



Professionalising site managers and team leaders in the specific management of building renovation sites in Europe

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FUNDACION LABORAL
DE LA CONSTRUCCION
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IO1: Transnational model for the positioning, support and professionalisation of site managers and team leaders for building renovation sites

IO1-A3. Design of national and modular systems for the professionalization of site managers and team leaders for building renovation sites identified in each partner country

IO1-A3a – Identification of skills and knowledge to be applied in work situations experienced by renovation site managers and team leaders
TRANSNATIONAL REPORT

Drafted by CCCA-BTP in collaboration with FORMEDIL



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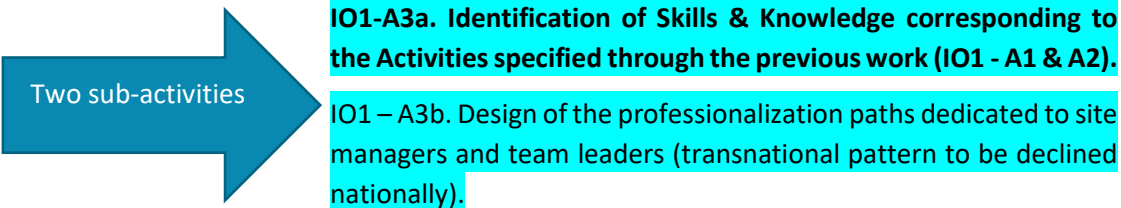
1. Activity IO1-A3: General context and objectives

IO1-A3 within IO1

IO1-A1. In-depth analysis of the technical, organisational and normative specificities of building renovation sites which affect the evolution of the functions of site managers and team leaders on these sites in the partner countries (activity finished).

IO1-A2. Identification, in each partner country, of the specific skills expected of site managers and team leaders by companies specialising in building renovation (activity finished, Final Report scheduled for 11 October 2021, by Pedmede).

IO1-A3. Design of national and modular systems for the professionalization of site managers and team leaders for building renovation sites in the territories identified in each country of the partnership: contents of the modules and teaching methods to be implemented based on a jointly designed transnational model (including training in work situations on site, in training centres and in e-learning):



The purpose of Sub-activity **IO1-A3a** was to prepare, through the identification of skills & knowledge corresponding to concrete Activities of site managers and team leaders on renovation sites, the design of the professionalisation paths, where work situations will be considered as main sources of learning. This aspect constitutes the principal innovation of RenovUp.

IO1-A4. Design at transnational level and implementation in specific national systems of a model for positioning the groups concerned in professionalization pathways (activity started with the identification of existing national practices, report available).

Partners involved

ALL, under the responsibility of FORMEDIL and CCCA-BTP.



2. Methodology for IO1-A3a

Starting Point: Identification of activities

Further to the information collected and analysed under the responsibility of Pedmede (GR), within the framework of IO1-A1 and IO1-A2, additional interviews with four professional trainers (two in France and other two in Italy) were carried out to identify the activities of site managers and team leaders acting at renovation worksites. After several consultations between Formedil and CCCA-BTP, **we concluded that the types of activities of the two occupational groups concerned are the same, the difference being consisted in their specific contents (autonomy and responsibility)**. In accordance with the results of IO1-A1 and IO1-A2, these activities follow the rhythm of the building renovation sites. They can be grouped into three phases:

Phase 1: Preparation of a renovation worksite (emphasis to be placed on this type of site)

- Activity 1.1. Renovation Site Analysis
- Activity 1.2. Site visit of the future renovation site
- Activity 1.3. Diagnosis of the existing building prior to intervention
- Activity 1.4. Preparation of the renovation site plan and its layout (tracing, fencing and preparation of the site area)
- Activity 1.5. Planning and phases of the team's work

Phase 2: Management of activities on a renovation site

- Activity 2.1. Team briefing / debriefing (daily and periodic)
- Activity 2.2. Elaboration and implementation of procedures for the proper execution of operations (e.g.: adaptation to site constraints, verification and monitoring of material supplies, verification of delivery times, consideration of energy efficiency, etc.)
- Activity 2.3. Management of teams on renovation sites (own teams, in cooperation, subcontractors, etc.): monitoring of tasks and anticipation of complex and conflicting situations. Management and monitoring of the work process of the teams, including monitoring and updating of the work schedule, co-activity on site, etc.
- Activity 2.4. Monitoring of relations with the client, the project manager, the architect, the design office, the HSC (health and safety coordinator).
- Activity 2.5. Organisation and control of on-site protection, including assembling/disassembling of scaffolding, work at heights, difficult access, use of hazardous products on renovation sites, etc.
- Activity 2.6. Management of waste treatment in renovation sites: planning and management of waste bins, sorting and recycling operations.
- Activity 2.7. Continuous quality control of renovations sites: quality of construction phases and quality of finished products.
- Activity 2.8. Administrative, financial and legal management of a renovation site.

Phase 3: Acceptance of the work done and quality control

- Activity 3.1. Final Production Quality Control
- Activity 3.2. Getting Client Agreement/Approval over the work done
- Activity 3.3. Evaluation of the work process, including evaluation, valorising and improvement of the team.

A mentioned above, responsibility, autonomy and tasks within each activity vary depending on whether the person is a site manager or a team leader. **It was therefore necessary to define their specific levels of responsibility and autonomy, as well as their specific tasks within each activity, for both site managers and team leaders.**

Identification of skills and knowledge corresponding to the activities

Starting from the results of IO1 A1&A2 and interviews with the trainers in France and in Italy, CCCA-BTP and Formedil have also identified what skills and knowledge are activated by site managers and team leaders during their professional activities on renovation sites. These results demonstrate that the generic names of the skills and knowledge are identical for both job profiles and for all activities listed above:

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Transversal Skills

- Ability to analyse and assess problems, project, anticipate and adapt to complex situations, also considering on-site co-activity.
- Internal communication capabilities on site and within the company, including the search for alternative solutions in complex situations. Ability to use appropriate communication tools.
- Capabilities of communication with external partners (clients, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.
- Ability to mentally manage workload, including management of stress and job strain.
- Ability to use software tools to analyse, evaluate and anticipate.

Transversal Knowledge

- Knowledge of planning, implementing and controlling the quality of production processes on renovation sites, including the organisation and control of supplies.
- Knowledge to plan and control the quality of intermediate and final productions.
- Knowledge to manage financial issues and the budget allocated to the renovation site.
- Knowledge to integrate an update to the energy standards of buildings during their renovation and to use the appropriate control tools.
- Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.
- Knowledge to integrate occupational health and safety prevention into renovation sites and to use appropriate control tools.

The challenge was to embed these generic skills and knowledge within the activities identified. In other terms, **the partners were asked to describe, with the help of appropriate professionals having a thorough knowledge of the activities of site managers and team leaders on building renovation sites, to identify how each transversal skill and generic knowledge are activated in work.**

Common framework for national enquiries

The objective was to identify the skills and knowledge to be applied in specific work situations (activities) by each partner. This work was completed mostly in **November and December**



2021. To achieve this, each partner filled in the two grids (one per professional profile: worksite manager and team leader acting at renovation sites).

The following method was suggested to accomplish the task:

- Find at least two experts who are familiar with the work of site managers and team leaders on building renovation sites to identify with them what is required in the grids to be completed.
- Work with these experts, preferably in a face-to-face situation, asking them for information on the degree of responsibility and autonomy of site managers and team leaders in each activity identified in the grid, and then on the different tasks that make up these activities (vertical analysis in both grids).
- Once the "vertical" work finished, it was suggested to move on, in the same working session, to the "horizontal" analysis, asking for information on the nature of the skills and knowledge that the site managers/team leaders must have in each of the three phases of carrying out the building renovation work.

At least five days were necessary for each partner to fulfil this task:

- One day to find the appropriate experts.
- Two days of work with them (one day for each professional profile: site manager and team leader).
- Two days for the analysis of results and for the finalisation of the two grids.

Following this common method, each partner proceeded in accordance with its specific national context and opportunities.

Data collection in France

CCCA-BTP contacted two training centres: in Bordeaux-Blanquefort and in Nantes-Saint-Herblain. Two physical one-day meetings were held there in October 2021. The CCCA-BTP staff met there: pedagogical directors, trainers specialised in training of team leaders and site managers specialised in the renovation of building (small and large sites). One site manager and one team leader were also interviewed. In total, 6 people were approached, i.e. 3 people per interview carried out by 2 people from the CCCA-BTP.

The basis for each interview was the common RenovUp grid, filled in during the interviews. The interviewers took care to listen carefully to their interlocutors, to identify each important piece of information. The free speeches of the interviewees, even if it did not correspond to the grid, were also noted and analysed.

After the interviews carried out in October 2021, the CCCA-BTP proceeded to the compilation of the results in order to publish a unique national synthesis, available in French and in English. This synthesis, which follows the transnational RenovUp “Grid for the Identification of Skills and Knowledge corresponding to Activities” was communicated to the French national stakeholders (training centres concerned and social partners) in December 2021.



Data collection in Italy

The methodology applied by Formedil for the identification and compilation of work situations, in terms of responsibility, autonomy and tasks was the following:

- In the first step, experts in the construction sector were contacted, identified among trainers and those responsible for teaching the courses of the building schools belonging to the FORMEDIL circuit, and between foremen and site technicians. The experts involved were 2 from the building schools of Bari and Cuneo, 1 foreman / technician from Avellino.
- The second step was organizing a meeting in mid-July to present the work to be processed and to collect opinions and suggestions. After the meeting, the work file was sent to all for further information.
- In the third step, all the files sent to the various experts were collected and the answers were analyzed. For each cell (given by the intersection of the work phase and skills) an in-depth summary of the responses received was made.
- In the fourth step, a further meeting was organized for the final presentation of the elaborated work to collect further suggestions and / or observations from the experts to improve the work.
- In the last step, the work was reviewed and completed, and its verification was sent to the CCCA-BTP and to other partners.

Data collection in Greece

The methodology applied by Pedmede:

- The experts who provided Pedmede with the input work in the same company and cooperate with each other which helped them - and Pedmede- coordinate well in terms of the replies provided or questions raised by them during the completion of the matrix.
- The excel file was not easy for the respondents to understand, as it seemed to them quite complex. To overcome the challenge, Pedmede broke the excel into short word documents that presented the questions in an arithmetic order.
- Pedmede worked on the vertical axes phase by phase, and then proceeded to discussing the skills.
- The main challenge Pedmede faced was the level of analysis required of the experts, as they were very focused on the activities, which they did not really distinguish from the level of responsibility and autonomy of the site managers and team leaders concerned.

Data collection in Poland

The methodology applied by Łukasiewicz - ITeE :

- Łukasiewicz - ITeE found two experts familiar with the subject. Both of them are active team leaders and owners of the company in building sector,
- An on-line meeting was arranged. It started with the general information about the aim of our meeting and the structure of the grid.



- Łukasiewicz - ITeE decided to work "phase by phase", in the sequence: Vertical analysis for phase 1 (responsibility and autonomy of team leaders) + horizontal analysis for Phase 1 (skills and knowledge that the site managers/team leaders); vertical analysis of phase 2, horizontal analysis for phase 2 etc.
- It took more than 4 hours just for the team leader specificity.
- Than the experts simply describe the most important differences between team leader and site manager (as responsibilities, autonomy, knowledge and skills are concerned).
- Łukasiewicz - ITeE analysed the collected information and fulfilled the grids, which took about 2 days per grid.

Data collection in Spain

During the two first weeks, and in order to help experts to identify and describe contents, FLC started relating the existing qualifications for site managers and team leaders in general at national context with the phases and activities already identified for both profiles on renovation sites in the previous phases IO1-A1 and IO1-A2 of the RenovUp project. It took over one week for each professional profile.

Two experts were selected to go deep into the renovation building sites requirements for professionals, two FLC trainers with a considerable updated experience as site managers and team leaders on building renovation sites.

During the four days worked with these experts, in a face-to-face situation, identifying and describing with them the degree of responsibility, autonomy within each phase, as well as the corresponding tasks, for both site managers and team leaders (horizontal analysis) **focusing, with an extreme interest, on renovation sites and real working situations.**

FLC also asked them to describe how the generic skills and knowledges detected on IO1-A1 e IO1-A2 were activated in each of the three identified phases of the renovation site manager's and team leader's work (vertical analysis).

It took us two days for the horizontal analysis (one for each professional profile) and another two days for the vertical one (also one for each professional profile).

Finally, three days for translation of both grids were needed.

Two training technicians from FLC were involved in this work, apart from the two external experts (trainers).

