**Professionalising site managers and team leaders in the specific management**

**of** **building renovation sites in Europe**

Contract Nb. 2020-1-FR01-KA202-080105 (2020-2023)



**IO1: Transnational model for the positioning, support and professionalisation of site managers and team leaders for building renovation sites**

**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.**

**IO1-A2. Identification of the specific skills expected of site managers and team leaders by companies specialising in building renovation.**

**Field research findings (IO1 A1/A2)   
Poland**



Radom, 31 May 2021

# **IO1- Transnational model for the positioning, support and professionalisation of site managers and team leaders for building renovation sites**

## Synthesis of the field research findings

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| **Executive Summary**  *(max 1 page)*   * *Brief presentation of the national field research: target groups involved (number of participants per target group category, occupations, genders, etc.), methods of investigation, description of interviewers, etc.* * *Main conclusions regarding the evolution of the functions of site managers and team leaders on renovation sites in your country, with regard to concrete work situations and potential lack of skills and competences.* * *Main recommendations for the training paths to be developed (training contents, methods, recognition of learning outcomes).*   The research carried out was aimed at:   * 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 Poland, * Identification of the specific skills expected of site managers and team leaders by companies specialising in building renovation in Poland.   This report concerns the second stage of qualitative studies conducted using individual interviews (desk research results were reported in a separate document).  Interviews were conducted between February and April 2021. According to the accepted methodology, the target group was employers and employees of construction companies carrying out renovation works (both site managers, foremen, team leaders). A total of 16 people took part in the research, including 1 woman.  Due to the epidemic situation and sanitary restrictions in the country, the vast majority of interviews (75%) was carried out as virtual meetings (on the Teams platform or by phone). 25% of interviews took place as face-to-face meetings. If the conditions allowed and the interviewers agreed, interviews were recorded (50%). This was not possible with 6 telephone interviews. |

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| Participation in a study of two groups of construction workers | Forms of conducting individual interviews |
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| The interviewees were experienced research staff and trainers of Łukasiewicz-ITeE, who kept a record of the most important statements and conclusions.  **Main observations from individual interviews:**   1. The specificity of the skills expected of construction workers (site managers, foremen, team leaders) carrying out the renovation of buildings (as opposed to workers building new buildings) was pointed out. This specificity for Poland was much clearer and evident than in the results of desk research and concerned the most foremen, team leaders; 2. Specific situations on construction sites indicating a potentially insufficient level of competence among the above group of Polish construction workers concern primarily situations of unusual, surprising, unforeseen, emerging in the course of renovation works. These situations are extremely stressful because they generate the risk of changing the effort of planned renovation works and thus changing time and costs. 3. Among the skills specifically required of the employees carrying out the renovation works were mainly soft competences, including:  * negotiating, arguing, persuading the client (e.g. as to the choice of technological solution or material); * flexibility, quick selection and offering the customer alternative material and installation solutions; * organisational skills; * management of a team of employees in situations of frequent risk of change, * resistance to stress.  1. Among the technical (professional) competences strictly related to the construction work carried out, the following are identified as requiring development:  * the use of IT programmes supporting the work of managers, including costing, * the use of BIM Building Information Modelling (only in large construction companies), * the application of circular economy principles (waste management), * the use of renewable energy solutions.  1. Renovation service market is developing in Poland very dynamically. So, the demand for workers in this sector has been very high for several years. Employers employ people even without any experience in construction, train them to work in specific jobs or entrust them only with the simplest supporting work. 2. A very strong segment of the training market are trainings organized by manufacturers of building materials, construction machinery and tools. They are the most common form of improving the qualifications of construction workers, as they are usually time-optimized (short), specific, very practical, free for participants. It should be noted, however, that these are not strictly training courses offering objective knowledge, in which several products can be compared in terms of their advantages and disadvantages. These are sales trainings aimed at showing the product as the best. 3. In the Polish public and media space, the professional development of construction workers is not promoted, i.e. there is no culture of asking a potential contractor for renovation works about his qualifications. The need to collect certificates (generated by the market) is slight and therefore there is no other motivation than internal/personal one.   The results of the research obtained by the RenovUp project were supplemented and enriched with the results of the Research Project ***Industry Balance of Human Capital in the construction industry*** of the Polish Agency for Enterprise Development. Quantitative and qualitative research on the current and future demand for competences and qualifications in the construction industry were carried out in 2020 and published in the report I*ndustry Balance of Human Capital – construction industry. Final report. 1st edition - 2021* (provide access asap.) |

