have to make savings and cancel or postpone construction projects.<sup>7</sup> The EMRG survey in March 2021 estimated a 5% loss of revenue for 2021, and 2% in 2022, compared to revenue in 2019.

The construction and renovation sector plays a crucial role in the Flemish Recovery plan, set up to tackle the economic effects of the corona pandemic. Of the €4.3 billion within the Flemish Recovery Plan, a total of around €2.3 billion was set aside for the period 2020-2024 for investments linked the construction sector, of which about €600 million will go to the renovation sector. These investments come on top of the already agreed investment budget of the Government of Flanders this legislature for housing renovations, renovation of public buildings and social housing, asbestos removal and insulation works, setting up a recycling hub and digitalisation<sup>8</sup>.

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<sup>5</sup> European Commission (2014) Cedefop EU Skills Panorama

<sup>6</sup> European Commission (2018) A Blueprint for Sectoral Cooperation on Skills (Wave II) Construction

<sup>7</sup> Deloitte.com – understanding the sector impact of covid-19: engineering and construction (April 1 2020)

<sup>8</sup> Flemish Recovery Plan in figures, 30 March 2021



## 4 / Identified skills needs

The identified trends are impacting the renovation sector in two ways: through an impact on processes and on skills. It is therefore the changes in skills that we will attempt to understand in this study. Indeed, dealing with new technologies, changing processes, etc., entails changing skills needs. It is not enough to develop the necessary know-how: putting the know-how into practice also requires the right skills and attitudes. This applies to both white-collar and blue-collar profiles, and can also be seen on building sites.

### Insights from the preliminary study

A survey by the VCB in 2019 on the desired or necessary skills of new workers in the construction industry suggested that young graduates from both BSO (vocational secondary education), TSO (technical secondary education) and Engineers, lack key skills:

- ▶ For graduates in BSO and TSO, the issue is primarily making calculations independently, and coming up with solutions (which 78% of the respondents deemed to be insufficient), but they also scored poorly on adequate communication and planning, according to >50% of respondents.
- ▶ Among engineers, soft skills represented 35% of the issues highlighted. Another 20% related to insufficient practical knowledge, and attitude was also highlighted as one of the main issues (16%).

One clear effect of the corona crisis on the construction industry was that companies want to invest more quickly in (basic) digitalisation. In a survey by VCB, 42% of respondents said they wanted to invest more in digitalisation. The main emphasis here is on basic digital tools to improve planning, communication, reporting and follow-up.

The interviewed experts also highlighted the following skills needs:

- ▶ A specific feature of the renovation sector, where every project is unique, is the need for flexibility, the ability to assess risks & request help/support, and creative and solution-oriented thinking.
- ▶ The required knowledge is changing faster and faster and becoming more specialised. As a result, workers must be able to deal with change and have the right attitude for lifelong learning.
- ▶ Due to the growing importance of management, a larger pool of workers need to have the necessary didactic and empathic skills.

Case studies confirm and deepen the insights from the preliminary study

► Focus on new and changing skills

The starting point for this strategic skills forecast was an analysis of the new and changing skills for workers in the renovation sector as of 2021. The trends emerging within the sector are the starting point.

As such, this study is not a comprehensive overview of all skills needed by workers in the renovation sector. The focus is on the evolutions in skills: in other words, skills that are relevant but not affected by the observed trends fall outside the scope of the analysis.

► Identification of 3 types of skills needs through interviews with renovation companies

The necessary information was gathered through 14 interviews, generally with the director of the renovation companies (see Annex B.3 /), all of which were SMEs

It is important to keep in mind that the sector is highly diverse: each company has its own specialisations, keeps different tasks in-house, and outsources others. Collaboration in the sector is crucial, and the system of subcontracting plays a major role. No two companies do completely the same things, and so the specific skills needs of workers also vary from company to company. Nevertheless, throughout the various interviews, we were able to identify quite a few new and changing skills needs that interviewees felt applied to all workers in the sector. These are split into three layers:

1. Generic skills are increasingly important in our society as of 2021, and are relevant for the labour market as a whole. As such, they are not just applicable to the renovation sector but are an important basis for the set of skills needed in the sector.
2. Sector-specific generic skills apply to the entire construction industry. These are general skills that are called for through various construction processes.
3. Technical skills are linked to the main technical innovations observed within the renovation sector. To be able to implement new techniques, workers need knowledge of new products, techniques and tools, and must be able to apply these on the building site.

The three skills layers include new and changing skills that workers need in the changing renovation industry. For each layer, we present the identified skills.