3. Professional Activities of Renovation Site Managers: Transnational Synthesis

Phase 01: Preparation of a renovation site

Phase 1: Preparation of	RESPONSIBILITY * The site manager, once he has received the initial project drawn up by a technician, is in charge of the work, and is therefore responsible for the preliminary analysis of the project.
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<p>a renovation site</p>	<ul style="list-style-type: none"> * The site manager is responsible for planning the work and organising the site. * She/He is responsible for communicating the pathologies detected and proposing solutions, after consultation with the superior (architect). * The site manager is responsible for the organisation of the site and its layout. * The site manager is responsible for planning the work and respecting the timescales dictated by the designer. * He/she is responsible for the preparation of his/her internal and external communication plan. * It is the site manager who decides what can and cannot be done in relation to the normative references on a renovation site, by playing the balance between what is allowed or not. * He/she is responsible for reconciling the renovation project with the local/regional/national regulation * The construction site manager is responsible for the organisation of the works and its conditioning, carrying out the relevant inspections and in compliance with the Health and Safety Plan. * Responsibility for feasibility checks: the building to be renovated already exists, it is up to us to adapt to the building, and not the other way around (big difference with new construction) * Global apprehension of the site: identify the co-activity, the supply, the formalization of the routine on site, by thinking spontaneously about the essential things which will take place there. * Responsible for planning the construction phases of the project and accountant to the hierarchy. She/he is responsible for planning the work, respecting the times scheduled by the designer. * Separation of tasks and prioritization, finding the necessary workshops. <p>AUTONOMY</p> <ul style="list-style-type: none"> * The preparation of the site is done in binomial with the works manager, in consultation with the company manager, the client or his/her representative (often the architect). * In small companies, the autonomy of the site manager is almost total. * Checking the current situation in conjunction with the study plans. * Autonomy in terms of performing diagnosis techniques. * The analysis of the Project is carried out autonomously, and before expressing any opinion on the work to be done, he/she should consult with his/her superior (architect) in order to eliminate any doubts. * She/ He consults and follows the verbal and written orders of the superior or person in charge (architect) if necessary. * He/she organises the construction site as he sees fit while respecting the workers' health and safety regulations. In agreement with the safety coordinator (if any) he/she can arrange all the canteen, changing rooms and toilets where he sees fit. * He/she plans the work to be carried out and how it should be done.
<p>Activity 1.1. Renovation Site Analysis</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Highlighting the essential things and having a critical look at the documents available. * He/she searches for alternative solutions for improvement. * Preparing the operating procedure and the arguments for his team allowing its implementation (first version); operating procedures that are specific and not standardized on renovation sites. He/She proposes alternative solutions for improvement. * The site manager identifies the tasks on renovation site. * He/she analyses the project in depth by checking files, drawings and technical documents. Analysis of written documents, gas pipes, architect's plans, technical documents, etc. (in renovation, the building exists, so it is easier to have written documentation concerning its technical and particular clauses (CCTP), architect's plan, declaration of intention and commencement of work (DICT), etc. * He/she gives an initial opinion on the documents. He/she also warns about possible difficulties, defects or malfunctions that could occur during the renovation work. * Identification of project stakeholders

<p>Activity 1.2. Visit of the future renovation site</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Identify situations where you will need to adapt to reality as it is (e.g. where to break, when and how) * Identify potential difficulties and peculiarities (e.g. where it will be difficult to meet all the standards, what solutions to find) * Understand the context, understand it, analyse the access, the neighbourhood, the connections, etc. * Identify the supply and storage areas and the conditions for applying safety rules * Formalization of the site installation plan (especially on large renovation sites, not always on small or simple sites) * He/she foresees material/supply needs * He/she nurture relationships with customers * He/She detects possible new pathologies and, consequently, new risks of occupational accidents. * He/She resolves and, if necessary, secures work areas; or consults with the project manager providing the necessary information for decision making. * He/She plans where all the facilities on site will be placed. * He/She contacts with the water, electricity and gas supply companies to get knowledge about their installations. * He/She collects information to make sketches and staking plans, selecting the relevant data obtained from the analysis of the project documentation, the study of the land and the situation of the work. * He/She plans the layouts, establishing the sequencing of the works and specifying the necessary resources. * He/She meets with the architect/project manager and the client to inform about the start of the work and what is intended to be done.
<p>Activity 1.3. Diagnosis of the existing building prior to intervention</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Identify the conditions of his intervention (responsibility for a thorough technical visit to understand his intervention and organize the work) * Documentation, data management and visualization * Localization of building components, indoor navigation * Propose solutions (renovation is a permanent search for solutions) - e.g. old premises next to another particular building, do not touch it * Paying attention to all aspects of technical feasibility, in connection with the technical knowledge of the structure and the supports of the building to be renovated, knowing the supports. * Formalize observations, analyse constraints in a distanced way (how to deal with the identified constraints), as the technical right-hand man of the company manager * Communicate this diagnosis to the team leaders, explain to them how to respect the old while respecting the current standards * Describe the tasks to be performed by the teams, including thermal break points, for example, highlighting all important elements, * Consult with the design office (the site manager provides the design office with information so that it can make an appropriate diagnosis) * Carry out "destructive surveys" to identify infestations, invisible damage, asbestos problems, hidden lead, etc., to better anticipate the future. * Clash detection, spatial programme validation * BIM quality assessment Construction progress tracking * Cost calculation or cash flow modelling (5D) * Deconstruction, rubble management forecasting * Deviation analysis, quality control, defect detection * Considering financial risks

<p>Activity 1.4. Preparation of the renovation site plan and its layout (tracing, fencing and preparation of the site area)</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Design the organisation and layout plans for the renovation site and communicate them to the team leaders. * Determining the sizes, and other constraints of those facilities. * Finalize the description of the tasks to be carried out, considering the realities and constraints (e.g. thermal breaks to be managed) which will condition the complexity of the renovation site. * Identifying the site facilities that will be required. Contact the municipal services to neutralize the access road, private transport, etc. * Control of the installation of the perimeter fence. * Establishing the inter-relationships between the facilities. * Optimising the layout of the facilities on the site. * Explain constraints to team leaders (e.g. how to pass beams) * Control of preventive measures for risks arising from demolition and earthworks. * Identification of materials and resources -material and human- to be used. * Control of inspections to be carried out and the samples to be taken on site. * Control of the temporary production objectives, specifying the execution deadlines for each element and phase of work, and the outputs to be obtained according to the available resources. * Control of occupational risk prevention measures specific to rehabilitation and demolition techniques (individual protections to be used by operators and collectives to be installed and maintained). * Control of the effects of demolitions in renovation Works. * Application of preventive and corrective measures for minimising the environmental impact and for avoiding annoyances to the users. * Control of the conditioning of the rehabilitation worksite before the start of works * Stabilization control of the facades to be maintained in demolition works of the interior structure.
<p>Activity 1.5. Planning and phases of the team's work</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Identify the goal of the project. Identification of project activities and execution of construction works, linking them to the phases of the process and to the established planning procedures. * Map out the scope, develop an outline or plan and share this initial idea with the team. * Control of the sequence of project activities and execution of construction works, establishing times and determining the resources for their execution * Identify and anticipate the roles of different stakeholders and the tasks they will be responsible for. * Manage the authorizations for the use of the road and public spaces in general allowing access to the construction site. * Plan the initial inventory of fixtures. * Development of contracting and control programmes for construction works, establishing objectives and identifying intervening agents and procedures * Monitor execution plans of construction works, applying programming techniques and proposing corrections to the deviations detected. * Control of occupational risk prevention plans in construction, relating specific risks to the construction phases and determining preventive and protective measures. * Establish the rotation plans of the teams on the renovation site (own teams and subcontractors). * Define co-activities (co-activity is planned well in advance) - very important in relation to planning to quantify the tasks in the renovation. * Explain well to the client what will happen between the starting point and the end point, especially in terms of the constraints of the project: this is particularly important if the renovation site remains inhabited ("clients want results, but not work"). * He builds a Gantt chart and shares it with the workers. * Requesting 5% of the budget in supply of unforeseen costs

Detailed results country per country

available on <https://www.renovup.org/general-overview-01/>



Phase 02: Managing activities on a renovation site

<p>Phase 2: Managing activities on a renovation site</p>	<p>RESPONSIBILITY</p> <ul style="list-style-type: none"> * The site manager is the first guarantor of what happens on the site: guarantor of safety, quality and proper functioning of the renovation sites (non-standard by definition - with evolution of specifications depending on the situation). * The site manager is more in the coordination of the different tasks. He/she is devoted to the operational and responsible for safety. ("Team leader warns and site manager finds solutions (e.g. an apparently healthy wall turns out to be rotten when opened: what to do, especially when the surface is large?") * He/she is responsible for anticipating situations following the analysis of plans and situations observed (exploitation of the information they contain). * He/she is responsible for anticipating situations during the execution of the work (particularly complex task on renovation sites). * He/she is responsible for setting up the skips, supplies, various evacuations and the protections to be implemented. * He/she is responsible for the execution of its internal and external communication plan. * He/she is responsible for the sequence of the different sequences (activities): he/she manages all the logistics, it is not more complicated than new construction, but it is different, because it is necessary to respect the existing building. * He/she must avoid the bad management of the renovation site (the slippages are much easier than on the new sites), avoid conflicts (open or latent within the teams of which the customers can be aware and which harm in the long run the site and the company). * The site manager has the power to "destroy" the site, especially if he/she is not present on there. <p>AUTONOMY</p> <ul style="list-style-type: none"> * Autonomously the site manager controls the progress of the work, organizes meetings with superiors, controls the interaction of all trades in order to guarantee the quality of the Project. * The site manager has autonomy to give instructions when he deems it appropriate. * She/he autonomously plans, organizes and coordinates the realization of the different works necessary to carry out the execution project, ensuring that the appropriate sequence of the different work packages are followed. * The site manager is autonomous in the complete management of the work site and the different phases of work. * The site manager organizes and controls the work site following the instructions received by the superior or person in charge according to the renovation project and in compliance with the Health and Safety Plan. * The site manager organizes and controls the work site following the instructions received by the superior or person in charge according to the renovation project and in compliance with the Health and Safety Plan. * The site manager has autonomy only for the storage of waste. For the rest she/he must follow the instructions of a qualified technician. * May temporarily suspend works when quality and technical requirements are not met. * Autonomously processes the control of production costs, keeping the Project manager continuously informed.
<p>Activity 2.1. Team briefing / debriefing (daily and periodic)</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Organize briefings with his team leaders to review what was done the day before and what will be done during the day: Briefing for planning the work phases and verifying the work procedures in order to respect the initial project. * Counselling for the planning of the project phases and the assessment of work methods in order to adhere to the original project's specifications. <ul style="list-style-type: none"> - Analyse what was done yesterday and what needs to be done today (with team leaders, sometimes clients, design offices) - Emphasize what needs to be anticipated, detect upcoming delicate moments, avoid tensions. - Meets with workers and subcontractors to convey instructions, with particular emphasis on the mandatory adoption of safety measures. * Identify the cost of non-anticipation (delays, additional financial costs, supply difficulties, misunderstanding on the part of the customer, etc.)

Activity 2.2.
Elaboration and implementation of procedures for the proper execution of operations (e.g.: adaptation to site constraints, verification and monitoring of material supplies, verification of delivery times, consideration of energy efficiency, etc.)

TASKS

* Manage day-to-day contact with clients (it is important to explain to the client what each change to the original plan entails), as well as a more personal relationship with the customer, considering his sensitivities, his constraints and his emotional side (the site manager is the privileged interlocutor of the customer) to remain credible and legitimated in front of the customer (crucial aspect for the good progress of a renovation site).

* Adapt to site constraints by organizing team activities:

- Energy/thermal analysis and control, carbon foot printing, energy efficiency, circular economy, health and safety on site.

- Risk scenario planning

- Scheduling (4D)

- Space management

- Structural analysis

* On-site control of demolition/deconstruction activities

- Stabilization management of the elements to be demolished.

- Control of bracings, supports/scaffolding and other load transfer measures. Control of the development of demolitions. Demolition control of bracing elements. Control of the demolition of construction elements that present the risk of collapsing. Detection of cracks in buildings and adjoining constructions.

- On-site control of specific renovation works (shoring, excavations...) and control of drifting of the temporary sanitation, water and electricity supply networks

- Resolution of contingencies, interferences and deviations from planning. Coordination between the different trades involved in the execution of the renovation works. Monitoring compliance with risk prevention measures.

- Supervises the renovation of the buried sanitation network and the treatment of buried walls and slabs of the work site, as well as the renovation of foundations, structures, facades and partitions, as well as the reinforcements of retaining walls and structures of adjoining buildings, the renovation of the roofs, of finishes, carpentry/locksmiths, and facilities.

* Control of the progress of work sites in the short term – daily and weekly.

- Control of the start date and expected duration of the different work packages.

- Estimation of production forecasts and progress, as well as of the resources available for each work package.

- Verification of the conditions that allow the beginning and development of the work packages on the scheduled dates. Verification of the adequacy of the meteorological conditions for the beginning and development of the work packages.

- Control of the sequence of performance of the different activities (mainly subcontractors) that may interfere with each other. Verification of compliance with the duration foreseen in the general planning for the different work packages. Resolution of contingencies, interferences and planning deviations detected.

- Proposal for rescheduling activities to correct non-compliance with partial deadlines

* Control of the availability of construction materials and work equipment

- Reception of materials. Control of the number of materials available, of the unloading and storage of materials and work equipment, of the safety of materials and equipment. Control of machinery parts. Verification of suitability of machinery and auxiliary equipment. Verification of the adequacy of the mobile machinery.

* He/she creates tools for checking times and costs.

* He/she provides for budgetary adjustment possibilities.