**National synthesis and analysis of the answers collected from interviews**

| **Key areas of investigation** | **collected answers** |
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| 1. Profile and activities of the companies having participated in the survey. | The study was attended by representatives of construction companies carrying out renovation works. In terms of employment, micro companies (14 companies) with up to 10 employees were the most important, among them 5 represented so-called self-employment (the owner is the only permanent employee). The group of employees and employers surveyed represented service companies engaged in both complex implementation of renovation and construction works or specialized (e.g. in finishing works, water-can installations etc.). |
| 1. Essential and sustainable change observed at renovation worksites during the last years. | * A work culture based on job security is developing (in conjunction with the growing insurance system: casualty insurance, property insurance, civil liability, criminal liability, etc.); * A higher working culture (e.g. cleaning after yourself, no smoking at work); * The quality of works is increasing (customers are more demanding), especially on new buildings, in the case of renovations – not necessarily (time and price is more important); * Execution of construction works based on many subcontractors (not on their own permanent staff of full-time professionals and own equipment – escape from costs); * New, much more efficient technologies and modern materials – much better properties (also recycled), but also more expensive; * Building structures are generally lighter, less durable, easier to disassemble or to change (remodeling, extension, etc.); * Renovations of older houses, even from the 1980s and 1990s, increasingly rely on doing everything almost all over again (if only a conservator is not at stake); * Graduates represent a poor level of preparation for technical tasks (poor practical preparation); * Claims of young workers; * More and more women in construction professions |
| 1. Specificity of role and profile of site managers and team leaders at renovation worksites observed through work situations (to be listed). | The **site manager** has to face more organisational challenges, planning with more factors than on a "zero-based" construction site (e.g. restrictions on the site space e.g. equipment maneuvering, material storage; noise restrictions at certain times of the day);  Both managers and foremen/ team leaders carrying out renovation work should have a special feature:   * adaptability - the need to react quickly but also professionally to unforeseen situations / problems (e.g. wall play, structural violations, errors in installations); * Readiness for unpredictable thing during the implementation of works, element of surprise, uncertainty accompanying work (above all, as to time, costs); * the ability to optimize costs, but keeping quality of the result; * flexibility – ability to adapt to a changing situation, ability to cope with situations of constant uncertainty; * Assertiveness, ability to negotiate with the client, argumentation and persuasion to change opinion (e.g. to choose a better technological solution or material for better efficiency); |
| 1. Criteria of professional performance of site managers and team leaders listed by interviewees (when preparing, executing and checking the quality of renovation). | Site managers are primarily managers, the measure of their professionalism is:   * Competence in the field of optimization in the layout: expenditure - time - quality of work, that is, ensuring a balance between the workload of the teams involved (working time), the quality of the work performed and remuneration, * Safety during construction work, * Credibility in the opinion of customers and employees, * High sense of responsibility, * Conduct in accordance with professional ethics (including professionalism, punctuality, punctuality), * Organizational and negotiating competences - coordinating the work of the various teams involved in the renovation, * Readiness to follow technical, technological, material news, but do not need to know everything; site manager should benefit from the experience and expertise of their foremen, * building a relationship of mutual respect and trust between management and employees;   Criteria for professionalism of foreman / team leader in construction sites:   * Professional experience (professionalism), arousing respect among colleagues, but also allowing to make current (often fast) decisions, * Communication and ability to manage the team, * Organizational skills, * Application of the principles of professional ethics (the success of small companies is determined by "whispered advertising"), * Tasks performed reliably, in accordance with the construction art, * The quality of work at a high level, in accordance with the manufacturer's recommendations, * Customer satisfaction with the end result of the work performed, * Dealing with situations of surprise, acting under time pressure, * Ability to argue, negotiate, convince (especially the client) to their own reasons / opinions based on professional experience, and sometimes contrary to the design or vision of the client himself |
| 1. Managerial and organisational challenges/barriers and corresponding skills required from renovation site managers and team leaders, including digital competences today and in the future. *Examples of concrete work situations.* | * Logistics (ripping jobs and deliveries over time, avoiding downtime and long-term storage of materials and/or waste); * Management of construction waste, segregation requirements; * Basic/unsophisticated digital competences, i.e. Excel (e.g. Costing), internet, basic telecommunications skills, through which you can follow the latest trends, cooperate e.g. With a designer; * Challenges related to the difficulties of working on an still operating facility/building: the need to reconcile renovation works with the day-to-day operation of the facility; * Securing property against damage resulting from ongoing work; * In larger companies, software supporting work management (e.g. Ms project); * The need to negotiate with employees who do not feel connected to the company, the financial issue is a priority; * The drainage of better qualified workers abroad is still ongoing (precisely for financial reasons); * Management of team working time – in case of renovations, it is sometimes a non-standard working time (e.g. Only until noon / only in the afternoon, only on specified days of the week, etc.); * Management of works in a way that takes into account and respects the restrictions associated with the functioning of the facility (e.g. noise and neighbourhood, protection against the destruction of goods including furniture, plants in the garden); * Management of works taking into account the restrictions resulting from the volume of premises or building; * Organizational problems are associated with a constant lack of professionals. |