Generic skills	Description
Leadership (foreman)	The ability to provide instruction and guidance to a group of people and encourage them to work together to achieve a goal, to communicate a vision and inspire others, to seek win-win solutions when conflicts arise, to recognise the impact of management style on productivity and development, and adjust as needed. This includes identifying training needs and potential development points in employees, and directing them toward training.
Working independently in a team environment	The capacity to take responsibility for taking on tasks within the demarcated processes, and to strive to accomplish shared goals.
Giving and receiving feedback	The ability to provide feedback in a constructive manner to colleagues. The ability to handle feedback appropriately, take it on board and use it constructively to improve.
Communicating	The ability to communicate verbally and in writing with colleagues. Given the presence of various different nationalities within the construction industry, this capacity requires some basic knowledge of other languages or multicultural aspects.
Coordinating (foreman)	The ability to organise work, set priorities, work out resource needs, determine the necessary sequence of activities to achieve objectives.
An understanding of planning and procedure	Have an understanding of planning and be able to correctly follow standard procedures.
Managing time	The ability to make efficient time estimates per task and execute them correctly.
Analytical and problem-solving thinking	The ability to assess situations on the site, identify and process valuable information, detect and explain patterns/solutions to others.
Have a flexible and adaptable attitude	Be open to new and innovative ways of working, with new methods and materials. Be able to flexibly apply ad hoc solutions to unexpected problems on site.
Sharing knowledge	Be able to impart new skills to colleagues and spread knowledge within the organisation.
Working meticulously and diligently	Have a good eye for accuracy and workmanship; Professional use of materials and tools.
Working safely and ergonomically	The ability to preventively assess unsafe situations and organise work in the safest way possible.

Sector-specific skills	Description
Have knowledge about building materials and their applications	Recognise and classify raw materials, and understand their properties and applications.
Handling tools and machinery	Be able to recognise, classify and handle tools and machinery Examples: <ul style="list-style-type: none"> <li>▶ Tools: compressors, grinding wheels with cutter, guns, etc.</li> <li>▶ Machines: telescopic handler, excavator, forklift, aerial work platform, tower crane</li> </ul>
Planning and organising	Be able to draw up operational schedules, plan appropriate construction processes, materials, tools and machinery, and prepare the site efficiently and effectively.
Have knowledge of building physics	Knowledge of and consideration for all aspects of the indoor climate (such as airtightness and moisture tightness, heat transport and acoustics)
Using smart devices	Be able to handle digital devices. Examples: tablets, smartphones
Interpret digital information	Be able to interpret digital information; Examples: <ul style="list-style-type: none"> <li>▶ BIM plans; 3D plans of installations and pipelines or intersections;</li> <li>▶ Digital measurements</li> </ul>
Have know-how on waste management and circular principles	Recognise waste materials and organise their safe removal and disposal; Example: the importance of asbestos removal. Plan the reuse of materials. Examples: The principle of dismantleability, banks of materials

Technical skills	Description
Building in wood (frame)	Have technical knowledge of wood frame construction including: material and product knowledge, understanding of connections, intersections, the effect on stability calculations and safety
Masonry	<p>Knowledge of new construction methods. Examples: adhesives instead of cement, curtain walls</p> <p>Knowledge of alternative forms of cladding. Examples: wood, aluminum, green walls, crepi, etc.</p>
Foundations and stabilisation	<p>Have practically applicable knowledge regarding stability; Examples:</p> <ul style="list-style-type: none"> <li>▶ Be able to correctly and carefully incorporate suitable (insulating) foundations (e.g.. Ytong blocks);</li> <li>▶ Be able to remove walls without compromising the stability of the building;</li> <li>▶ Knowledge of shoring techniques.</li> </ul>
Prefab construction	<p>Knowledge of the various different construction methods regarding, e.g.</p> <ul style="list-style-type: none"> <li>▶ (wood, PVC or aluminium) windows;</li> <li>▶ Full walls;</li> <li>▶ Complete modules with built-in technical systems;</li> <li>▶ Concrete elements.</li> </ul> <p>Be able to fabricate and assemble these in advance according to a detailed plan in a workshop or hall, and then assemble them on site according to a clear plan.</p>
Insulation work	<p>Have the capacity to work with new insulation materials and - techniques. Examples of materials:</p> <ul style="list-style-type: none"> <li>▶ Ecological insulation (e.g. cellulose, flax, wood wool)</li> <li>▶ Mineral wool (e.g., stone and glass);</li> <li>▶ Celit wood panels (waterproof facade insulation)</li> </ul> <p>Examples of techniques:</p> <ul style="list-style-type: none"> <li>▶ Roof sarking</li> <li>▶ Dry-build systems</li> <li>▶ Precise knowledge of connections and foils</li> </ul>

## Identified areas of concern

### ▶ Generalist or specialist training

Renovation sites, on the one hand, demand workers who can switch smoothly and respond flexibly to problems as they arise; on the other hand, the growing complexity of techniques, materials, standards and requirements imposes an ever-increasing demand for specialists. Companies are faced with the dilemma of training or developing their own workers as generalists or specialists. To deal with this situation, companies are increasingly turning to specialised subcontractors. Large companies may set up specialist departments in-house, but in small companies, workers tend to remain multi-skilled.