<p>Activity 2.3. Management of teams on renovation sites (own teams, in cooperation, subcontractors, etc.): monitoring of tasks and anticipation of complex and conflicting situations. Management and monitoring of the work process of the teams, including monitoring and updating of the work schedule, co-activity on site, etc. This activity is the most sensitive: "as soon as you get involved with people, it's complex; you have to choose your team leaders well, to get along with them".</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Adopt the posture of manager (absolutely fundamental responsibility during this key activity), by controlling the organisation of the site. * Recruiting teams. * Organize the increasingly complex co-activity. * Convey relevant messages to teams (instructions and explanations), paying attention to language and map reading barriers to adapt to varied and diverse audiences. * Carefully craft messages for clients, considering their diversity and sensitivity, by activating communication skills. * Informing the teams about safety prevention and passing on instructions to respect the rules, by activating its communication skills and using media adapted to the specificities of renovation sites. * Give the teams the necessary means to carry out what is required. Explain why the means are sometimes lacking, even if the work must be done in spite of everything. * Being often on the ground - this is imperative for renovation sites, the team must feel that he is present, in support of the team leaders who cannot do everything, so he must be present to assist the teams, be able to protect them if necessary, and stand by them in front of the client. * Organize the different interventions well (e.g. "the one who has the crane, has the power"). * He/she makes sure that the work progresses without time and cost deviations, for the monitoring of the work phases he creates control files which he updates periodically and if necessary daily. <ul style="list-style-type: none"> - Distribution of workers in the work sites according to the planning carried out. - Assignment of tasks to workers - Communication of orders to staff - Verification of the suitability of workers - Evaluation of the performance of human teams and individual workers. - Establishment of a favourable work environment with the workers in charge and other agents of the work site involved. - Management of suppliers and subcontractors - Organisation of coordination meetings - Resolution of conflicts among the different agents involved in the work site.
<p>Activity 2.4. Monitoring of relations with the client, the project manager, the architect, the design office, the HSC (health and safety coordinator).</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Adjust the organisation of the site and the achievements to the constraints of renovation which one discovers as one goes along (including supplies, subcontracting, etc.), by negotiating with the appropriate interlocutors. * Adapting the posture and the discourse to each interlocutor (one adapts a different discourse and a different attitude with an architect (the exchanges are more technical and descending with the architect, there are no relational/motivational stakes, one adapts a posture of the one who is accountable, whereas with the worker, one is a manager). * Managing surprises and convincing your interlocutors to accept changes within the budget, making them understand that not everything can be planned in advance (e.g. pipes to be adjusted, resizing of foundations, etc.) * Negotiate with partners outside the hierarchy (this is learned in an empirical way, so not learning the law or the rule, but its concrete application in a situation on site, the examples are taken from experience on site, based on these abilities of being a graduate) * Managing complex relationships with architects, especially when it is necessary to negotiate adjustments imposed by the complexity of renovation projects, which are by definition atypical (there must be a partnership with the architect). * Risk Management: issue tracking * Coordination, control, assurance and communication to users and workers about the restrictions of uses and transits in the renovation building * Verification of compliance with the conditions that allow the beginning and development of the work packages on the scheduled dates and in harmony with the users to able their access to their homes. * Control of the protection of common facilities not affected by the works.

	<ul style="list-style-type: none"> * Control with the client/user of lists of reviews and pending actions * Interrelation with users * Resolution of conflicts with users.
<p>Activity 2.5. Organisation and control of on-site protection, including assembling/disassembling of scaffolding, work at heights, difficult access, use of hazardous products on renovation sites, etc.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Considering the cost of different solutions, safety issues, knowing how to measure and assume the risks, in consultation with the team ("Safety guides the choice: if several choices are possible, it is the cost factor that will determine the choice"). <ul style="list-style-type: none"> - Compliance with health and safety procedures in construction work - Use of protective equipment in construction work - Human security-related factors - Legislation related to the rules of protection, safety and health, to know the procedures to follow: Identify different types of risks, such as chemical ones * Identify means of access and circulation. Impose choices and trade-offs * Measure the risk, be tough if you have to (especially important when dealing with safety - if workers don't want to put up a scaffold to save half a day, be assertive about not making them work on a ladder where a scaffold is needed). <ul style="list-style-type: none"> - Detection of contingencies, monitoring and control of preventive measures of the risks derived from demolition work (supports, shoring ...), clearing up, facade retention, removal and renewal of building's innards. * Detection of contingencies, monitoring and control of preventive measures of the risks derived from height works. * Regular site visits to keep track of the entire renovation project. * Negotiate and use situational intelligence to avoid being a prisoner of norms, while respecting them. * Impose safety, while respecting the existing building ("in the new building, there are habits that cannot be applied in the renovation") * Finding non-standard solutions for non-standard work situations, e.g. finding special scaffolding, mobile cranes, narrow excavators, etc. These solutions have an additional cost, you have to anticipate (performance with experience).
<p>Activity 2.6. Management of waste treatment in renovation sites: planning and management of waste bins, sorting and recycling operations.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Implementation of an operational plan for the reuse or recovery of waste: <ul style="list-style-type: none"> - Management and monitoring of the environmental management plan. - Preparation and processing of records. - Collaboration in environmental inspections. - Notification of non-conformities. - Participation in the development and modification of procedures to update or improve them. - Control of preventive and corrective measures of environmental impact - Verification of the separation and deposit in the established containers of demolition waste (RCDs). - Control of the storage and disposal of construction and demolition waste. * Design schemes to treat ALL types of waste including unforeseen ones such as asbestos, lead or other (regulations and treatment techniques to be known and respected) * Provide and manage skips, enforce differentiated sorting, treat non-routine waste, asbestos, etc.

	<ul style="list-style-type: none"> * Control tasks to ensure that the instructions are followed (e.g. "no burning of materials on site"). * Ensure what can be done in a given context and then communicate appropriately with the team to enforce the rule.
<p>Activity 2.7. Continuous quality control of renovations sites: quality of construction phases and quality of finished products.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Permanent verification of the achievements as they are made, with a control sheet for a regular quality follow-up. * In renovation, the site manager checks more carefully the compatibility of the materials to be applied with the old materials (already applied). * The site manager managements and controls of supplies: he discusses with suppliers in the event of non-compliant or non-delivered material; he/she coordinates subcontractors: he/she discusses with foremen and/or workers from other companies to control the work phases and he analyses problems that have arisen and/or been encountered. * Follow-up of the work: checking that the materials are correctly installed and used in relation to the data sheets in order to comply with the minimum quality requirements. * Checking compliance with the budget: checking that new work and/or new products do not alter the final cost of the work. * Verification and control of the materials supplied: the S.M. checks that the materials acquired correspond to those foreseen in the project. If they do not correspond, the S.M. checks the data sheets of the new materials with those foreseen in the project. * Check the correct implementation of the different energy renovation systems, including the correct laying and installation of materials and products. * Check that all regulations (safety, circular economy, etc.) are respected. * Present the benefits of a successful implementation of the circular economy for the client and the project manager. These benefits could be illustrated by highlighting the financial and environmental savings of the intervention. * Performs compliance and quality checks on the tasks carried out by the teams. * Manages unforeseen events in the production of the work. * He controls and adjusts working hours. * He draws up daily reports, reports and activity reports. * He draws up the various administrative documents for monitoring the site. * Check for leakage issues, etc. * Check the quality of the treatment of buildings divided into different lots whose construction is spread over many years, where each lot is different, with particular constraints for renovation (different ageing, different technical characteristics, etc.) - the rendering of the work is difficult to predict. * Preparation and processing of records. <ul style="list-style-type: none"> - Collaboration in quality inspections. - Notification of non-conformities. - Determination of measures and resolution of poorly executed construction elements - Participation in the development and modification of procedures to update or improve them. - Quality management of project documents, analysing documentation systems and applying control techniques.
<p>Activity 2.8. Administrative, financial, and legal management of a renovation site.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Preparation of documents for renovation projects * Applying construction law. Checking of building permits. * Budgeting and cost management: Staying within budget: <ul style="list-style-type: none"> - Preparation of price tables of work packages, selecting resources and outputs. - Preparation of budgets for construction work linking the measurement of work packages with the corresponding price * Monitor and regulate the financial aspects through the management of materials and working hours: Cost controls by preparing comparative studies of offers, certifications, technical documentation. * Administrative reporting related to site management. * Budget management and monitoring of indicators, including "dry" purchases, drawing up estimate costs. * Re-education of all the administrative documents to be used and updated. * Control and alert in case of default, even if he/she is not dedicated to financial negotiation. * Filling in specific declarations for the thermal regulation in renovation.

Phase 03: Acceptance of a renovation site and quality control of the work done

<p>Phase 3: Acceptance of a renovation site and quality control of the work done</p>	<p>RESPONSIBILITY</p> <ul style="list-style-type: none"> * Project checking in conjunction with the initial specifications, together with the client and the company manager. * After the completion of the work, the worker groups are also evaluated (cooperation, coherence, efficiency, quality). * He/she is responsible for the successful completion of the work. Anticipation of customer satisfaction. The expectation described in the initial document must always be kept in mind. * Responsibility for the process and for explaining the malfunctions observed on the site concerned. * He/she participates in the formalization of reservations <p>AUTONOMY</p> <ul style="list-style-type: none"> * The acceptance of a renovation site is done in pairs with the works manager, in consultation with the company manager and the architect (depending on the nature of the work and the size of the site). * The site manager may refuse to supply any material if he considers that he does not comply with the designer's instructions and that its characteristics may affect the final quality of the project. * The site manager has the autonomy to organise the work as he sees fit, but cannot modify the work. Any deviation must be authorised by the designer in agreement with the client. * He/she can ask the companies involved to eliminate any anomalies it has found.
<p>Activity 3.1. Final Production Quality Control</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Special control of water supply networks, heating, air conditioning, boilers, when the networks have been modified (this is not clipped, unlike new networks) * Immediately after the work has been completed and before being accepted by the client or the construction manager, the site manager verifies that they have been completed according to the initial design. If any anomaly occurs, she/he will analyse the problem and try to solve it with its workers or subcontractors, informing at all times the superior, by email and with photographs. * After having solved the anomaly, the site manager carries out a final review of the quality of the work, considering the problems detected in the first phase of verification. * Once verified that the work has been carried out correctly, the construction manager notifies the client and/or the person responsible for the work and the subcontractors that the work has been completed. This communication must be done by email, or other means, including photographs. * Check the new balances (beams in relation to the walls, adjustments to ensure the new water flows, networks and electrical power, etc.) * Check whether the new installations are hidden as planned (e.g. need for false ceilings). * A very thorough check of the commissioning.
<p>Activity 3.2. Getting Client Agreement/ Approval over the work done</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Checking whether anything has been damaged during the work (cornices on the ceiling, parquet, etc.) at the client's and in the neighbourhood - proposing repair work if anything has been damaged. * Follow the highly codified reception procedures. * Identify any rework, hidden defects, etc. and plan additional work that will lead to the lifting of reservations. * Without waiting for the entire Project to end, the site manager verifies as the works are completed, the acceptance by the client and / or responsible for the work * If during the execution of the works, the site manager detects that there may be budgetary deviations to improve the construction processes, he/she must communicate it to the client and / or person responsible for the work, explaining the reasons, and obtain their approval before proceeding to the deviation. * In the delivery phase, she/he will support the budget deviation with photos and graphics of the new processes and corrections made to the product. * Create the necessary documents to monitor the delivery of the works, controlling the finishes. * Controls the contingencies of end of work ensuring the quality of the final products * Participates in the acceptance of the works * If necessary, use non-conformity sheets to resolve problems detected in the acceptance of jobs as quickly as possible. * She/he organizes the replacement material and the work that this entails.

<p>Activity 3.3. Evaluation of the work process, including evaluation, valorising and improvement of the team.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * The site manager carries out a final inspection with the team leaders and the person in charge of the work: <ul style="list-style-type: none"> - Preparation of the summary notes at the end of the work, also taking into consideration the problems and points of view of the various parties. - Gap analysis and clarification. - Valuation of positive points, evaluation of processes. - Analysis of schedules, delays: why are there differences? 3We go back over our mistakes, we start a dialogue. We build a closeness". * Provision of evaluation and assessment reports to the team * An informal meeting (barbecue, etc.) at the end of the work (especially if it has lasted a long time) is important for team cohesion. * Discussion regarding the improvement of the team with each member: Project to increase the skills of the teams.
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4. Professional Activities of Team Leaders: Transnational Synthesis

Phase 01: Preparation of a renovation site

<p>Phase 1: Preparation of a renovation site</p>	<p>RESPONSIBILITY</p> <ul style="list-style-type: none"> * The team leader works under the supervision of the site manager. (S)he instructs the Manager for complete control of the building in relation to the study. * Collaborates with the Manager for the correct and effective fencing and the possible placement of a construction site. * The team leader is responsible for planning the work of his/her construction crews, respecting the times scheduled by the designer and under the supervision of the site manager. * Reliable and factual assessment of the condition of the renovated building. <p>AUTONOMY</p> <ul style="list-style-type: none"> * It is a function more vague than that of site manager, but a function nevertheless (training: Professional title of team leader, level 4. She/ He consults and follows the orders of the site manager. * Check of the report produced by the site manager about the collection of site's data * He can visit the site to be worked on independently and propose his own organisation and planning of the work and of the site to the site manager. * The team leader can request a different site layout from the site manager or safety coordinator. <p style="background-color: #fff2cc;">team leader can plan the interventions to be carried out and their modalities.</p>
<p>Activity 1.1. Renovation Site Analysis</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Decode the plans prepared by the site manager: Once (s)he has received instructions from the site manager, (s)he studies the work to be done and proposes some corrections. * Identification of project stakeholders * Risk Management: issue tracking
<p>Activity 1.2. Visit of the future renovation site</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Use the operating procedures prepared by the site manager * The team leader can visit the work sites and plan the work he has to do with his team. * Monitor material/supply needs * Cope with customers and all project stakeholders * Analysis of all conditions affecting the course of renovation works (e.g.: restrictions in the space of the area or building; restrictions related to the functioning of the renovated building; the need to secure elements of equipment; the possibility of storing building materials, machines as well as waste generated during the renovation).