| 1. Identification of technical challenges/barriers and corresponding skills required from renovation site managers and team leaders, including energy saving and circular today and in the future. *Examples of concrete work situations.* | * Solutions for greening buildings, i.e. thermomodernizations, installation of photovoltaic panels, heat pumps (e.g. too small plot to install a horizontal heat pump); * Performing and repairing antihydrate and anti-moisture insulation (vertical and horizontal), removal of mold and fungi; * contact with old technologies (so old that they are no longer used and therefore unknown); * Challenges related to strengthening walls and ceilings; * Ability to use organic products e.g. recycled (more and more customers have such a wish); * Skills related to color selection and combination; * Skills related to the selection and installation of different types of lighting; * Challenges of familiarity with old technological solutions and old materials, with a particular focus on awareness of their value and quality (e.g. 19th century tiles hidden from a plaster layer, or hidden wooden beams, etc.); * Challenges of ensuring proper acoustics and, in fact, silencing of premises (e.g. communication lines, including elevator shafts); * Challenges related to so-called electromagnetic smog (installation of suitable nets, de-radiation); * New heat control technologies at home. |
| 1. Identification of legal and normative challenges/barriers and corresponding skills required from renovation site managers and team leaders. *Examples of concrete work situations.* | * Increasing civil and criminal responsibility of managers resulting (managers are insured but the amount of the contribution is usually paid to the minimum); * The complexity of health and safety regulations, fire safety, labour law, environmental protection and, finally, building law and their frequent changes (almost every year), in addition to this there are new regulations and relief for investors e.g. for the replacement of boilers, furnaces, warming houses e.g.; "Clean Air Program" or its new edition of "Cleaner Air 2.0" (customers ask for it and if we do not know for ourselves, at least you need to be able to skillfully redirect them to a reliable source of information); * Formulation of contracts with the client/ investor; * Reception of completed works; * Public procurement law; * Legal aspects of the employment of employees. |
| 1. Identification of health and safety challenges/barriers and corresponding skills required from renovation site managers and team leaders, today and in the future. *Examples of concrete work situations.* | * lack of imagination and responsibility in young workers |
| 1. Global opinion of the interviewees on the skills and competences of site managers and team leaders, necessary to face current and future challenges within their specific professional contexts. Identification of the most appropriate learning forms and training paths suggested by the interviewees. | * Construction managers in Poland are well prepared to perform their functions on the construction site. This is mainly due to the path they have to take to become a manager (to gain entitlements), i.e. the need to have at least several years of professional practice on the construction site. Thanks to paid contributions in the Regional Chambers of Civil Engineers, they have access to free thematic training (related to new technologies, solutions and regulations) and to the latest publications on industry trends and problems (national and regional); * Foremen are often /selected by managers on the basis of observation of their work (professionalism + soft skills). To be a good foreman/team leader, no formal education is required – only experience and predisposition matter. “Either you have this "thing" and you know how to get along with people or you don't. You can't really learn that”; * Employees take care of the timeliness of their knowledge and practical skills on themselves. |
| 1. Identification of the recruitment difficulties and methods practiced currently by the companies interviewed to find appropriate site managers and team leaders for renovation sites. | * Finding new employees with the proper competences and experience is almost impossible, employers exchange proven employees, or perform the works themselves; * Recruitment is usually carried out through private channels (recommendation of a trusted person), employees with a good reputation are often busy several months in advance; * Larger renovation companies benefit from foreign workers (mainly from Ukraine), and small entrepreneurs (there are most of them in the industry) recruit rather completely unprepared native workers, who, however, are able to perform only the simplest supporting work; * A problem is also the randomness of preparing Ukrainian migrants for work, only some of them "have an idea" about work in construction, although there are also professionals and even leaders of Ukrainian brigades, who, for example, after 10 years of working in Poland, are able to work responsibly and supervise a certain section of works. In general, however, their level of environmental awareness is too low; * Students and graduates want to earn a lot quickly, so they are interested in well-paid finishing jobs – but they do not realize that to do the job well, you need to have specific skills; * School graduates often have knowledge of novelties, trends, a kind of "fashion" in construction, while they lack the most basic knowledge in the field of construction; * Very good preparation for work, especially in terms of practice on the construction site, gives the construction technician (more than engineering studies, where there is only 1 month of practice and it is not necessarily on the construction site). |
| 1. Identification of the ways in which the companies interviewed cover their training needs addressing site managers and team leaders, in line with current and future evolutions. | * Both construction managers and foremen update their qualifications themselves; they learn, among other things, on the Internet, e.g. Youtube videos (they have the ability to critically analyze the offered training and webinars in terms of both content and their own needs – they do not waste time on poor quality training); * Whereas the regional chambers of civil engineers provide several dozen trainings per year for persons performing independent technical functions, including site managers, unfortunately there is a training gap for team leaders/ foremen; * Foremen participate in organized training much less often, they develop their competences through practice at the workplace; * Possible training needs for new technologies, products or tools are met through training and advice offered by manufacturers. The benefits can be mutual: construction experts are treated as validators of new solutions and their experience is very valuable for manufacturers; * Only large companies (more than 50 employees) send for training, because only those can afford it (they have a large enough crew to arrange replacements at work); * In small service companies there is informal mentoring – less experienced people learn from the mentor, i.e. the usually elderly, very experienced person who "knows everything", supervises and with others performs tasks based on his experience. |
| 1. Identification of the main skills likely to be improved by site managers and team leaders concerned through their further (incl. in-job) training. | * coping with stress, * managing people and organising work; * Soft competencies that would improve contact with customer; * Understanding and applying the principles of the circular economy; * the use of IT programs supporting the work of managers, e.g. AutoCad or costing programs, preparation of Safety and health plan (BIOZ); * setting up scaffolding; * for foremen - training ending in obtaining privileges e.g. gas welding; * Ability to calculate the cost of construction processes (costing), to be able to present an alternative (better quality) to the investor if necessary; * Skills related to color selection and combination; * Skills related to the selection, installation of different types of lighting; * Skills related to ensuring proper acoustics, or actually silencing rooms (e.g. communication lines, including elevator shafts). |