### ▶ Develop specific expertise to avoid the hollowing out of jobs

By working more and more with subcontractors, workers in some companies have to focus on less challenging tasks and have less chance to apply and develop their own skills. This risks making their skills obsolete, and threatens to hollow out internal jobs. Niche markets and complex building sites have less interaction with subcontracting, but require specific expertise from workers.

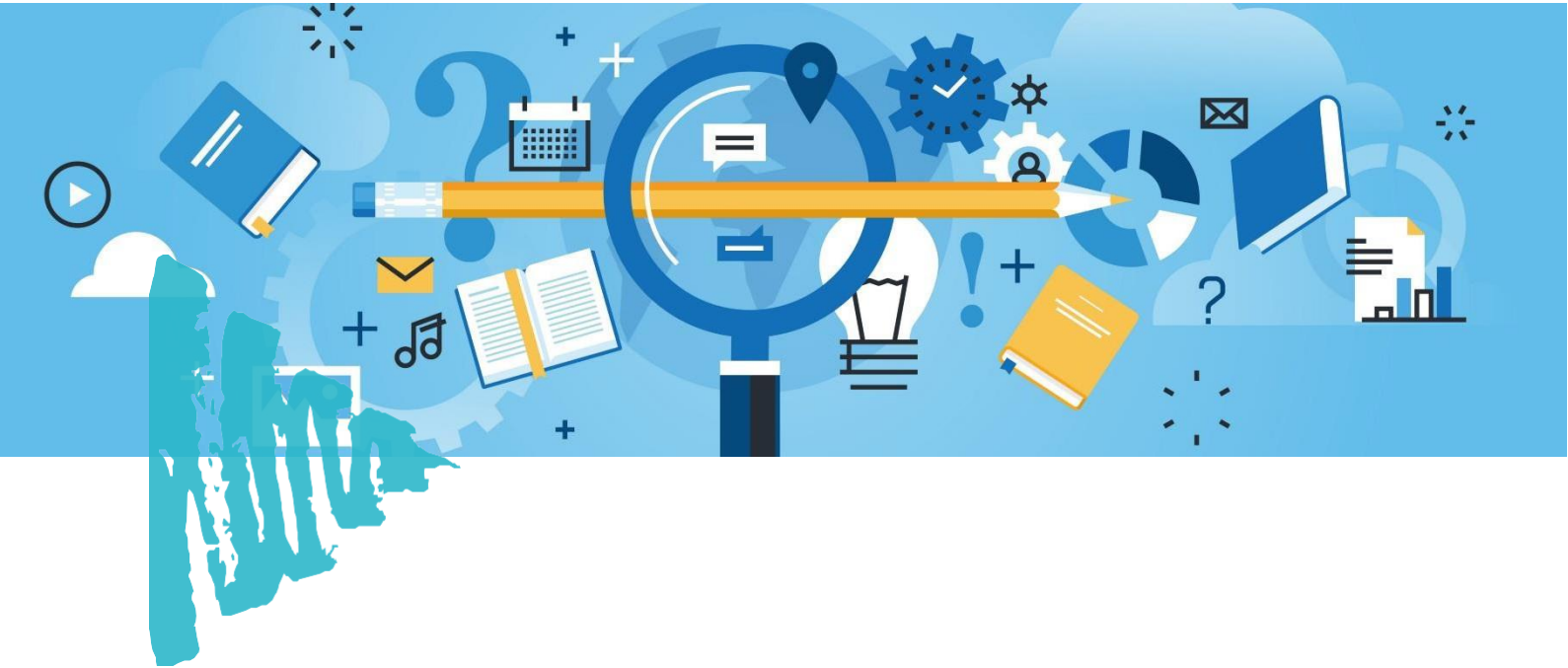
### ▶ Guarantee knowledge building and transfer

Specialists must continually learn to keep their knowledge up-to-date, and with an ageing population and limited inflow, the clock is ticking to capture the expertise of the most experienced and older generation of workers. The importance of knowledge of both old and new techniques also underlines the importance of continually building and transferring knowledge, in good time.

### ▶ Demarcating the role of workers

The line between the expected skills of workers and foremen on building sites is blurring. Due to the increasing complexity and need for workers with specialist knowledge on building sites, more and more skills are required that can only be found, to a lesser extent, with the site foreman, who has more generalist knowledge. This raises the question of what skills can and should be expected of workers in the future.





## 5 /Analysis of the available training offering

To determine the extent to which the current training offering for workers in the renovation sector responds to the future skills needs identified in the previous chapter, we analysed the training offering. This allowed us, firstly, to highlight where the current training is already aligned with future skills needs, and secondly, to identify where gaps remain. The analysis is not intended to shine a light on the selected training programmes, it was explorative in nature, to help formulate the action points in the next phase of the study.