<p>Activity 1.3. Diagnosis of the existing building prior to intervention</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Assist the site manager, if necessary, especially in the following: <ul style="list-style-type: none"> - Deconstruction, rubble management - Deviation analysis, quality control, defect detection - Localization of building components, indoor navigation * Diagnosis of the building undergoing renovation, with particular emphasis on the scope, nature and purpose of the planned works (the aim may be to change the aesthetics, modernize, increase technical parameters, including increasing thermal insulation etc.). The diagnosis may cover various aspects of the condition of the building, e.g.: <ul style="list-style-type: none"> - thermal insulation - safety of the construction (condition and strength of the ceiling, walls), - insulation against noise, - hygienic (safety) and health conditions (including, for example, removal of exhaust gases, moisture etc.).
<p>Activity 1.4. Preparation of the renovation site plan and its layout (tracing, fencing and preparation of the site area)</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Assist the site manager if necessary. * Identifying the site facilities that will be required. * Preparation of a plan covering the scope (quality) and volume (quantity) of renovation works). * Selection of appropriate methods, technologies, tools. * Collaboration in the control of the installation of auxiliary equipment - scaffolding, cranes and others. * Identification of materials and resources -material and human- to be used. * Control of the temporary production objectives, specifying the execution deadlines for each element and phase of work, and the outputs to be obtained according to the available resources. * Control of occupational risk prevention measures specific to rehabilitation and demolition techniques (individual protections to be used by operators and collectives to be installed and maintained). * Control of the conditioning of the rehabilitation worksite before the start of works * Control of the stabilisation of the facades to be maintained during the demolition of the interior structure.
<p>Activity 1.5. Planning and phases of the team's work</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Having received the planning (Gantt chart): Identification of project activities and execution of construction works, linking them to the phases of the process and to the established planning procedures. * Organisation and coordination of own work and employees within the framework of entrusted tasks. * Accounting for employees from hours worked. * Coordination and arrangement of works with site managers. * It manages the stocks of the materials at least one week ahead * He reads and uses the documents produced by the design office or the site manager.

Detailed results country per country

available on <https://www.renovup.org/general-overview-01/>



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Phase 02: Managing the activities on a renovation site

<p>Phase 2: Managing the activities on a renovation site</p>	<p>RESPONSIBILITY</p> <ul style="list-style-type: none"> * He is manager of his team on a first level, and at the same time semi-executive / semi-manager (profile: levels 3 and 4 plus years of experience). * The team leader alerts the site manager so that he can find solutions (e.g. an apparently healthy wall turns out to be rotten when it is opened: what can be done, especially when the surface is large? - You have to explain to the customer what this means). * Team leader is responsible for supervising a group of employees performing construction works of a specific specialty/field (e.g. bricklayers, installers, electricians, etc.): <ul style="list-style-type: none"> - Responsible for the work of a subordinate team carrying out construction works - Compliance with the rules of occupational health and safety by the team - Conduct in accordance with the principles of ethics in the performance of professional tasks - Compliance with the principles of loyalty to the employer and co-workers in the work environment. * Maintaining effective communication with the client/investor (if there is no construction manager). * Management of generated waste in accordance with arrangements with the customer / investor and in accordance with recommendations/orders of site manager. * Team leaders suffer the consequences of their own and subordinate team's negligence, mistakes etc.in the scope of renovation works assigned to a given team. * He/she is responsible for planning the work to be carried out with his team and for keeping to the timetable. * The team leader is one of those responsible for the health and safety of workers. * It is the team leader who ensures the permanent control of the work, step by step. <p>AUTONOMY</p> <ul style="list-style-type: none"> * He/she is the proposer, but not the decision-maker (he/she respects the authority). * Management is limited to his/her own position and his/her own team. * The team leader is autonomous in the complete management of the works to be done by the crews. * The team leader has autonomy to give instructions when he deems it appropriate. * She/ He consults and follows the orders of the site manager. * Cooperation with Manager on decision making process of waste treatment * Cooperation with Manager especially on the financial and legal management and decision making.
<p>Activity 2.1. Team briefing / debriefing (daily and periodic)</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Team leader Organises briefings by informing all workers. If necessary, he can also invite the site manager to the briefing. * Briefing for the planning of the work phases in order to respect the initial project, with particular emphasis on the mandatory adoption of safety measures. * He/she reports daily to the site manager.

<p>Activity 2.2. Elaboration and implementation of procedures for the proper execution of operations (e.g.: adaptation to site constraints, verification and monitoring of material supplies, verification of delivery times, consideration of energy efficiency, etc.)</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Pass on the right information about the rules to be followed * Plan your week and anticipate the activities of your team. * He/she verifies that the work schedule is adhered to and can create a personalised schedule. * Control of the progress of work sites in the short term – daily and weekly. <ul style="list-style-type: none"> - Control of the start date and expected duration of the different work packages. - Verification of the conditions that allow the beginning and development of the work packages on the scheduled dates. - Verification of compliance with the duration foreseen in the general planning for the different work packages. - Resolution of contingencies, interferences and planning deviations detected - Proposal for rescheduling activities to correct non-compliance with partial deadlines - Daily reports * Contribute to the improvement of operating procedures as a stakeholder * Determine the need for materials, human resources, etc. He's talking quantity, not money. * Control the quality of the executions, step by step * On-site control of demolition/deconstruction activities <ul style="list-style-type: none"> - Stabilization management of the elements to be demolished. - Control of bracings, supports/scaffolding and other load transfer measures - Control of the development of demolitions. - Demolition control of bracing elements - Control of the demolition of construction elements that present a risk of collapse - Detection of cracks in buildings and adjoining constructions - Monitoring compliance with risk prevention measures during renovation Works.
<p>Activity 2.3. Management of teams on renovation sites (own teams, in cooperation, subcontractors, etc.): monitoring of tasks and anticipation of complex and conflicting situations. Management and monitoring of the work process of the teams, including monitoring and updating of the work schedule, co-activity on site, etc. This activity is the most sensitive: "as soon as you get involved with people, it's complex; you have to choose your team leaders well, to get along with them".</p>	<p>TASKS</p> <ul style="list-style-type: none"> * The tasks that make up this activity are the most sensitive, as they are complex, involving humans. * Choose your team well, get along well with them. * Protecting the workers, showing solidarity with them in front of the customer, the site manager, etc. * Listen and anticipate. * He reports any relationship or behavioural problems to the site manager. * Identify all kinds of risks, some of which are more specific to renovation sites: risk of falling rocks, risk of working at height, lead and asbestos poisoning.
<p>Activity 2.4. Monitoring of relations with the client, the project manager, the architect, the design office, the HSC (health and safety coordinator).</p>	<p>TASKS</p> <ul style="list-style-type: none"> * The team leader is not usually in contact with external partners, including customers. * On the other hand, he will be in contact with the occupant (but if there are problems, the site manager will intervene). * Be able to build confidence. * Team leader continuously monitors the work and check that the deadlines are respected. * (S)he communicates any problems promptly to the site manager or construction manager. * At least make your team aware of the rules of good manners, coupled with the rules of know-how (e.g. lifting the furniture instead of pushing it).

	<p>* Making contacts and arrangements with the client (if there is no construction manager).</p>
<p>Activity 2.5. Organisation and control of on-site protection, including assembling/disassembling of scaffolding, work at heights, difficult access, use of hazardous products on renovation sites, etc.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Use technical and regulatory skills in this area. * Plan his week at this level and anticipate the assembly and disassembly of scaffolding or other equipment necessary for the smooth running of the site. * Formulate proposals to find solutions to problems that arise in terms of security or to anticipate their arrival. * Pass on the right information about the rules to be followed * Compliance with health and safety procedures, use of protective equipment on renovation site * Ensure compliance with safety rules, alcohol on site (during breaks) - risk situations (e.g. risks of falling rocks, falls from height, poisoning by asbestos, lead, sharp hyper glazing, non-standard installations in places that are difficult to access, removal of rubble without a lift, in a courtyard where the lorry did not pass). * Monitor gestures and postures, combined with the use of preventive measures (clearing up, demolition, façade retention, etc.).
<p>Activity 2.6. Management of waste treatment in renovation sites: planning and management of waste bins, sorting and recycling operations.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Use technical and regulatory skills in the following: <ul style="list-style-type: none"> - Organisation of containers. - Placing the containers in a suitable place on the construction site. - Supervising waste segregation. - Organizing the disposal/transporting of waste. * The team leader has to control the sorting of the waste in the three skips. * Pass on the right information about the rules to be followed. * Notification of non-conformities. * Verification of the separation and deposit in the established containers of demolition waste.
<p>Activity 2.7. Continuous quality control of renovations sites: quality of construction phases and quality of finished products.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Make sure that the materials to be applied are compatible with the old materials (already applied). * Check for leakage issues, etc. * Check the quality of the treatment of buildings divided into different lots whose construction is spread over many years, where each lot is different, with particular constraints for renovation (different ageing, different technical characteristics, etc.) - the rendering of the work is difficult to predict. * Quality control of construction products and renovation works performed. * Performing measurements. * Ongoing controlling of the compliance of the implementation of renovation works with technical and construction regulations and the principles of technical knowledge.
<p>Activity 2.8. Administrative, financial, and legal management of a renovation site.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Assist the site manager if necessary. * Team leader identifies the tasks executed. * Team leader verifies that the work carried out respects the regulations in force.

Phase 03: Acceptance of a renovation site and quality control of the work done

<p>Phase 3: Acceptance of a renovation site and quality control of the work done</p>	<p>RESPONSIBILITY</p> <ul style="list-style-type: none"> * The team leader may be involved in this activity (not systematically), but it is mainly the responsibilities of the site manager. * The project is checked in conjunction with the study for the perfection of the construction. * Supervises and intervenes where necessary during the control process by the customer. * Responsible for work assigned to the team, carried out in accordance with the art of construction (in accordance with technical documentation, standards, etc.). * The customer is satisfied with the course of work and the final effect. * Evaluation of the works done within the scope assigned to the specific team. * Checks the Manager's comments for the evaluation of each team and suggests improvements. <p>AUTONOMY</p> <ul style="list-style-type: none"> * Team leaders may participate in the acceptance of sites (depending on the size of the site), but it is not their main activity. * Team leaders participate in this phase as spokespersons for their teams. * She/ He consults and follows the orders of the site manager. * Quality control of work assigned to the subordinate team. * Only within the scope of work assigned to the subordinate team.
<p>Activity 3.1. Final Production Quality Control</p>	<p>TASKS</p> <ul style="list-style-type: none"> * Assist the site manager if necessary. * Double-check that the all works are completed as planned. * Delivery of the project to the project manager and the client. * Immediately after the work has been completed and before being accepted by the client or the construction manager, the team leader verifies that they have been completed according to the initial design. * If any anomaly occurs, she/he will analyses the problem and try to solve it with its workers or subcontractors, informing at all times the superior, by email and with photographs. * Final quality control: On completion of the work, the foreman, together with the site manager, reviews the work or changes that led to a deviation from the budget. Alternatively, he/she shows the work and/or changes that have been made so as not to upset the budget.
<p>Activity 3.2. Getting Client Agreement/Approval over the work done</p>	<p>TASKS</p> <ul style="list-style-type: none"> * May provide detail what needs to be taken back and how. * No clearly identified task for handing over the work to the client.
<p>Activity 3.3. Evaluation of the work process, including evaluation, valorising and improvement of the team.</p>	<p>TASKS</p> <ul style="list-style-type: none"> * They give their opinion on what worked and what didn't work on the renovation site. * Check of evaluation and assessment reports to the team. * Discussion regarding the improvement of the team with each member: Organising assessment/ evaluation meetings with the team. * Taking / ordering remedial or corrective actions. * They participate in the formulation of proposals to improve the functioning (organisations and people).