| **Topics** | **Key conclusions reached** |
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| 1. Identification of the work situations in which the role and functions of worksite managers and team leaders in building renovation evolve in the most significant way (in the partner country concerned). | Following situations were identified:   * Organize professionals of all required specialties to ensure the expected complexity of the work. As a result, the organizational work of managers and foremen related to the acquisition and organization of the work of several teams / subcontractors is increasing; * Creating and upholding a culture of work and the associated quality of work performed; * Situations related to waste management on the construction site; * Costing (also in terms of proposing ecological solutions); * Situations where energy efficiency of buildings (pvv, better thermal insulation materials, replacement of coal stoves for gas and heat pumps and replacement of roofing materials) is expected * Polish people appreciate increasingly the value and beauty of old elements of renovated buildings (e.g. tiled stoves, ceramic tiles, wooden beams or floors), therefore expect the renovation crews to know these materials and solutions and to be able to renovate them and integrate them into the renovated rooms; * Situations of negotiation with the client about the planned /expected scope of renovation works or material solutions. |
| 1. Recommendations for the training paths to be developed in line with the work situations of site managers and team leaders concerned, as well as with the skills needs identified: Verification and further development of the hypotheses identified during the desk research. | * Professional development occurs in close connection with the experience of working on the construction site, there is complete lack of time for other forms of training; * Online training rather only for theory; * Interesting are the demonstrations speaking to the imagination (e.g. presentation of models in different situations, showing what happens to them under the influence of different phenomena); * Entitlements should be available only to persons with a degree and industry experience. |

