FINAL REPORT

Project „Business development and Qualification (BusQua)"
Leonardo da Vinci - Transfer of Innovation - Lifelong Learning Programme

The works coordinator at the level of foreman in small and medium sized enterprise in the construction sector

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1. Introduction

The project entitled „Business development and Qualification (BusQua)" implemented under the Lifelong Learning Programme Leonardo da Vinci aims to counteract the high share of older unemployed persons and to enhance and preserve the employment of older people in companies. The main task was to transfer didactical Erfurt-APO model developed by the University of Erfurt in cooperation with Eichenbaum GmbH and adapt it to Polish realities on the example of Silesia region. The project improves the competitiveness of enterprises by increasing the qualifications of human resources. In particular, the project focuses on employees over 45, improving their position in the labour market by finding alternative jobs in the enterprises and by developing the aged appropriate qualifications.

The final report has the following structure. In the second section there are the Silesian labour market, the economic situation in the region and created conditions for further education discussed. Another describes the construction sector as a branch of the economy that may soon face the problem of an insufficient number of skilled workers. A detailed description of Polish product is contained in the third chapter, ie. its base, committed staff, structure and content of the curriculum, the learning process. The course of implementation, which has been discussed in Chapter five, includes a description of participants, duration of the course and completed operations. Chapter six "the effectiveness of the training package" describes the results of the learning process. The final chapter is a summary of conclusions, suggestions for improvements and possible further use of materials developed.

2. Labour market

The second section contains basic information describing the situation of the market and the level of the Silesia region's economic development. The last section discusses issues relating to further education.

2.1 Economic situation

Silesian Voivodeship is an area of 12300 km^2 inhabited by 4,6 million people, where industrial history and tradition combines with technology and innovation. Silesian Voivodeship has the highest population density in the country (377 people per square kilometre, compared to the national average of 124). The region's considerable industrialisation gives it one of the lowest unemployment rates nationally - 8.4% (30.09.2009)
Silesia is the most industrialized Voivodeship in Poland and one of the most industrialized region in Europe. There are over 436,7 thousand of companies, which employ over 1,6 million of workers. The most important branches on Silesian Market are coal and steel sectors. Energy, automotive, textile and chemical sectors are also very important ones. The tourism sector is highly developed, which means there are some catering and hospitality job opportunities.
Silesia is also an important educational centre. There are over 50 universities.

Silesia is rich in natural resources, for instance hard coal, zinc and lead deposits, methane, natural gas beds, marl, limestone, natural aggregate deposits as well as healing, thermal and mineral waters.

The highest shares of gross value added in the Silesian Voivodeship are generated by services (with a majority of market services) followed by industry (with a very high share of manufacturing industry), construction and agriculture.

Regarding the total number of business entities in the Silesian Voivodeship the highest share of business entities is represented by ‘micro enterprises’, having less than 10 employees (94.5%) followed by businesses employing 10-49 employees (4.5%) and enterprises employing more than 50 employees (1%).

In 2008 the increase of GDP was 5%. GDP per capita measured in Standard Purchasing Power (PPS) equalled 57,4% in 2008.

In 2008 the inflation rate was higher than in 2007 and amounted to 4.2%.

Regarding the development possibilities of the Silesian Voivodeship it is important to consider that the region still suffers in basic infrastructural aspects and still is undergoing the process of transformation:

“The accomplishment of the main objective and the fast growth of the region will undoubtedly call for the creation of advantageous conditions for the transformation of the economy relying on heavy industry into the knowledge- and information-based economy. The success of the region depends, to a large extent, on eliminating barriers to sustainable development, such as polluted environment, clogged transportation routes, multiple devastated urban areas in which social and economic problems accumulate or in which educational and health care infrastructure is highly devastated and old. Economic growth and improved standard of living will also be supported by skilful handling of tourism and cultural potential.”1

A closer look on employment in sections shows, that the manufacturing-sector has the most employees: 420,000 of 1843,000 employees work in this sector. The second biggest employment provider is wholesale and retail sectors with 307,000 employees, the third biggest is the construction sector with 158,000 employees.

[1] REGIONAL OPERATIONAL PROGRAMME OF ŚLĄSKIE VOIVODESHIP FOR THE YEARS 2007 – 2013; Katowice 2006; p. 53

2.2 Current situation on labour market

The number of the unemployed registered in the labour offices at the end of September 2009 amounted to 154,0 thousand persons (85,1 thousand of which constituted females), and it was higher than the one observed at the end of the previous month by 2,6 thousand . The unemployment rate at the end of August 2009 comprised 8,4% of the economically active civilian population. It was by 2,4 point lower than in the country (10,8%). To improve the situation of the region several instruments on European, national and regional level have been used in the nearer past. The European Union supported the East European Countries in a wide scope after the transformation of the national systems.

The majority of the unemployed population constituted women. At the end of the III quarter of 2009, the share of women in the total number of the unemployed amounted to 55,2%. The highest number of women among the total unemployed persons was reported in: rybnicki powiat (65,2%), Żory (64,2%) and Rybnik (63,4%).