### Analysis with a focus on three training courses

The analysis took place in two stages. First, the current education and training offerings for workers in the renovation sector were identified, via desk-based research. Based on this, three courses were then selected and analysed in the second stage:

- ▶ the 7<sup>th</sup> year 'renovation' in vocational secondary education
- ▶ the Syntra 'renovation coordinator' training programme
- ▶ the graduate programme 'building site organisation'

In addition to the desk-based research, several training providers were contacted with a request to clarify how the trends and skills needs are specifically addressed within the training programme. For each of the training programmes, we received additional information from at least one training provider.

### Overview of the available training offering

To obtain an overview of the available training programmes, the training offering for workers in the renovation sector was mapped out. The focus in this regard was on the public offering aimed at (future) workers in the renovation sector. On top of this public offering is an extensive range of training with private training providers (suppliers, private organisations, etc.). These tend to be shorter, less comprehensive courses. They are not included in the overview, as Constructiv already provides an overview of these offerings by province.

Table 1 summarises the training offering mapped out. This overview immediately highlights an important pain point, namely that there are currently no training programmes among public education providers that directly and fully prepare workers for a job in the renovation industry, with the exception of

the 7<sup>th</sup> specialisation year 'renovation' in vocational secondary education. Moreover, this training programme will be phased out after the reform of secondary education in the third grade. Although intake is also possible from several other courses in compulsory education, these courses lack a direct focus on the renovation sector.

Outside compulsory education, the public employment service of Flanders (VDAB), Syntra and Centres for Adult Education also offer training for workers who wish to develop their basic skills for the construction industry (e.g., the 'construction immersion' at the VDAB). However, none of these training programmes focus on the renovation sector. Each of these institutions does also offer several more specific, shorter courses with a focus more closely aligned with the challenges in the renovation sector (e.g., training in wood frame construction, ecological rebuilding, NL on the job, etc.).

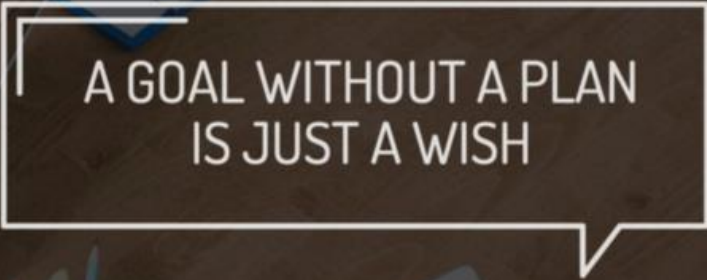
Table 1: Overview of educational Institutions

Public educational Institutions				
Higher education		Public Employment Service of Flanders (VDAB)	Syntra	CVO
Graduates	Site organisation, architectural drawing, renewable energy systems, HVAC systems	Construction immersion (basic skills) Specific offering including: wood frame	Basic skills Specific offering including: ecological rebuilding, wood frame construction, BIM draftsman	Basic skills (building shell including plumbing and finishing) Specific offering including: renovating and finishing, building and rebuilding
Professional bachelor's	Construction, wood technology, ecotechnology	construction, conscious sustainable building, construction foreman, NL on the work floor	Renovation coordinator	
Postgraduates	BIM, energy monitoring, circular building			
Secondary education*				
7BSO	Renovation Construction Restoration Construction Bio-ecological building finishing Roofing Works Decoration			
6BSO Work-based learning	Building shell - structural finishing Sustainable living Painting Construction site machine operator Stone and marble work			
6TSO	Construction and wood science			
*Overview September 2021				
Private providers/public organisations				
Private training institutions	Suppliers	Confederations/unions	Public organisations	
(Vinçotte Academy, Furbo, etc.)	(Wienerberger, Isoproc, ...)	(Bouwunie, Confederatie Bouw, ...)	(het Vlaamse Kruis,...)	

## General conclusion regarding the training offering analysed

The analysis of the training offering leads to the following overarching findings:

- ▶ There is an extensive training offering available from public and private training providers, which can be accessed by workers in the renovation sector. There is a wide variety of training programmes, ranging from basic courses that teach general construction skills that can be used in the renovation sector, to highly specific courses aimed at the renovation sector, organised by suppliers, for example. Despite this extensive offering, there is only one course, 7BSO renovation construction, that directly prepares young people for employment as labourers in the renovation industry. Moreover, this training programme will be phased out once secondary education is reformed.
- ▶ The various training programmes respond most explicitly to the 'sustainability' trend. Several training programmes identify this trend as their rationale, and it is also used to attract participants. For the other trends identified within this study, there is less of an explicit focus on the following:
  - For the digitalisation trend, this usually means that it is integrated within various training components.
  - For other trends (e.g., faster follow-up of innovation, subcontracting, etc.), it is not always entirely clear from the desk-based research to what extent the trends are currently already interwoven in the training programme.
- ▶ Furthermore, based on the desk-based research, it is not always clear to what extent participants also learn and practice the skill in order to apply it in practice, besides learning the theory of the knowledge component. Especially with regard to technical skills, it became clear throughout the analysis that the execution aspect of certain skills is not always given equal consideration in the training programmes.
- ▶ Finally, we observed that not all training programmes pay equal attention to all generic skills yet. For example, the skills of *knowledge sharing*, *being flexible and adaptable* or *giving and receiving feedback* have not yet been incorporated into all training programmes, although this study highlighted the fact they are essential on today's renovation sites.