## Validation of outcomes reached from the Field Research with group of experts

According to the agreed methodology, desk research findings were validated by the group of sector experts. Focus group was organised as face-to-face meeting, on 06th May 2021. It took about 2,5 h.

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| Name | | Organisation | Occupation |
|  | Krzysztof Baranowski | Confederation of Construction and Real Estate (KBiN) | President of the Confederation; Long-time expert, social activist for the construction industry |
|  | Zenobiusz Wydrzyński | Association of the Specialists of Finishing Works | President of the association SSRW  Employer and manager of company in construction sector |
|  | Jacek Blachowski | Association of the Specialists of Finishing Works | Vice-President of the association SSRW  Employer and manager of company in construction sector |
|  | Ireneusz Woźniak | Sectoral Council for Construction | Researcher of labour market– VET relations, in particular the construction industry, co-author of the Sectoral Qualifications Framework for Construction |
|  | Krzysztof Symela | Sectoral Council for Construction | Researcher of labour market– VET relations, in particular the construction industry, co-author of the Sectoral Qualifications Framework for Construction |
|  | Andrzej Stępnikowski | OECD National Expert on Vocational Training, Member of the CEDEFOP Apprenticeships Expert Network | Researcher of the human-occupation-work relationship. long-time employee of the organization of crafts (2006-2020) and an associate of the National Committee of Building Crafts, lecturer on pedagogical courses for instructors of practical vocational training, member of the project team |
|  | Jolanta Religa | Łukasiewicz - ITeE | Member of the RenovUp project team; meeting organiser |