At the end of the presented period, the largest group among the unemployed constituted persons aged 25-34 years. Their number amounted to 45,0 thous. The percentage share of registered unemployed persons at the age 45-54 years comprised 22,4%, 18-24 years – 21,3%, 35-44 years – 17,9%, while persons aged over 54 constituted 9,2%. The majority of the unemployed registered in the labour offices comprised persons with relatively low level of education. The two largest groups among the unemployed constituted persons with basic vocational education and lower secondary, primary and incomplete primary education and (their shares amounted respectively to 27,8% and 27,4% of the total number of unemployed registered at the end of September 2009). The certificate of completion of post-secondary and vocational secondary schools had 24,1% of the total number of the unemployed, the graduates from tertiary schools constituted 10,8% and general secondary schools completed 9,9%.

2.3 Continuing education and training for adults

„Adult education" and „continuing education" are often used interchangeably. In Poland the term "continuing education" (CE) is defined as "education in schools for adults, as well as gaining and supplementing general knowledge, vocational skills and qualifications in the out-of school forms by people past the period of compulsory education" in accordance to the Education System Act of 7 September 1991[2].

Continuing education aims at the acquisition and extension of general knowledge, upgrading of vocational skills and qualifications needed for a given occupation, job or post. Vocational training aims at the adjustment of the knowledge and skills to developing technologies and work organisation, as well as to job changes. The main objective of the training of the unemployed is to react quickly to current local market needs and to help the unemployed to adjust their qualifications to these needs.

Training for the unemployed mainly takes place in the scope of public employment services and is regulated by the 2004 "Act on Promoting Employment and Labour Market Institutions". The Act makes it possible that continuing education institutions can receive financial support from the Labour Fund. The Fund was created in 1990 as a state-owned target fund with the main task to finance the unemployment benefits, for those who are entitled to them, and to finance Programmes combating unemployment. Most of this fund is financed by contributions of employers and persons running businesses.

Training for the unemployed is not only carried out by public but also by private institutions. Among other institutions providing training for the unemployed one can find "Further Training Centres, the Association of Polish Crafts, Continuing Education Centres, Practical Training Centres, vocational schools, training centres, branch organizations

The training organized by labour offices is supposed to generate or improve those qualifications, which are required in the labour market. Such trainings include direct trainings

[2] Article 3, section 17

for jobs, re-qualification or vocational-change-based trainings, upgrading qualifications but also trainings which support the unemployed persons' ability to seek and obtain a job.

A direct priority in the scope of support for the unemployed is given to "persons in a specific situation in the labour market". This term is defined by legal regulations and covers both, younger unemployed persons (under 25 years of life) and older unemployed persons (50+ unemployed) and additionally the long-term unemployed and the unemployed without vocational qualifications[3].

The continuing education system in Poland is characterized by a strong focus to help in seeking, keeping or changing a job. Therefore only little attention is paid to the continuing vocational education of employees. Nevertheless there are some provisions included in the Labour Code, which regulate the employers' obligations and the employees' rights and duties in the scope of training and some notice-worth measures to support training activity in small and medium enterprises.

The employer has the obligation to facilitate the vocational qualification development of his employees. According to the 2004 Act on Promoting Employment and Labour Market Institutions employers have the opportunity to create an own training fund from which some expenditures can be refunded, e.g. cost for specialist training for employees vulnerable caused by redundancy[4]. An employee can either upgrade his own vocational qualifications with or without recommendation of the employer.

[3] Furthermore unemployed who single-handedly raise a child below 7 years of age and disabled unemployed

[4] "The Act of 20 April 2004 on Promoting Employment and Labour Market Institutions gives employers an opportunity to create their own training fund meant for financing or co-financing of the continuing education costs of employees and employers (article .67, sections.1 and 2). Collective labour agreement or the fund byelaws regulate creation, functioning and winding up of the training fund (article 67, section 4).
Expenditures from the fund must be in compliance with the training schedule agreed on by the employer and the trade unions (article 68, section 2).
An incentive to create the training fund is the provision of article 69 of the Act stipulating that following the petition of the employer which created the training fund, the sub-prefect can refund the costs of specialist training for the employees vulnerable to by redundancy from the Labour Fund resources, observing the terms specified in the agreement, in the amount of 50% per person provided that the employees who underwent training are employed in conformity with the training they received."
(cedefop, thematic analysis, continuing training and education for adults, 0504 – CVET at the initiative of enterprises or social partners; employers and their organizations).

3. Construction sector

In Silesian, construction sector is playing an important role. The share of older employees is relatively high (10%) compared to other sectors (third place). Taking into consideration only private companies one can observed a high decrease of employed persons from 2000 to 2007. In 2007 work 27% less employees in construction. Thinking about the reasons of this situation one can note that working in the construction sector involves unfavourable conditions for older employees due to a high amount of incriminatory physical work, different weather conditions and shrinking employment possibilities. Unfortunately also a share of enterprises in this sector, which provide training is the lowest one in relation to others (29%). As an answer to those problems can be training which aims workers over 45 (45+) in order to keep them active in the labour market. Such a further education will be an opportunity to update and improve their qualifications, to remain in current place or to transfer to physically less demanding job.