A GOAL WITHOUT A PLAN  
IS JUST A WISH

## 6 /Towards an action plan for the renovation sector

The strategic skills forecast conducted in the context of RenoVLAMT aims to develop a common vision for future skills needs, by obtaining and utilising the best possible information on the future labour market. To this end, the key trends and developments in the renovation sector were identified and future skills and training needs were analysed. The insights gained from this analysis, summarised in the attached paper, have been translated into an action plan.

The action plan below shows the planned initiatives by various stakeholders to ensure the sector proactively responds to the identified trends and addresses the changing skills needs. It provides an overview of the various actions that members of the steering board can initiate from a concrete commitment to allow the results of the study to trickle down to the renovation sector.

The preliminary study showed that finding enough qualified renovation workers will be the industry's major challenge in the coming years. The results of the study will therefore be used primarily to implement actions within the following four strands:

1. Develop a recruitment story for study and career choice
2. Update the training offering for re-skilling and upskilling
3. Build up expertise with organisations that support employers and (potential) employees
4. Exchange sustainable knowledge between key actors in the renovation sector

Within each strand, it is indicated what actions were proposed and why. The time frame and possible partners within the steering board are also mentioned.

Although the action plan focuses on the renovation sector, many results are also relevant to other subsectors in the construction industry, and even more broadly: to other sectors of the labour market. Where possible and relevant, the proposed actions from the action plan will therefore be extended to these other (sub)sectors so that the results of the study find their way to all actors involved.

## Strand 1: Recruitment story for study and career choice

Encourage inflow

- ▶ Relevance: The analysis of trends shows that the sector is in full swing. The digital and green (r)evolutions are making themselves felt and innovative applications are being introduced in the sector. Moreover, recent evolutions point to growth within the renovation sector, for example through the renovation obligation and the Green Deal. This information can be used to highlight the attractiveness of the industry and renovation companies. A stronger image and informed study and career choices can increase inflow and lateral entry.
- ▶ Proposed actions:
  - Update existing communication materials
  - Include them in Constructiv's new communication plan 20/20/20, with an explicit link to renovation
  - Inform partners such as Onderwijskiezer, the Beroepenhuis
  - Update tools for study and career choice
- ➔ Timing: medium to long term
- ➔ Possible partners: shared responsibility, with an important role for the sector (in particular Constructiv, VCB, Bouwunie), VDAB, education and training providers and companies in the sector.

## Strand 2: Update the training offering for re-skilling and upskilling

Strengthen work-based learning in the renovation sector

- ▶ Relevance: work-based learning is an important link for better connecting the education and labour market. Through work-based learning, educational actors are closer to the practical aspect. Young people get a chance to develop the necessary skills on the workforce, and companies immediately train the workers of the future. In the future, this will also be possible for adults through work-based learning pathways in adult education. Currently, however, the work-based learning pathways in secondary education are primarily new construction pathways: it is not straightforward for renovation companies to offer a suitable work environment within the current work-based learning courses.
- ▶ Proposed actions:
  - Set up initiatives to get more renovation companies involved in work-based learning
  - Find out if larger construction companies offer apprenticeships
    - If not: identify the reasons
    - If they do: make them more visible/recognisable
  - Offer a work-based learning path for renovation (and link a validated professional competence and professional qualification profile to it, as indicated in Strand 3)
    - Place this on the agenda and discuss it at Construction Sector Partnership meeting
    - If there is consensus: include it in the secondary education matrix
  - Continue to invest in initiatives to encourage the inflow of students into work-based learning pathways (highlighting the added value of the pathways so that students/course participants can make informed study choices)
  - Correctly inform and persuade (potential) providers of work-based learning training to give new impetus to their offering, e.g. through more focus on renovation
- ➔ Timing: short and medium term
- ➔ Possible partners: Constructiv, companies and their educational partners.

## Optimise the external training offering

- ▶ Relevance: The external training offering must evolve with the changing labour market to ensure that workers within the renovation sector (continue to) have the right skills. For new entrants (such as young graduates and job seekers), this requires up-to-date training within initial education and re-skilling programmes. For workers in the renovation sector, upskilling programmes should also be adapted so that they (continue to) have the right skills.