5. Skills & Knowledge associated to the Activities of Renovation Site Managers: Transnational Synthesis

Phase 01: Preparation of a renovation site

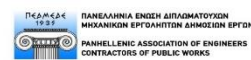
<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<p>Specificity: the adaptation to the existing which characterizes renovation and diagnosis.</p> <ul style="list-style-type: none"> * Ability to interpret the Project and adapt it to the real needs of the renovation site before starting the works. * It is more complicated in renovation, it is necessary to foresee much more things (how to make pass a crane, arrival of the water points, how I evacuate the dumpsters, the rubble, which is the width of the access road, etc., availability of the electric cables, upstream of the visit of the building site) - feasibility study * To have a precise vision of what is on site, lot by lot, e.g. what is the coating of the installations * It must think about the realization of the works and their feasibility and all the surrounding. The accesses, the available space, the available height. * Knowing how to read and analyse written material, identifying delicate points (tensions, difficulties, risks) * Be able to make your own roadmap to analyse a renovation site (anticipate difficulties) - prepare them for routines * Ability to anticipate insofar as you must prepare your planning from A to Z (know how to materialize your table) * Ability to analyse and evaluate the energy renovation works to be carried out, foreseeing the possible problems to be faced. * Ability to draw up a work plan after having carefully carried out an inspection of the places where all the work phases will be carried out, incl. organisation and preparation of the site. * Ability to extract the information related to the implementation included in a Health and Safety Plan of a renovation site in building, specifying the initial stabilization measures prior to the works.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * Ability to communicate with the designer and / or the person responsible for the work, as well as with the security coordinator (if any), using information and communication technologies that allow documenting the problems with reports, photos and / or videos, and if necessary, proposing more efficient alternative solutions according to their experience * Ability to communicate with workers and clearly convey the phases of work. * Site installation plan - also a communication document (available to all participants on site) * Autocad document: dynamic tool to manage co-activity on site. * Alert on the critical points: the site manager must communicate during the first meeting of the site the elements concerning each future participant. * Being able to write & draw clearly, take accurate measurements, become active listener.
<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * Knowing how to show the client how the building will become (knowing how to distinguish between technical documents and communication documents) - creating evolutionary documents for dialogue, transmission, and communication. The most important thing for the site manager is to feel and sense the wish and desire of the client, the project. • To feel the customer's need (the clientele is very specific and very heterogeneous) - the building, it carries values and human activities, not betray the client's wishes, explain the constraints that limit their wishes • Know the specificity of external partners <ul style="list-style-type: none"> - to have permanent contacts with them * Ability to manage with the supply companies (water, electricity, gas ...) and subcontractors the implementation of the work; and with local authorities obtaining permits, licenses...; using information and communication technologies that allow documenting the established procedures. * Ability to use software, email and social media for the presentation of work.

<p>Ability to mentally manage workload, including managing stress and work tensions. Personal management.</p>	<p>Be organized (have a good command of documents, know how to adapt them to your own functioning) * Big concern: recruitment and management of personnel on site, especially if there is a shortage of manpower. * Establish support groups of team leaders. * Learn to consider the unexpected as a sustainable component * Have a balanced professional life * Consider internships with work psychologists who would analyse stressful work situations * Ability to timely schedule and program all site activities especially the ones aiming at the planning and delivery of materials * Ability for all workers and subcontractors to understand workloads and potential issues that arise during work implementation. * Ability to make the team leader metabolise workloads and any problems that may arise during work.</p>
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<p>* Knowing how to read plans, analysis of graphical parts, architectural plans, structural plans * BIM in renovation to prepare the building site, this allows to model the works (e.g. simulate openings, etc.) - create models * Master Autocad * Knowledge of Excel (at least) - Gantt chart * BIM for digital mock-ups * Improve written expression * Read incoming computer documents * Gantt chart: representation and calculation. * Software and computer environments for construction projects recently implemented: consultation and extraction of data and graphics in digital format. * Software of organisation and control in the realization of layouts (GPS...).</p>
<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies. --- Knowledge to plan and control the quality of intermediate and final productions.</p>	<p>* Perfect knowledge of the documents relating to the renovation of a building, knowledge of the site. * To be able to build one's own roadmap for the observation of the construction site, with all its components (a support from which the expertise will emerge later) * Site visit: tool for anticipating achievements (more complex for renovation): foresee demolitions, replacements, hidden defects, etc. * Digging into the "reading of the plans": it is more the analysis of the plans to organize the tasks to be done, to anticipate the problems, decoding (analysis and decoding of the plans in order to ...) - know how to exploit the information contained in the plans. • Matching the technical possibilities of a renovation project with the available budget and the needs/wishes of the clients Knowledge of representations and sketching in construction. Layout techniques in construction sites * Knowledge about the control of the implementation of construction works and organisation of materials, machinery and equipment. * Knowledge for the verification of connections with the existing building, stabilization. * Knowledge for the verification of the terrain and execution of improvements (fillings, emptying, compaction). * Knowledge to obtain perceptual authorizations, carrying out the administrative procedures required in relation to the project and / or execution of building works. * Find compromises between constraints (including security) and expected achievements * Knowing how to select teams with the right skills for the tasks at hand. * The site manager recruits his workforce: he determines the quality and quantity of workers needed: Knowledge of quality management systems.</p>
<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<p>* Knowledge to produce documents that facilitate the control of time and especially the costs derived from the implementation of the project. * Knowledge to estimate and understand the financial cuts (know what has been cut) - the financial part is more the responsibility of the site manager, on smaller sites, the site manager makes direct purchases, the site manager has a budget to manage (purchase orders), then refer to the site manager • Define its program and its funding envelope * Knowledge to understand and coordinate with team leader on the budgetary initial planning of the project as well as discuss with him/her potential unforeseen costs that are to be generated</p>
<p>Knowledge of how to integrate the energy</p>	<p>* To know the regulations relating to the energy standards of buildings during their renovation and to use the appropriate control tools.</p>

standards of buildings during their renovation and to use the appropriate control tools.	<ul style="list-style-type: none"> * Knowledge to recognize the established energy systems of the renovation projects as well as their alternatives towards energy efficiency systems to be put. * Knowledge to propose solutions that improve the energy efficiency of the building before works begin. * Knowledge of working methods and techniques to improve the energy efficiency of the building. * Knowledge of new materials that improve energy efficiency.
Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.	<ul style="list-style-type: none"> * To know the regulations to integrate the circular economy on renovation sites and to use the appropriate control tools. * Knowledge to analyse the work phases and implement the correct preventive actions to safeguard the health and safety of workers. Ability to prepare appropriate safety plans accompanied by images, work files and site layout. Knowledge of the current legislation on health and safety in the workplace. * Knowledge to analyse and make an accurate diagnosis of the building to produce enough documentation for a future vision of the building integrating the circular economy in energy rehabilitation projects. * Knowledge to design files that contemplate the introduction of the circular economy.
Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.	<ul style="list-style-type: none"> * To know the regulations for integrating health and safety at work prevention in renovation sites and to use the appropriate control tools. Schedule proper training and information sessions for all team members regarding H&S especially tailored for every worksite. * Knowledge to analyse the work phases and correctly implement the necessary actions, provided for in the Safety Plan, to safeguard the health and safety of workers. * Knowledge to prepare prevention plans, duly illustrated * Knowledge of the current regulations on occupational risk prevention.

Detailed results country per country

available on <https://www.renovup.org/general-overview-01/>



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Phase 02: Managing activities on a renovation site

<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<ul style="list-style-type: none"> * Working on common sense: giving meaning to procedures. Three things: human issues (“the guy must feel good on the site”), safety including securing my own responsibility, societal issues. It must be credible. The site manager commands the work. The foreman will be closer to the workers, while the site manager coordinates the foremen. • A particular professional posture: one cannot start from a technological scheme learned in class, one needs flair and experience to choose the right courses of action * Power to act in unpredictable situations, to manage the unexpected. * Knowing how to manage construction sites when the inhabitants are there (e.g. housing rehabilitation). Ability to calculate the execution times of the work packages. Ability to control and monitor that each of the work packages are carried out according to the project once completed. * Ability to anticipate, calculate and provide necessary materials, equipment, and human resources. * Ability to analyse and verify the safety conditions of the work and workers. Especially in the demolition/deconstruction phase, the ability to identify the risks that are generated as it is executed and to adopt preventive measures that minimize them. * Ability to make diagnoses and treatments associated with renovation works, determined by descriptions of symptoms, technical reports, photographs, and schemes, by proposing continuous improvements, agreed with the project manager. * Ability to solve situations, problems or contingencies with initiative and autonomy within the scope of their competence, with creativity, innovation, and spirit of improvement in personal work and in that of team members. * In the quality control phase, ability to perform the traceability of the works, checking daily that the different standards are met. * Ability to analyse and control construction waste and propose reuse and recycling solutions. * Ability to extract information relating to inspections, testing, and sampling in the execution of a renovation work, specified in a quality plan. * Ability to identify environmental impacts/nuisances to users and their prevention and corrective measures. * Ability to control the elements that influence the energy performance of the building, as well as renewable energy technologies. * Ability to recognize pathologies derived from the bad thermal behaviour of the building to be renovated and solved them. * Ability to control the insulation works of the building envelope to be renovated, ventilated facades, SATE, insulation of roofs, walls, and basements.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * Ability to learn via analysing work circumstances as well as how to deal with the unexpected on the job and improve communication within teams and with the hierarchy. * Disseminate the right information to the team * Get into the habit of communicating in co-activity, with teams, with customers. the site manager must be able to argue with the project owner to finance unforeseen events (and upstream to set aside the necessary negotiation funds) * Know how to communicate rotation plans to other trades * Know how to communicate with people on site (colour codes, languages, etc.) • Transmit messages to teams, transmit instructions, choose the right means, make sure they understand; give instructions that are understood by everyone, keep communication simple. • He/she must be vigilant regarding skills of the workers concerned: monitoring technical skills (use of plans, topographic tools, understanding of the functioning of the different trades and the interactions that are created between them). * He/she must be vigilant regarding his/her own technical skills, starting with the structural work (very important in renovation). This is an important prerequisite and the principal source of his/her legitimacy. * Importance of the discussion with the customer, because with the old building the customer has an emotional relationship - dealing with asymmetric volumes, etc. * Ability to transfer to human teams the necessary instructions to execute the activities assigned to them.

	<ul style="list-style-type: none"> * Ability to work with multiple work teams with many personalities and characters, cultures, and languages. * Ability to communicate with the designer and / or the project manager, using information and communication technologies that allow documenting with reports, photos and / or videos the problems, and if necessary, proposing more efficient alternative solutions according to their experience. * Ability to argue information in an orderly, structured, clear, and precise way to the right people always and respecting the channels established in the organisation. * Ability to communicate with their peers, superiors, and people under their responsibility using effective means of communication, transmitting the appropriate information or knowledge, and respecting the autonomy and competence of the people involved in the field of their work.
<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * In renovation, the client's presence will be more frequent. The presence of safety coordinators will be more frequent. "The more outward looking we get; the more difficult communication can be." * Commercial dimension of the site manager and advice. Site managers are involved in customer relations: reassuring them, explaining the progress of the site, and doing a bit of sales. * The management of occupants in an occupied site is a very important point. Relational skills are essential. There is a very specific professional knowledge which must be impelled and managed by the site manager * Relationship with subcontractors with. diplomacy and mediation. The experience is a very good school! * The site manager must be able to measure or evaluate the risks or opportunities (technical, financial) to know if he can take them without harming the quality of the site. It is part of his prerogatives. * He reports problems to the architect encountered on the site . * The site manager is the interface between very different interlocutors (customer, workers, team leaders, customer, various authorities. * Knowing how to communicate with the client in a more nuanced way, convincing him to find solutions that cannot be based solely on emotions linked to an old building to which he is attached, etc. * Ability to ensure that subcontractors comply with the work phases and implement the security measures adopted by the company * Ability to manage customer nonconformities * Ability to communicate well with users in a renovation site.
<p>Ability to mentally manage workload, including managing stress and work tensions. Personal management.</p>	<ul style="list-style-type: none"> * Ability to analyse his/her environment to identify the constraints to be considered: adapting to unforeseen events and jobs in the specific context of renovation projects. * The most difficult thing: projecting yourself in a realistic way is a source of stress * Anticipating hazards in renovation. Fear of criminal law, risk management (human, economic, societal). * Think about the bailiff's report to be made in order not to endorse possible damages already existing in the neighbourhood and which could be imputed to the realization of the building site. * Responsible for recruiting personnel, including interim, leading teams: getting them to come to work every day, having guys in the right position; dialogue skills, know how to measure the skills of newcomers on a site - the site manager welcomes the new workers (welcome sheet, this allows us to check a lot of things). * Ability to organize and coordinate work teams, supervising their development, with responsibility, maintaining fluid relationships and assuming leadership, as well as providing solutions to group conflicts that arise (e.g. conflicting behaviour of customers or users; non-compliance with subcontractors; damages, unscheduled cuts of facilities; accidents or emergency situations ...).
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<ul style="list-style-type: none"> * To be able to produce documents that facilitate the understanding of the site and the activities that are assigned to each member of the site team. * To identify obstacles and threats to the production process. * To know the principles of quality to carry out controls to guarantee the quality of the work phases and the products approved* Knowing how to read plans, analysis of graphical parts, architectural & structural plans * Knowledge of GPS, IOT. * Knowledge of computer applications for obtaining, visualizing, and storing information relevant to the work