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| **Key results of the national Field Research** | **Opinion/Validation of the findings**  **Additional ideas and proposals made by the Focus Group Experts** |
| 1. Profile and activities of the companies having participated in the survey. |  |
| 1. Essential and sustainable change observed at renovation worksites during the last years. | * Customers in Poland are increasingly demanding, expecting more and more complexity of contractors (as opposed to western European countries, where rather narrower specialization is observed); * Internationalization of the Polish construction industry; * Return to the use of prefabricated technology, which is rated as extremely simple and fast to implement; |
| 1. Specificity of role and profile of site managers and team leaders at renovation worksites observed through work situations (to be listed). | * Renovations are mainly carried out by small companies – up to 10 employees, and very often 1-person (the manager usually also owns a construction company and often simultaneously – in addition to supervisory functions – also carries out some of the work); * The specificity of the role of the site manager is due to the scope of the works and the size of the rebuilt object, in Poland these are so-called independent technical functions (requiring appropriate entitles), for which strict legal regulations on the scope of responsibilities and responsibilities apply; * The responsibility of the site manager is very high, the manager is responsible for the entire construction, even for the designer's mistakes, over which he had no influence; |
| 1. Criteria of professional performance of site managers and team leaders listed by interviewees (when preparing, executing and checking the quality of renovation). | * Readiness for continuous learning - customers often want to compare parameters and prices of different solutions, expect reliable and immediate advice; |
| 1. Managerial and organisational challenges/barriers and corresponding skills required from renovation site managers and team leaders, including digital competences today and in the future.   Examples of concrete work situations. | * Today we have “the labour market of the employee” but it is to the extent that it contradicts the logic and healthy relations of the employer-employee; |
| 1. Identification of technical challenges/barriers and corresponding skills required from renovation site managers and team leaders, including energy saving and circular today and in the future.   Examples of concrete work situations. | * Companies operating in the construction sector should in the short term prepare for the increased importance of so-called "green energy" investments and strengthen their technological background in order to be fully competitive in the market; * The growing role of renewable energy generation, the rise in the popularity of passive buildings, the increase in the importance of photovoltaics and the increased implementation of investments with the greatest attention to possible low energy losses; * The development of BUILDING INFORMATION Modeling (BIM) technology and the growing role of this software is a digital/technological challenge, but for the time being it only concerns executives in large construction sites, in small businesses - rather not; * In finishing work, the absence of major technical challenges, contractors are kept up to date with new material and tooling solutions (mainly thanks to so-called production training); * Designers/architects, not managers or foremen, are responsible for proposing certain works using the materials and technologies indicated, so they often determine the energy efficiency of the investment |
| 1. Identification of legal and normative challenges/barriers and corresponding skills required from renovation site managers and team leaders.   Examples of concrete work situations. | * As far as foremen are concerned, they are unlikely to face such challenges – they are, on the other hand, the participation of the owners of construction companies; * Such challenges (e.g. knowledge of standards, requirements for energy efficiency of partitions, etc.) lie rather on the part of designers. Site managers, much less foremen have to stick to the project; |
| 1. Identification of health and safety challenges/barriers and corresponding skills required from renovation site managers and team leaders, today and in the future.   Examples of concrete work situations. | * Health and safety rules and regulations are generally known and respected (mainly due to compulsory cyclical training); * There is a need for OSH training not only among workers, but above all among managers, who are more likely to regard such activities as a formal necessity because they do not understand the benefits of keeping workers safe; |
| 1. Global opinion of the interviewees on the skills and competences of site managers and team leaders, necessary to face current and future challenges within their specific professional contexts. Identification of the most appropriate learning forms and training paths suggested by the interviewees. | * In Poland, there is no need to collect certificates. In public, media space, the professional development of construction workers is not promoted, i.e. there is no culture to ask potential contractor of renovation works about his qualifications. Therefore, there is no motivation other than internal/personal. Those who try to develop and acquire new skills often do not have the opportunity to show such certificate; * In Poland, the most important "channel" of information about construction contractors (confirmation of their qualifications) is informal opinions of other people; * The demand for renovation works on the Polish service market is so great that the lack of any confirmation of the qualifications of a potential contractor does not discourage the owners of apartments/houses from employing him (very often the most important factors are availability of the contractor and the price); * Employers fear the "disappearing" of workers, abandonment of work. The high level of mobility of workers from neighbouring countries makes them extremely unstable; |
| 1. Identification of the recruitment difficulties and methods practiced currently by the companies interviewed to find appropriate site managers and team leaders for renovation sites. | * In the market of construction services (especially renovation) there is a large group of people without any experience in this area (they have not succeeded in other professions, so they decide to do what is in high demand); |
| 1. Identification of the ways in which the companies interviewed cover their training needs addressing site managers and team leaders, in line with current and future evolutions. | * One of the popular form of professional qualification improvement is YouTube channels on construction topics, along with comments on videos that further support the development of knowledge and supplement information gaps in recorded materials; * So called “production training” is a very important form of professional development of Polish construction workers, mainly foremen/team leaders like them because they are usually short, very specific and free; * Large companies organize training for their employees, rather only in the field of health and safety (less often managerial and IT). They often hire third-party training companies that organise tailor-made training for them; * Employers do not invest in training employees because they are under constant pressure of their departure (going abroad); |
| 1. Identification of the main skills likely to be improved by site managers and team leaders concerned through their further (incl. in-job) training. | * Conflict-free human management |
| 1. Identification of the work situations in which the role and functions of worksite managers and team leaders in building renovation evolve in the most significant way (in the partner country concerned). | no additional comments |
| 1. Recommendations for the training paths to be developed in line with the work situations of site managers and team leaders concerned, as well as with the skills needs identified: Verification and further development of the hypotheses identified during the desk research. | no additional comments |