Education and training providers can reinforce each other, as well as collaborate with companies. This will ensure that the offering is sufficient: enough applied training programmes must be envisaged within the new skills needs. This is an important concern, because the analysis of the training offer highlighted a major pain point, namely that there are currently almost no training programmes that directly and fully prepare individuals for a job in the renovation sector (with the exception of the 7th specialisation year 'renovation' in vocational secondary education, but this course will be phased out after the reform of secondary education in the third grade).

- ▶ Proposed actions:

- Update the offering in terms of content (based on identified skills needs) and form (responding to growing digitalisation)
- Have sufficient focus on renovation in the available education and training offering of construction training, and ensure sufficient supply focused on niche markets
- Further develop online modules
- Collaboration with/between training providers
- Learn and apply reuse of materials within the training programmes

- ▶ Points for consideration: The target audience should not be overlooked: for labourers, in addition to clarity about who needs to know what, language is also important (Dutch only versus other languages for giving instructions + avoid 'policy language'). Moreover, the analysis highlighted that there are limited digital skills in the industry, which hinders the further development of online modules (especially among labourers, less so among foremen).

➔ Timing: short and medium term

➔ Possible partners: Constructiv, VDAB, education and training providers. Encourage

collaboration for internal academies

- ▶ Relevance: Many companies invest in in-house training: on the work floor, through workshops, seminars, etc. In some (especially larger) companies, this is formally organised in an in-house training centre. However, it is currently unclear which companies have set up a training centre and to what extent this involves cooperation with external partners. Besides in-house workers, job seekers and young people can also be trained through these academies. That would bring schools closer to companies. However, it may also be interesting to open the academies to workers from other companies: for example, this could bring smaller companies together. But this is not straightforward: some companies are often willing to open their doors to schools, but this is more difficult for other companies, especially if they are competitors.

- ▶ Proposed actions:

- Inventory of in-house training at companies
- Facilitate exchange between the in-house training centres of companies (e.g., welding academy)
- Keep in-house academies going, through a bonus from Constructiv

- Encourage companies with in-house academies to take advantage of existing systems such as BIOs (in-house training)
- Encourage collaboration among small businesses for in-house training/academies, e.g., through professional federations, employer federations, by providing a renovation offering in their training days, which small businesses can easily sign up to (affordable, feasible, larger scale, etc.)
- Strengthen in-house academies through collaboration with schools (e.g., through ESF project)
- Explore the potential of in-house academies (possibly also at manufacturers/importers of construction materials and equipment) for simulated workplace learning (also called trial learning) and other forms of apprenticeships also in the context of upgrading construction training programmes

➔ Timing: short term

➔ Possible partners: Constructiv, companies, VDAB

### Strand 3: Building expertise in support organisations

Deploy mentors as ambassadors

- ▶ Relevance: Mentors are key actors in following up on the training needs for each worker. In practice, all foremen can play a mentoring role provided they are given the relevant support, for example through targeted training. Consequently, training and guidance should address not only social and didactic skills (including digital skills), but also the evolving skills for workers in the renovation sector. Mentors can therefore also play a bridging role, putting identified trends and changing skills needs on their own companies' radar.
- ▶ Proposed actions:
  - Inform and raise awareness among companies about the importance of mentors for the organisation, including in training catalogues, through company visits and through provincial account managers of the VDAB
  - Educate and support mentors through information, guidance, tools, networking, projects (e.g.. ESF) etc.
  - Make the available support visible and communicate it to companies and mentors
  - Integrate the current 'Constructiv mentor website' into the Constructiv website with basic information about the concept, 'standard' training programmes, best practices, how to choose a 'good' mentor, the mentor training course offering with links to training providers, inflow pathways in the sector (BouwIngroeiBaan (BIB), master mentor pathway (MMT), etc.).
  - Encourage forward-thinking companies to provide workplaces for traineeships

➔ Timing: short term

➔ Possible partners: companies, Constructiv, VDAB.

## Update professional competence profile

- ▶ Relevance: Evolutions in the skills needed by renovation workers on the workforce should be stated in job descriptions, job vacancies, training pathways, etc. In order to support the educational and labour market actors in this regard, the professional skills profiles (BCPs in Dutch) are an essential tool. It is therefore advisable for these to evolve along with the changing labour market, so that they accurately reflect current expectations regarding renovation workers and proactively respond to the expected evolutions. In addition, the BCPs are also an important tool for ensuring that there is enough focus on renovation in other, related training courses.
- ▶ Proposed actions:
  - Update professional skills profiles for renovation workers and related occupations
  - Update information in Competent
  - Prepare a professional qualification dossier
- ➔ Timing: Short and medium term
- ➔ Possible partners: Constructiv, sectoral social partners, VDAB, Agency for Higher Education, Adult Education, Qualifications and Study Grants (AHOVOKS).