	<ul style="list-style-type: none"> * Knowledge of software for budgeting: spreadsheets, databases, specific construction applications. * Knowledge to elaborate graphic documentation of construction projects, drawing plans using computer-aided design programs (CAD, BIM). * Knowledge about the management of word processors, data compressors, video and photography editing, management of map viewers, real-time communication systems (skype, videoconferences,) to solve problems and communicate with their superiors. * BIM in renovation to manage the building site, this allows to model the works (e.g. simulate openings, etc.) - create models. * Master Autocad * Knowledge of Excel (at least) - Gantt chart * BIM for digital mock-ups.
<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies.</p> <p>---</p> <p>Knowledge to plan and control the quality of intermediate and final productions.</p>	<ul style="list-style-type: none"> * Compatibility between existing and new materials must be considered. Beware of the phenomenon of the semi-bearing wall (initial partition which over time becomes a bearing or stabilising element in the building). In training it is necessary to train to this approach of "surprise" to solve. * Knowledge to define the procedures for monitoring and control in the execution of the project: evaluation procedure of the activities or interventions; quality indicators for carrying out the evaluation; procedure for the evaluation of the incidents that may arise during the performance of the activities, their possible solution and registration; procedure for managing possible changes in resources and activities, including the system for recording them; preparation of the necessary documentation for the evaluation of the activities and the project; procedure for the participation of users or customers in the evaluation and specific documents have been drawn up; system to ensure compliance with the project specifications * Knowledge of interpretation of renovation plans. Study of pathological processes and renovation procedures. * Knowledge for the control of the progress of rehabilitation works: planning, monitoring, updating and review; selection and testing of equipment, machines and tools; intervening agents; planning and coordination between teams and users; occupation of public roads; organisation of stockpiles; shopping; inspections, sampling, testing and testing. * Knowledge of provisional stabilization and deconstruction. * Knowledge for the control of renovation of the buried sanitation network, buried walls and slabs in buildings. * Knowledge for the control of renovation of foundations, structures, facades, and partitions in buildings. * Knowledge for the control of the renovation of roofs, finishes, carpentry and locksmithing, and building installations. * Knowledge of innovative materials, techniques and equipment recently implemented in renovation works. * Knowledge of relationship management in renovation works. * Knowledge to monitor and implement quality management, universal accessibility, and design procedures for all. * Knowledge of documentation systems on renovation sites. * Knowledge of completion of incidents, supply, delivery, and others production charts; as well as verification of quality certifications and authorised brands. * Construction permit or declaration of works (legislative aspects) to be consulted and any other regulation in relation to classified or unclassified heritage sites (if concerned by renovation works). * Ability to oversee the quality of work performed on the job site and ensure that it meets the quality and environmental system's needs and standards. * Understand and control the budget of a renovation project. Manage budget margins. Know how to implement procedures to check for anomalies due to deviations from the budget. * Know how to interpret metric calculations and specification costs to check for deviations from the budget. Know how to communicate deviations from the budget to stakeholders.
<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<ul style="list-style-type: none"> * Specific regulations in terms of energy impact: Specific VAT, premiums, and subsidies to advise the owner. * Be able to ensure the financial management of the site, organize supplies. Ability to effectively discuss with architects as well as with the other partners of the site. * To know how to apply the directives contained in the documents relating to safety at work and to check that the materials used are not harmful to workers. Knowledge of and ability to apply current legislation, standards and operational procedures that allow the energy saving aspects of renovation work to be respected.

	<ul style="list-style-type: none"> * Knowledge of measurement and preparation of prices of work packages; measurement of work packages; budgeting of construction work and control of costs in construction, controlling budget deviations.
<p>Knowledge of how to integrate the energy standards of buildings during their renovation and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Know the limits (what can be renovated and what cannot be renovated), listed buildings, streets not to be touched, local renovation standards. * Knowledge to control the execution of the elements that influence the energy performance of the building using the appropriate technology. * Knowledge to monitor the construction of efficient facades from the energy point of view according to the technical specifications of the worksite. * Knowledge of renewable energy sources; its application in renovation works; and energy monitoring tools * Knowledge on energy efficiency regulations and the thermal performance of the building for proposals for improvement. * Knowledge of what is deductible from Eco-taxes, interest-free loans (the site manager has an obligation to advise, participate in commercial negotiations - the various tax reductions that can encourage customers to renovate). * Knowledge for the control and management of the building envelope to be renovated: ventilated facades, insulation of roofs, walls, and basements. * Knowledge about the energy renovation of buildings through ventilated facades. * Knowledge to adapt to new work situations, keeping the scientific, technical, and technological knowledge related to their professional environment updated
<p>Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * The site manager must have an updated and complete knowledge allowing to identify the various wastes and to know the processes of storage and treatment or reprocessing. * Know how to deal with non-routine waste, asbestos, etc. * Waste sorting and energy saving (e.g. water fountains) - again, a matter of communication with the teams; skips are a cost. * Knowledge to interpret the Environmental Management Plan and introduce measures to control the environmental impact and circular economy in the rehabilitation work. * Knowledge for the management of construction and demolition waste, using project documentation and ensuring compliance with regulations. * Knowledge to analyse and make an accurate diagnosis of the building in order to produce enough documentation for a future vision of the building integrating the circular economy in energy rehabilitation projects.
<p>Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * It is difficult to integrate safety requirements in renovation (unlike in new construction): Enforce compliance with safety regulations, don't just talk about safety in terms of costs. It is also an investment. A change in mentality is necessary. Show the benefits in concrete terms. * Knowledge of gestures and postures to preserve health. * Knowing how to identify all kinds of risks, some of which are more specific to renovation sites: risk of falling rocks, risk of working at height, lead poisoning and asbestos. * Knowledge to generate safe environments in the development of their work and that of their team, supervising and applying the procedures for the prevention of occupational and environmental risks in accordance with the provisions of the regulations and the objectives of the company. <p>In particular, knowledge of: legislation relating to prevention and safety and health on construction sites; occupational diseases and accidents; risks and prevention measures in work sites, machinery and equipment; procedures for action and first aid in cases of accident; personal protective equipment; safety in tools, tools and material handling; safety in signage and fencing of works; safety in electrical installations and equipment; safety in the use of scaffolding, platforms and ladders; safety in the operation of machines, forklifts, cranes and conveyor belts; safety in light construction machinery; safety in landslides, landslides and containments; safety in demolition/deconstruction work; safety in work at height; hazardous materials safety.</p>

Phase 03: Acceptance of a renovation site and quality control of the work done



<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<ul style="list-style-type: none"> * Assess the final project quality in all requirements set in phase 1. * Being able to assess the quality of the result, in relation to the hazards observed and the means made available. * The site manager must reconcile self-confidence and humility. His adaptability and his technical knowledge are essential assets. He must be ingenious. * Ability to control the quality of the works finished before and during delivering them, especially of the thermal insulation, waterproofing and electricity norms. * Ability to explain and justify unforeseen events, deviations, etc.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * The most important communication ability: the worksite manager must be rigorous and ready to a permanent self-checking. * Ability to encourage team's good job and discuss what went well and what remained a challenge. * Capitalizing on experience and increasing the skills of the teams (identification of the right contacts at the various service providers or operators. * Knowing how to express reservations in relation to the various trades.
<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * Ability to discuss with external partners about the final product, accommodate changes and discuss lessons learnt. * Activate communication skills with clients, especially in case of disagreement, conflict, or search for alternative solutions. Respond positively to external criticism (customers, subcontractors) and take their opinion into account. * At the time of the handover, be able to present to the client the advantages of the energy upgrade of the building being renovated. * Negotiate reservations and how to remove them.
<p>Ability to mentally manage workload, including managing stress and work tensions. Management and personnel management</p>	<ul style="list-style-type: none"> * Ability to discuss with the team leader effectively on the workload faced and management techniques that took place. * Ability to understand the client's requests when delivering the work and to manage the professional tensions that these may generate: importance of clarity of the request.
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<ul style="list-style-type: none"> * Abilities: in digital the site manager must be able to use, read and exploit digital documents and reading tools. (BIM) He must master the basic office automation and syntax. * Ability to overview the software used and other needed for future use and training of the team * Ability to illustrate to all stakeholders the results achieved in terms of quality of processing techniques and materials used. * Computer knowledge to make reports and display the results.
<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies. --- Knowledge to plan and control the quality of intermediate and final productions.</p>	<ul style="list-style-type: none"> * Ability to supervise the quality of the work carried out on the site and comply with the requirements and standards established in the quality and environment system. * Mastering the criteria and quality indicators for assessing intermediate and final productions. * Knowledge to define the quality indicators to carry out the evaluation. <p>Knowledge to establish the procedure for participation in the evaluation of users or customers and preparation of specific documents.</p> <ul style="list-style-type: none"> * Checking the functionality of the retained heating appliances after intervention. An installation that worked well initially may not work properly after the intervention (electricity, heating, ventilation, etc.). * Carry out a commissioning . this check can be devolved to the relevant team leader. * The site manager is often very concerned about the state of the elements already on the site (well protected and not damaged parquet, cracks, splinters, etc.). In training, it is important to make the students aware of the consequences and responsibilities to which the site manager is exposed in the event of poor reception of the site.

<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<p>Ability to perform a final overview and compare initial with final financial data and evaluate results in a cost-effective manner.</p> <ul style="list-style-type: none"> * Know how to present the benefits of energy retrofit to the customer by using a flow meter to illustrate the thermal transmittance of walls or by using a thermal imaging camera. * Knowledge to communicate with all the agents involved about the results acquired according to the delivery times and the assigned budget. If there is a budget deviation, ability to communicate it, justifying the problems encountered and the benefits obtained.
<p>Knowledge of how to integrate the energy standards of buildings during their renovation and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Knowledge to evaluate energy efficiency of the renovation projects as well as the methods used. * Communicate to all stakeholders the results achieved and to be achieved thanks to the circular economy measures adopted for the energy renovation of the building. Ability to use computers and software to present the results achieved.
<p>Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Knowledge to evaluate circular economy methods used for the project implementation or potential training needed. * Demonstrate to all stakeholders that the health and safety criteria. * Knowledge to communicate, through the proper use of information and communication technologies, the results of the integration of the circular economy in the work.
<p>Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Knowledge to evaluate team's health and safety policies' performance or potential training gaps. * Knowledge to communicate, through the proper use of information and communication technologies, the results of the integration of occupational risk prevention in the work.

6. Skills & Knowledge associated to the Activities of Team Leaders: Transnational Synthesis

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<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<ul style="list-style-type: none"> * Specificity: the adaptation to the existing which characterizes the renovation sites and the diagnosis. Ability to interpret the site and adapt it to the real needs of the renovation site before starting the works. Ability to coordinate layout works. * It is more complicated in renovation, it is necessary to foresee many more things (arrival of water points, how I evacuate the dumpsters, the rubble, what is the width of the access road, availability of electrical cables, etc.) * Ability to assess the status of the site in terms of existing material, and problematic points. * (S)he must think about the realization of the works and their feasibility and all the surroundings. The accesses, the available space, the available height. * Knowing how to read and analyse written material, identifying the delicate points (tensions, difficulties, risks concerning his team). * Verification of task assignment plans in unforeseen situations, e.g. organizing replacements, changing the work schedule and certification of task assignment plans in unforeseen situations, e.g. organizing replacements, changing the work schedule, etc.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * Organize team building activities before the beginning of the renovation works, ability to listening actively to the team's issues and actively listen to their problems. * Determining the scope of work and assigning tasks in accordance with the competences and experience of subordinate persons (forming a team). * Understand the site installation plan - also a communication document (consultable by all participants on site) * Another dynamic Autocad document, - a tool to be inserted in the co-activity on site * Build communication tools to convey safety messages: ratio activities/risks.
<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * Ability to argue/ discuss with the client– establishing a common opinion on the actual condition of the renovated building and the state of target parameters (after renovation) * Organising alternative contractors. * To feel and make feel the wish and desire of the client, of the project. • Get a good feel for the customer's need (not to betray the will of the customer, to explain her/him the constraints which limit her/his wishes.
<p>Ability to mentally manage workload, including managing stress and work tensions. Management and personnel management</p>	<ul style="list-style-type: none"> * Ability for all workers to understand workloads and potential issues that arise during work implementation. * Be organized and know your own operation. Ability to timely schedule and program all site activities especially the ones aiming at the planning and delivery of materials. * Establish support groups of site managers * Learn to consider the unexpected as a sustainable component * Have a balanced professional life * Consider internships with occupational psychologists who would analyse stressful work situations.* Ability for all workers and subcontractors to understand workloads and potential issues that arise during work implementation. * Ability of the team leader to absorb workloads and problems that may arise on the job.
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<ul style="list-style-type: none"> * Know how to use tablets, laptops, etc. equipped with applications appropriate to communicate with the hierarchy, with his teams, with customers, etc.

<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies.</p> <p>---</p> <p>Knowledge to plan and control the quality of intermediate and final productions.</p>	<ul style="list-style-type: none"> * Decode the plans, use the operating procedures prepared by the site manager. * Knowing how to determine the needs in quantity of materials and human resources. But he/she is not financially responsible. * Ability to plan the procedures linked to the QA. Following consultation with the site manager and visit to the site, the procedures will be clearly defined and followed. * Building permit or declaration of works (legislative aspects) to be consulted and any other regulation in relation to classified or unclassified heritage sites. * Knowledge of quality management systems. * Ability to enforce themes and avoid problems in order not to deviate from the budget foreseen in the design phase.
<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<ul style="list-style-type: none"> * General knowledge of specific regulations in terms of energy impact (RT 2020 etc ...) Specific VAT, premiums, and subsidies to advise the customer. * Principles and forms of cost estimation of renovation works using catalogues, calculators. * Cost estimation of human workload considering the safety margin (potential /unforeseen additional works).
<p>Knowledge of how to integrate the energy standards of buildings during their renovation and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * General knowledge of what is deductible from VAT, taxes, interest-free loans (the site manager has an obligation to advise, participate in commercial negotiations - the various tax reductions that can encourage customers to do renovation) * Know the limits (what can be renovated and what cannot be renovated by your team). * Ability to assess energy efficiency capacities and methodologies to be used in the project, tailored to its characteristics . * Knowledge of new materials that improve energy efficiency. * Knowledge of methods and techniques of laying materials for the energy improvement of a building. * Technical knowledge of new materials for energy improvement.
<p>Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Principles of management of waste arising during renovation works, with particular emphasis on applicable regulations and rules for calculating costs. * Know how to schedule waste sorting. * Knowing how to deal with common and non-common waste, asbestos, etc. * Waste separation and energy saving (e.g. water fountains) - again, a matter of communication with the teams; skips are a cost. * Ability to manage and compile files used for circular economy planning.
<p>Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Knowing in depth the safety regulations (drilling in the joints and not in the stone); the safety net etc... These are more adaptations to be found than compromises. * Enforce safety regulations, show the benefits in concrete terms. * Knowledge to analyse the work phases and correctly implement the necessary actions, provided for in the Safety Plan, to safeguard the health and safety of workers. * Knowledge of the current regulations on occupational risk prevention.

Phase 02: Managing activities on a renovation site

<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<ul style="list-style-type: none"> * Capacity to manage unplanned events that the site manager cannot solve and proceed to offer alternatives and take decisions when needed. Ability to ensure the timely management and progress of the project. * You can't become a team leader without experience. You need knowledge, but above all experience. It is above all chief/neighbourhood manager. * Ability to assess work situations and decide whether to alert the site manager. * Anticipation skills * Be able to plan your team over the week and quantify the materials you will need over the same period. -Their professional identity is first and foremost While technical, they must learn cross-cutting skills. Their technical skills are equivalent to those of a site manager (reading plans, taking measurements, measuring quantities, checking the quality of their team's work). * Power to act in unpredictable situations, to manage the unexpected. * Ability to calculate the execution times of the work packages * Ability to control and monitor that each of the work packages are carried out according to the project once completed * Ability to analyse and verify the safety conditions of the work and workers. Especially in the demolition/deconstruction phase, the ability to identify the risks that are generated as it is executed and to adopt preventive measures that minimize them. * Ability to solve situations, problems or contingencies with initiative and autonomy within the scope of their competence, with creativity, innovation, and spirit of improvement in personal work and in that of team members. * Ability to recognize pathologies derived from the bad thermal behaviour of the building to be renovated and solved them.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * Building own authority among subordinate employees. * Coordination of the work of the team in relation to the work of other teams. Cooperation in an inter-branch team. * Supporting the construction manager in renovation project management. * Communicating the principles of waste management to subordinate employees in an unambiguous and legible way. * Ability to ensure the motivation of his team. * Disseminate the right information to the teams. * Know how to communicate rotation plans. * Know how to communicate with people on site (colour codes, languages, etc.) * Conveying messages to your team, giving instructions, choosing the right means, making sure they understand; giving instructions that are understood by everyone, keeping communication simple, knowing how to decode and construct your message. * Build ways to communicate safety messages: ratio activities/risks. * Ability to communicate with the site manager about the intervention to be carried out and to propose alternative solutions in relation to their own experiences. * Ability to communicate with the workers to transfer clearly all the operative modalities of the site organization and the execution of the work activities. * Ability to use email and social networks to facilitate communication.

<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * The ability to behave is very important because he is likely to be in contact with customers very frequently (more often on renovation sites than on new construction sites). * Know-how in front of the customer, especially at the customer's premises. * The management of the occupants of a building site is a specific capacity for renovation sites. * Ability to communicate with their peers, superiors, clients, and people under their responsibility using effective means of communication, transmitting the appropriate information or knowledge, and respecting the autonomy and competence of the people involved in the field of their work. * Building his/her own authority among external partners. * Verification/ changes of external orders (materials) according to the course of renovation works. * Using web communication tools to place/verify orders. * The ability to assertively negotiate with the client, argue and persuade to change their mind (e.g. to choose a better technological solution or material that provides better efficiency).
<p>Ability to mentally manage workload, including managing stress and work tensions. Management and personnel management</p>	<ul style="list-style-type: none"> * Ability to develop a methodical, precise, and rigorous approach to organising the work to be carried out by your team. * Ability to ensure that planning and details are respected. * Ability to manage conflicting situations between the work of the same company or of different companies. ("As soon as you get into the human side of things, it's complex (you must choose your team leaders well, to get on well with them"). The team leader must be able to protect the workers, to be in solidarity with them in front of the customer, in front of the site manager, etc. * Ability to bring care to the work (fully responsible). * Ability to make all workers and subcontractors understand the workloads and possible problems that may arise during the work. * Monitoring the workload of individuals, in accordance with their competence and experience. * Ability to organise and coordinate work teams, supervising its development, with responsibility, maintaining fluid relationships and assuming leadership, as well as providing solutions to group conflicts that arise (e.g. damages, unscheduled cuts of facilities; accidents or emergency situations ...).
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<ul style="list-style-type: none"> • Know how to use tablets, laptops, etc. equipped with applications appropriate to communicate with the hierarchy, with his teams, with customers, etc. • The team leader is accountable for the task, also with modern communication means (mobile phone, etc.) / use of digital tools even more important for the leader for the team leader than for the site manager. * Knowledge to elaborate graphic documentation of construction projects, drawing plans using computer-aided design programs (CAD, BIM). * Understanding digital documents indicating the minimum quality requirements to be achieved. * Knowledge about the management of word processors, data compressors, video and photography editing, management of map viewers, real-time communication systems (skype, videoconferences,) to solve problems and communicate with their superiors. * Performing financial and material calculations



<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies.</p> <p>---</p> <p>Knowledge to plan and control the quality of intermediate and final productions.</p>	<ul style="list-style-type: none"> * Checking the compatibility between existing and new materials. Beware of the phenomenon of the semi-load-bearing wall (initial partition which over time becomes a load-bearing or stabilising element in the building) In training it is necessary to train to this approach of "surprise" to solve. <ul style="list-style-type: none"> • Control of the works (including self-checks, on his own initiative), based on the plans. He redoes the spot checks, during the work. * Self-checking (designed either by works managers or by site managers). * Knowledge to supervise the quality of the work carried out on the site by the site manager and the team, assess the standards established. * Interpretation of renovation plans. Study of pathological processes and renovation procedures. * Control of the progress of rehabilitation works: planning, monitoring, updating and review; selection and testing of equipment, machines and tools; intervening agents; planning and coordination between teams and users. * Knowledge of provisional stabilization and deconstruction. * Knowledge of relationship management in renovation works. * Knowledge for the control of renovation of the buried sanitation network, buried walls and slabs in buildings. * Knowledge for the control of renovation of foundations, structures, facades, and partitions in buildings. * Knowledge for the control of the renovation of roofs, finishes, carpentry and locksmithing, and building installations. * Knowledge of innovative materials, techniques and equipment recently implemented in renovation works. * Knowledge to oversee the quality of work of the site manager and the team on the job site and ensure that it meets the quality and environmental system's needs and standards. * Building permit or declaration of works (legislative aspects) to be consulted and any other regulation in relation to classified or unclassified heritage sites. * Reading a technical drawing. * Selection of key moments (milestones) appropriate for the control. * Knowledge to monitor and implement quality management, universal accessibility, and design procedures for all.
<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<ul style="list-style-type: none"> * The team leader talks in quantity, not money. * Be sensitive to the cost of materials and operations, such as the cost of a bad sorting. * Effectively manage the financial aspects of the project and initiate procurement processes. Knowledge to effectively discuss with the client about all project events and their impact to its financial knowledge. * Knowing how to apply the directives contained in the documents relating to safety at work and to check that the materials used are not harmful to workers. * Principles of running business and entrepreneurship in the renovation sector. * Readiness for unpredictable course of events during the implementation of works (e.g. unexpected price increases, lack of availability of materials, etc.).
<p>Knowledge of how to integrate the energy standards of buildings during their renovation and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Rudimentary knowledge of what is deductible from VAT, taxes, interest-free loans - to discuss with customers - the various tax breaks that can encourage customers to do renovation) * Know the limits (what can and cannot be renovated within the scope of your activities) * Knowledge of and ability to apply current legislation, standards and operational procedures that allow the energy saving aspects of renovation work to be respected.
<p>Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Know how to sort the waste for which he is fully responsible. * Waste separation and energy saving (e.g. water fountains) - again, a matter of communication with the teams; skips are a cost. * Knowledge of the techniques and work phases for the management of waste (recoverable and non-recoverable) on the construction site. * To know and apply the current legislation, standards and working methods that allow the aspects of circular economy to be respected on the renovation site. * Propose to the site manager or construction manager solutions for the recovery and reuse of waste in energy efficiency worksites. * To identify obstacles and threats to the production process. To know the principles of quality to carry out controls in order to guarantee the quality of the work carried out. * To know the working techniques for the recovery of construction and demolition waste. * To be able to communicate with the workers about the minimum quality standards to be achieved and the management and recovery of waste.

<p>Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * It is difficult to integrate safety requirements in renovation (unlike in new construction). * Knowledge of gestures and postures to preserve health. * Knowing how to identify all kinds of risks, some of which are more specific to renovation sites: risk of falling rocks, risk of working at height, lead poisoning and asbestos. * Enforce compliance with safety regulations, don't just talk about safety in terms of costs. It is also an investment. A change in mentality is necessary. Show the benefits in concrete terms. * Knowledge of the importance of emergency exits for the safety of all people working on the building site. * Knowledge of the effects/risks of the (not) use of the rules of personal/collective protection. * Knowing of the reliable sources of information on the amendment of the related law. * Continuous update of knowledge about the applicable and frequently changing legal provisions in the field of health and safety.
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Phase 03: Acceptance of a renovation site and quality control of the work done

<p>Ability to analyse, evaluate problems, project, anticipate and adapt to complex situations, also considering the co-activity on site.</p>	<ul style="list-style-type: none"> * The team leader must reconcile self-confidence and humility adapted to his professional context. His adaptability and technical knowledge are essential assets. He must be the technical specialist recognized by the workers and by the site manager. * Ability to control the finished works before delivering them, especially of the thermal insulation, waterproofing and electricity. * Ability to justify unforeseen events, deviations, etc. * Compliance with standards, budget changes, etc. * Ability to discuss with the team on lessons learnt and problems encountered.
<p>Internal communication skills on site and within the company, including finding alternative solutions in complex situations. Ability to use appropriate communication tools to manage teams.</p>	<ul style="list-style-type: none"> * Capitalizing on experience and increasing the competence of teams. Knowing how to evaluate and express reservations in relation to the different workers, procedures and organization modes. * Ability to communicate with crews and jointly seek solutions to solve problems arising in the delivery phase of work. * Communicating positive and negative results of work evaluation to individual employees. * Ability to discuss with the team and the site manager about communication problems encountered.
<p>Ability to manage formal contacts and communication with external partners (customers, subcontractors, suppliers, etc.). Ability to use appropriate communication and monitoring tools.</p>	<ul style="list-style-type: none"> * Know how to respond positively to external criticism (mainly from customers, management, partners) and take it into account. * Dealing with crisis situations: complaints, lack of acceptance by the client / investor. * Negotiate the way to remove reservations: Activate communication skills with the site manager especially in case of disagreement, conflict or search for solutions.
<p>Ability to mentally manage workload, including managing stress and work tensions. Management and personnel management</p>	<ul style="list-style-type: none"> * Ability to control stress during the crucial phases of the handover when the site manager and/or the project manager expresses reservations about the work carried out, for example. * Ability to convey well the client's requests made at the time of handing over the work and to manage well the professional tensions that these may generate: importance of the clarity of the request. * Ability to discuss and evaluate with the site manager the project management typology used during renovation activities.
<p>Ability to use computer tools to analyse, evaluate and anticipate.</p>	<ul style="list-style-type: none"> * Ability to illustrate to the site manager or director of works the results achieved in terms of the quality of the working techniques and materials used. * Ability to use PCs and software to present the results achieved. * Ability to assess the work performed with the use of software by the team.

<p>Knowledge to plan, implement and control the quality of production processes in renovation sites, including legal aspects, human resources management, organisation and control of supplies.</p> <p>---</p> <p>Knowledge to plan and control the quality of intermediate and final productions.</p>	<ul style="list-style-type: none"> * Knowledge to supervise the quality indicators to carry out the evaluation. * Knowledge to assess supplies management and procurement procedures * Mastering the criteria and quality indicators for assessing intermediate and final productions. * Knowledge to perform checks and assess material used for failures and evaluation. * Communicate to the site manager or construction manager the results achieved in terms of delivery and meeting the budget standards assigned to the team's work. * Knowledge to evaluate intermediate and final productions according to quality criteria and indicators.
<p>Knowledge to master the financial stakes and the budget allocated to the renovation site.</p>	<ul style="list-style-type: none"> * Mastering the IT tools that enable the production of reports accounting for the work of the team.
<p>Knowledge of how to integrate the energy standards of buildings during their renovation and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Know how to present to the site manager or director of works the conformity of the works in terms of energy efficiency by using a flow meter to illustrate the thermal transmittance of the walls or by using a thermal imaging camera. <p>Ability to use PC and software to present the results achieved.</p>
<p>Knowledge to integrate the circular economy on renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Demonstrate to the site manager or construction manager the team's respect for the circular economy. * Ability to use computers and software to present the results achieved.
<p>Knowledge to integrate health and safety at work prevention in renovation sites and to use the appropriate control tools.</p>	<ul style="list-style-type: none"> * Demonstrate to the site manager or construction manager that the health and safety criteria adopted were appropriate. * Communicate that work has been done well and safely.