## Inform/Raise awareness

- ▶ Relevance: Renovation companies are not always aware of the rapidly changing environment in which they operate and the changing skills needs that result. This suggests that they are still unaware of the need for training for all workers, and the available supply of re-skilling and up-skilling. As such, continued efforts need to be made to provide support for preparing, adapting and extending their training plan, drawing on the results of the study. This is a major concern in SMEs in particular. This illustrates how crucial it is to communicate the results of the study internally by members of the steering board, so that they can be integrated into their own operations and services. In addition, external dissemination of the results is also advisable, so that they can trickle down into the renovation sector.
- ▶ Proposed actions:
  - Underline the importance of training and substantiated training policies to companies
  - Disseminate the results in-house within the organisation and among the external network
  - Incorporate the results of the study into the support made available (through information, guidance, tools, etc.)
  - Actively seek partners who (will) come into contact with renovation projects and give them accurate information, for example by referring to the climate and environmental objectives (renovation obligation) in Flanders, the cities and municipalities. It is crucial that these projects are properly addressed, and that the partners are ready for them, in collaboration with the industry.
- ➔ Timing: Short term
- ➔ Possible partners: shared responsibility, with an important role for the sector (in particular Constructiv, VCB, Bouwunie, ACV, ABVV), VDAB, education and training providers and companies in the sector.



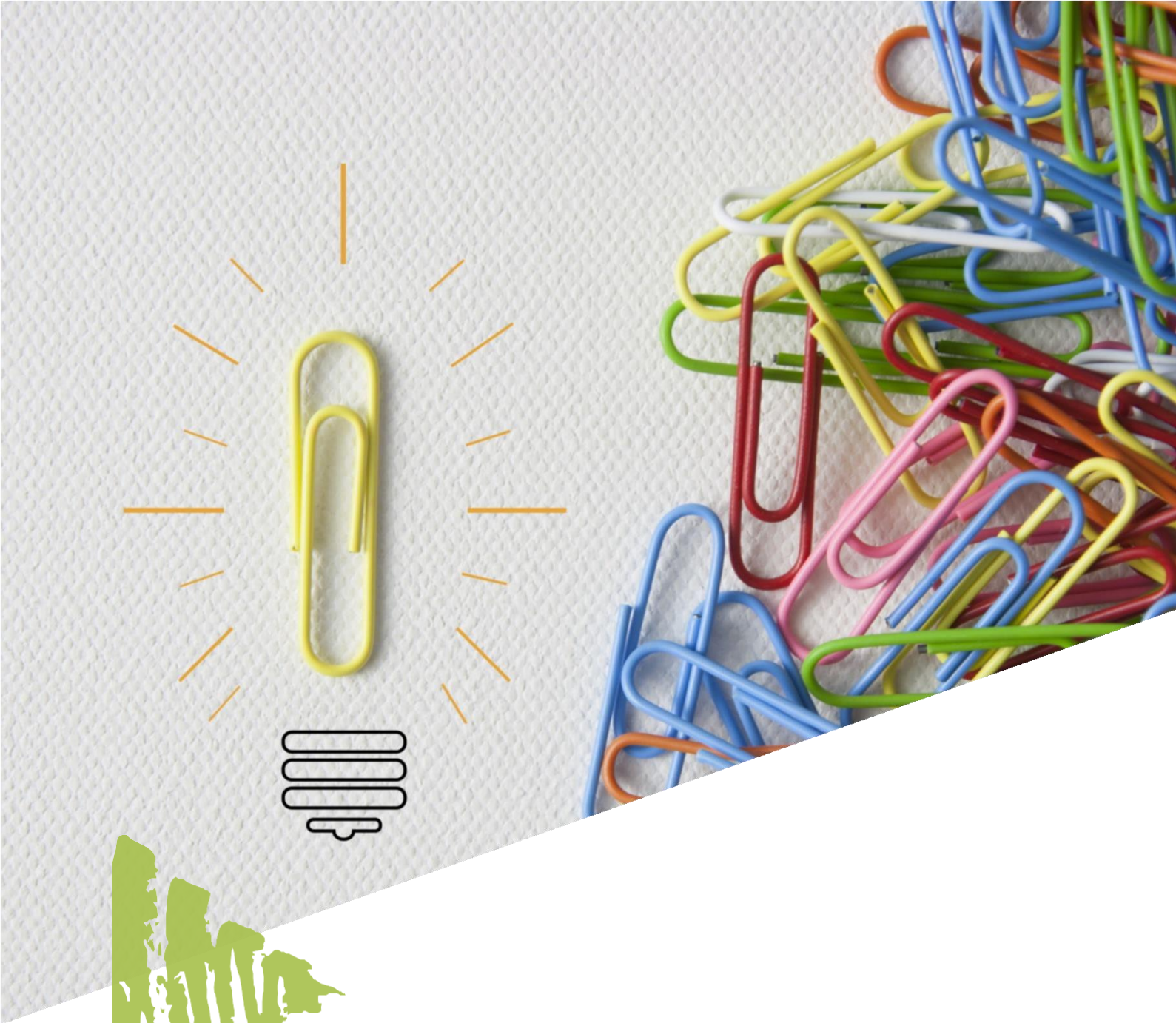
## Strand 4: Sustainable knowledge exchange between key actors in the renovation sector