7. Conclusion: Further Steps

An update to finalise the professionalisation scheme

As a result of the work carried out in this phase of the project, the partners confirm that the professional situations and the corresponding activities are the main the basis of their work on the targeted professionalisation scheme. This general principle will be integrated to the positioning processes of the trainees at the entry into the professionalisation scheme, to their learning process and to the assessing of the acquired competences.



Work to finalise the professionalisation scheme has been planned between January and September 2022. It will include initial positioning/needs assessment, professionalisation pathways, assessment/appraisal and recognition of learning outcomes, and proposals for training of trainers. The partners will work in two groups: Formedil and FLC will focus on themes 1 and 2, while Lukasiewicz ITeE and Pedmede will develop proposals for themes 3 and 4. CCCA-BTP will be present in both groups. The results will be discussed and approved by all partners.

THEME 1

POSITIONING/EVALUATION OF INITIAL NEEDS AT THE BEGINNING OF THE PROFESSIONALISATION PATHWAY

- Identification of the needs and learning objectives to be achieved
- Identification of the methods and means of positioning
- Identification of the means of exploiting the results of the positioning in the vocational training pathway

THEME 2

PROFESSIONALISATION PATHWAYS

Educational approach, which makes it possible to use real work and site situations to transform them into learning situations (in company, online, in training centre).

1. Analyse the work situation observed in the company with **RenovUp analysis tools (to be designed)**
2. In relation to the learning objective to be achieved, decide on the contents of each learning situation/unit and what can be learned on the renovation site, in a simulated work situation at school, online, analysis, pooling and synthesis phase at school, **using RenovUp design tools/grids (to be designed)**
3. Design the pedagogical conducting/facilitating of the learning units, encouraging the participation of learners **(specific to each country, no common methods & tools proposed)**

The work on these two themes will make it possible to finalise the conceptual and pedagogical approach making it possible to prepare and implement each component/learning unit, further to the identification of activities, skills and knowledge related to the functions of worksite supervisors and team leaders acting on building renovation sites.

Purpose:

Moving from work situations on renovation sites to pedagogical entities (situations/components/learning units) enabling learners to be professionalized in a more formal way.

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Principles:

1. Each **learning component/situation/unit** has a corresponding **learning objective**. This learning entity can possibly be divided into several learning sessions (time entities).
2. **Inclusion of 3 dimensions of learning** i.e., cognitive (content), emotional (motivation) and social (interaction), with reference to the critical and evaluative cognitive aspect (meditation).
3. **Challenge-based learning**, based on a collaborative framework, where learners, while trying to overcome challenges, gain deep transversal/managerial knowledge and skills.
4. **Strong adherence of the learner to the learning activity** (interest in the actions and tasks to be performed - motivation)

THEME 3

EVALUATION/ASSESSMENT & RECOGNITION OF LEARNING OUTCOMES

- Adaptation of the Assessment and Recognition Tools and Methods (**Open Badges**) to the specificities of the RenovUp learning outcomes and audience.
- Pragmatic implementation of the RenovUp Open Badges in the partnership countries: identification of the conditions for the recognition of learning outcomes at the end of each component/learning unit.

Putting the work situation at the centre of the training scheme requires prior preparation of the trainers who will oversee designing and implementing national professionalisation paths for site managers and team leaders for building renovation sites. Indeed, the partners consider the training of trainers in techniques and methods of transmitting knowledge and know-how enabling them to conceive trainings in line with the specific and individual work situations of each learner is one of the most important challenges of the project.



THEME 4

TRAINING OF TRAINERS/TRAINING CONCEIVERS (5 days – hybrid foreseeable)

- **KNOWING AND EXPLOITING THE WORK SITUATIONS:**
 - Methods for identification and observation of work situations for training purposes.
 - Analysis of the work situations and their integration to learning contents and pedagogical methods.
- **DESIGN OF LEARNING COMPONENTS/UNITS TO BE IMPLEMENTED WITHIN WORK-BASED LEARNING.**
 - BUILD the learning component/unit based on the **work-** and at the same time **learning situations** (in company or in workshop).
 - ORGANISE the different sessions that make sense for the learner.
 - DESIGN THE EVALUATION of the units/sessions.
- **CONDUCT THE LEARNING SEQUENCE in the training centre that integrates learner's professional experience in company and on worksite.**
 - Anticipation and adaptation to the situations encountered.
 - Mastery of the pedagogical approach and appropriate decision-making process in contact with learners.
 - Constructive evaluation of learning outcomes.

TRAINING ABROAD : Observation and Analysis of Training/Teaching methods in a partner country (3 to 5 days; Be aware of language issues!)

The work of each of the two identified groups will take place:

* In each country, by bringing together pedagogical focus groups from the bases provided to refine the pedagogical objectives identified (see next part) and to pre-position the places of acquisition of new knowledge and know-how (companies, training centres, online training).

* In three-day meetings (in March 2022 in Oviedo, FLC, for group 1 and in April 2022 in Radom, Lukasiewicz, for group 2) to cross-reference the national results and to draw up transnational bases, to be validated by all the project partners.

* Again, in each partner country, to adjust the transnational base to the national contexts and to envisage experimentation from September/October 2022 with trainees.



Interactions between work situations and learning (pedagogical) objectives

To design the training projects, the partners will start from the table that brings together the work situations, grouped in three thematic blocks (preparation of the renovation site, management of the renovation work and restitution of the results), and the learning (pedagogical) objectives that should enable the learners to acquire new knowledge and know-how, so that they act more competently in these situations.

RENOVATION SITE MANAGERS

Block 1: Preparing a renovation site	Breakdown into general pedagogical objectives
Component 1.1: Literature review of the renovation project components	<ul style="list-style-type: none"> Identify and collect documents specifically related to renovation projects Analyse data and identify critical points Report back and propose improvements, changes or solutions if necessary
Component 1.2. Diagnostic methods for existing buildings and premises prior to intervention	<ul style="list-style-type: none"> Identify the different diagnostic procedures/methods/techniques possible in renovation projects Determine / select appropriate diagnostic method(s)
Component 1.3. Visit to the site of the future renovation: Preparation, observation methods and analysis of the observed elements	<ul style="list-style-type: none"> Identify, list and locate particular elements to be observed during the visit Determine the diagnostic methods to be used and the possible contributors or materials required Carry out the visit, identify and notify critical points Analyse the critical points and propose the necessary solutions or adjustments
Component 1.4. Preparation of the renovation site plan and its layout (marking out, fencing and preparation of the site area)	<ul style="list-style-type: none"> Identify/characterise specific elements of renovation sites Integrate the specific elements of renovation into the design and layout of intervention sites.
Component 1.5. Planning and phasing of the team's work on renovation sites	<ul style="list-style-type: none"> Identify/characterise specific elements of renovation sites Integrate the specific elements of renovation into the planning, procedures and phasing of interventions
Block 2: Managing communication and relations on a renovation site	Breakdown into general pedagogical objectives
Component 2.1. Management of teams on renovation sites: Monitoring of assignments and tasks and anticipation of complex and potentially conflictual situations with internal staff and subcontractors.	<ul style="list-style-type: none"> Identify and characterise critical situations or problems specific to renovation sites Anticipate, develop and propose solutions Informing team leaders
Component 2.2. Development and implementation of procedures for the proper execution of operations (e.g. adaptation to site constraints, verification and monitoring of material supplies, verification of delivery times, consideration of energy efficiency, final efficiency, etc.).	<ul style="list-style-type: none"> Identify and characterise the different types of constraints or problems specific to renovation projects Anticipate, develop and propose solutions and inform team leaders

Component 2.3. Follow-up of relations with the client, the company manager, the architect, the design office & the CSS (health and safety coordinator).	<ul style="list-style-type: none"> • Characterise the specificities of the different protagonists of a renovation project • Integrate these specificities in the exchanges/procedures between stakeholders
Component 2.4. Mental management of workload, including management of stress and tension at work.	<ul style="list-style-type: none"> • Identify the particularities and specificities of the tensions linked to renovation projects • Develop facilitative or anticipatory strategies
Block 3 : Management of technical and organisational aspects of the renovation site	Breakdown into general pedagogical objectives
Component 3.1. Administrative, financial and legal management of a renovation project.	<ul style="list-style-type: none"> • Identify and collect administrative, financial and legal documents specifically related to renovation projects • Integrate these specificities in the management of the site
Component 3.2. Management and control of on-site protection of workers and buildings, including erection/dismantling of scaffolding, work at height, difficult access and use of hazardous materials on renovation sites.	<ul style="list-style-type: none"> • Identify specific and critical situations • Identify the current standards or regulations • Develop and propose resolution strategies • Informing team leaders
Component 3.3. Waste management on renovation sites: planning and management of waste bins, sorting and recycling. operations (circular economy), and the use of appropriate monitoring tools.	<ul style="list-style-type: none"> • Identify specific situations • Identify the current standards or regulations • Develop resolution strategies and implement appropriate techniques • Informing team leaders
Component 3.4. Integration of energy saving standards in renovation projects and use of appropriate monitoring tools.	<ul style="list-style-type: none"> • Identify specific situations • Identify the current standards or regulations • Develop and propose resolution strategies • Informing team leaders
Component 3.5. Continuous quality control of renovation sites: quality of intermediate phases and quality of finished works.	<ul style="list-style-type: none"> • Identify the critical points to be taken into account • Identify quality criteria and develop specific control procedures
Block 4: Acceptance of renovation work and quality control .	Breakdown into general pedagogical objectives
Component 4.1 Quality control of renovation results and client approval	<ul style="list-style-type: none"> • Identify and characterise the particular points of attention to be taken into account • Develop the necessary control procedures
Component 4.2. Evaluation of the working process and results, including evaluation, valorisation and improvement of the team.	<ul style="list-style-type: none"> • Evaluate the final deliverables and processes implemented • Valuing work with team leaders and teams

BUILDING RENOVATION TEAM LEADERS

Block 1 : Preparing a renovation site	Breakdown into general educational objectives
Component 1.1. Preparation of a renovation site and diagnostic methods of existing buildings and places before the intervention	<ul style="list-style-type: none"> • Implement specific technical protocols or diagnostic methods
Block 2 : Mastering communication and relations on a renovation site	Breakdown into general educational objectives
Component 2.1. Monitoring teams on renovation sites: Anticipation of potentially conflictual situations with the team and subcontractors.	<ul style="list-style-type: none"> • Identify and characterise critical situations or problems specific to renovation sites • Anticipate, develop and propose solutions to your team
Component 2.2. Development and implementation of procedures for the proper execution of operations, including co-activity.	<ul style="list-style-type: none"> • Identify and characterise critical situations or problems specific to renovation sites • Anticipate, develop and propose adaptation solutions
Component 2.3. Follow-up of relations with the client, the hierarchy and external partners.	<ul style="list-style-type: none"> • Characterise the specificities of the different protagonists of a renovation project • Integrate these specificities in exchanges with different stakeholders



Component 2.4. Evaluation of the working process, including evaluation, valorisation and improvement of the team.	<ul style="list-style-type: none"> Evaluate the final deliverables and processes implemented Valuing work with team leaders and teams
Block 3 : Mastering the technical and organisational aspects of teamwork	Breakdown into general educational objectives
Component 3.1. Administrative, financial and legal aspects of the tasks entrusted to team leaders on renovation sites.	<ul style="list-style-type: none"> Identify and collect administrative, financial and legal documents specifically related to renovation projects Integrate these specificities in the management of the site
Component 3.2. Organisation and control of on-site protection of workers and buildings, including erection/dismantling of scaffolding, work at height, difficult access and use of hazardous materials on renovation sites.	<ul style="list-style-type: none"> Identify specific and critical situations Identify the current standards or regulations Develop and/or implement resolution strategies
Component 3.3. Organisation of waste treatment on renovation sites: planning and management of waste bins, sorting and recycling operations (circular economy), and the use of appropriate monitoring tools.	<ul style="list-style-type: none"> Identify specific situations Identify the current standards or regulations Implementing appropriate techniques
Component 3.4: Integration of energy saving standards in renovation works and use of appropriate monitoring tools.	<ul style="list-style-type: none"> Identify specific situations Identify the current standards or regulations Apply resolution strategies
Component 3.5. Continuous quality control of the intermediate phases and the quality of the finished work.	<ul style="list-style-type: none"> Respecting quality criteria and developing specific control procedures
Block 4: Acceptance of renovation work and quality control	Breakdown into general educational objectives
Component 4.1: Quality control of renovation results and client approval.	<ul style="list-style-type: none"> Checking the final deliverables and the processes implemented

The main added value of the RenovUp project will be the mastery of the back and forth between the work situations experienced by the learners and their understanding and distanced analysis, theoretical contributions, confrontations, and experiments in the training centre, to guarantee a return to the work situation with greater competence.

Reference:

Damianou, E., Religa, J., Lawinski, M., *Building renovation sites as workplaces with specific skills requirements – international challenges* – Article in *Edukacja Ustawiczna Dorosłych* (Polish Journal of Continuing Education), Nb 3(114)/2021. Available at [RenovUp](#)