Continue to invest in knowledge exchange

- ▶ **Relevance:** The interaction between the members of the steering board and the consultation of renovation companies demonstrated the importance of knowledge exchange. Creating and maintaining networks is more relevant than ever in a rapidly changing environment, to efficiently exchange information. To keep a finger on the pulse, it is important to build long-term relationships, both at the company and sector level: companies can be encouraged to invest in knowledge sharing within their own knowledge network, and for sectors, knowledge sharing with companies is essential.
- ▶ **Proposed actions:**
  - Continue to invest in knowledge sharing once the study is finished (and after the final steering board meeting), e.g. through a 'Sustainable Construction Task Force' (focusing on policy) or a learning network (focusing on the operational level).
  - Continue to monitor evolutions through exchanges with companies
  - Support mentors in sharing knowledge within their organisation
  - Support active networks at company level for the purpose of knowledge sharing, led by the main contractor
- ▶ **Timing:** Short term
- ▶ **Possible partners:** Constructiv, companies from the sector, VDAB.

Knowledge database: theory, tools, cases

- ▶ **Relevance:** There is already a great deal of expertise within the sector, but it is still fragmented across renovation companies and training providers. The available knowledge, practical cases, templates, etc. should ideally be disseminated in a language that workers and foremen understand (highly visual, through short reports and building on real-world observations).
- ▶ **Proposed actions:**
  - Centralise the available knowledge for the renovation sector in a knowledge database and link existing tools to it, with, for example, the BBRI and Building Your Learning from Constructiv as possible platforms → broaden and link existing knowledge databases to avoid fragmentation
  - Make the knowledge database available to renovation companies and training providers
  - Translate theoretical knowledge in practical ways through e.g. short, practical training modules
- ➔ **Timing:** Medium term
- ➔ **Possible partners:** shared responsibility, with a leading role for the sector (in particular Constructiv, BBRI VCB, Bouwunie, ACV, ABVV).



# ANNEXES



## B.1 / Composition of the steering board

Organisation	Participant
VCB	Gerrit Degoignies
bouwunie	Twain De Hondt
bouwunie	Mieke Bonnarens
ABVV	Annick Canaert
ACV	Iwein Beirens
ESF Flanders	Nikas Goossens
DWSE	Jutta Vandenbussche
VDAB	Ellen Albrechts
VDAB	Katrien Brands
Social and Economic Council of Flanders (SERV)	Mieke Valcke
Belgian Building Research Institute (BBRI)	Johan Van Dessel
Odisee	Paul Kenis
AP University college Antwerp	Pascale Mast
Tiboss bvba	Timmy Bours
Renotec	An Willaert
Renotec	Sanne Janssens
Temmerman Home	Stijn Temmerman
Eltherm Isolatietechniek	John Coose
Monument Group	Nicolas van Renynghe
Maarten Dutry bvba	Elise Mestdagh
Constructiv	Patrick Uten
Constructiv	Jan Jackers
Constructiv	Kathy Maddens
Constructiv	Wim Vandenput
Constructiv	Emma Vandersmissen
Constructiv	Kristof Nolmans
Constructiv	Geert Ramaekers
Constructiv	Jean-Yves Duyts
Constructiv	Kaatje Haelterman



## B.2 / Reference list

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## B.3 / Overview of interlocutors

### 3.1. Exploratory in-depth interviews

- ▶ Vandebos NV      Krijn Henrotte
- ▶ Hadibouw        Dirk Hellemans
- ▶ SPIB BVBA       Christel Biesmans
- ▶ Monument Group Nicolas van Renynghe
- ▶ Renotec            An Willaert

### 3.2. Case studies

Company	Function	Size
Boud (x2)	Director (1) and Team Leader (2).	Small
Beneens	Director	Medium-sized
Van Damme Algemene Bouwwerken	Director	Small
Woema!	Office assistant	Small
Eco & zo	Director	Small
Houtcreaties	Director	Small
A2Z Renovatie	Director	Small
B&R Bouw en Renovatie	Director	Medium-sized
Vandendorpe Arthur	Technical director	Medium-sized
Sleurs en Vangompel	Director	Small
Bouwbedrijf De Neve	Director	Small
Marimar	Director	Small
Schrijn- en timmerwerken Tifre	Director	Small