4. Curriculum and training package

In the first part of this chapter, basic information about the Polish product is discussed such as: to whom it is directed, on what is it based and the committed team work. In the next sections you can find data concerning structure and content of the curriculum and planned learning process.

4.1 Preface

With regard to market needs, in line with BusQua Project, there were some possibilities of training of older people specified to maintain their professional activity.

Taking into account the specificities of this sector and the age of target group, it seemed to be reasonable to prepare experienced collar workers over 45 (45+) to perform less physically demanding function which is works coordinator. To gain it there was the training Programme and supporting documents based on Erfurt-APO model (work process oriented learning) developed.

Knowledge and skills acquired during the training are complementary to the tasks arising from the basic professional duties of beneficiaries, which have an influence on strengthening the synergy of learning outcomes. Taking Erfurt-APO model as an example, in the didactical process, training materials, materials to self-learning, which uses mostly visual elements such as flow charts, are included. This graphical schematic presentation of a typical construction activity also includes required professional and social competences.

During realization the following publications were created:

- "Programme of further training in the field of activities of the works coordinator at the level of foreman in the small and medium enterprise in the construction industry",
- Manual for self-study for "The works coordinator at the level of foreman in the small and medium construction company", which consists of two parts:
  - working materials for learning the typical steps in coordinating the work of several or over of employees in small and medium construction company,
  - guidebook – used to supplement the competences in communication and team of workers' management in small and medium construction company,
- "Handbook for trainers (training materials) in areas of works coordinator at the level of foreman in the small and medium construction company", including the details of learning content and guidance to implement the Programme by the trainers.

"Programme of further training in the field of activities of works coordinator at the level of foreman in the small and medium enterprise in the construction industry" has been based on European and National Qualifications Framework. In this case, vocational qualification standards for professions and specialties in construction included in the Classification of Occupations have assigned skills, which accompany professional activities according to qualification groups and qualification levels. The standards for the construction sector define five levels of qualifications.

The aim of the training under this reference project is to acquire the third level of qualifications by beneficiaries, and thus prepare them to act as works coordinator in the construction sector on the level of foreman. Employee, who has vocational qualifications on the third level, performs compound tasks. The complexity of these tasks generates a need of having skills to solve unusual problems at work. Employee of this level must be able to manage a small group of people. He is responsible for both the consequences of his actions and his team's actions.

Training workshops are supposed to "create" an efficient coordinator not only on professional ground, but also in life, through:

- competent choices and responsibility for consequences,
- gaining and using the information from various sources,
- presenting own skills, opinions and knowledge,

- combining theory with practice,
- competent planning and implementing of the plans,
- keeping social behavior arising from the general social standards,
- self-controlling and self-assessment.

Course recipients

The course is aimed to persons over 45 (45+) employed in enterprises of construction, renovation. These people are operating as workers in the construction sector, having on the one hand a lot of work and life experience and on the other hand, possess building education just on the first and second level of vocational qualifications.

Profession specificity

The beneficiaries are working directly in the place where sub-elements of the buildings are produced or on a buildings site at the newly constructed buildings or with reconstruction, rebuilding or renovating existing ones. The works in this profession due to physical load, rank it as the occupation in category of heavy work. This job requires a good health, great physical strength and physical resistance, because it is often carried out in difficult and changing weather conditions.

Course involving

Coordinator: plans, organises work, controls works' realization, calculates costs, ensures works' safety, solves professional problems and manages the team of workers. Before as a qualified worker such an employee was responsible only for his part of work which he was given by foreman.

New position as a works coordinator in building sector changes their previous works' character, it requires spreading their competences both in managing the construction process and team management, personal relationships, implementing personnel and administrative activities. Exercises which spread the competences of the beneficiaries in the areas of works coordinator are carried out in two cycles of training:

- I training part includes exercises in the field of psychosocial competences (Module I-IV),
- II training part aims to improve professional competences (Module V - VIII).

4.2 Background

After a thorough analysis of the materials describing the Erfurt-APO model and the hereby project, data, which provided the legal basis, and also the basis for the substantive content of professional activities necessary for the works coordinator was collected.

Among the sources, which were used may be mentioned:

- Krajowy System Kwalifikacji dostosowany do Europejskich Ram Kwalifikacji - Zalecenie Parlamentu Europejskiego i Rady z dnia 23 kwietnia 2008 r. w sprawie ustanowienia europejskich ram kwalifikacji dla uczenia się przez całe życie, Traktat ustanawiający Wspólnoty Europejskiej - artykuł 149 ust.4 i art. 150 ust.4 [National Qualifications System adapted to the European Qualifications Framework - Recommendation of the European Parliament and the Council of 23 April 2008 on the establishment of a European Qualifications Framework for lifelong learning effect, the Treaty establishing the European Community - Article 149 paragraph 4 and Article 150 paragraph 4]
- Europejskie Ramy Kwalifikacji dla uczenia się przez całe życie ec.europa.eu/efg, NC-30-08-272-PL-D [European Qualifications Framework for lifelong learning lec.europa.eu/efg, NC-30-08-272-PL-D]
- Rozporządzenie Ministra Edukacji Narodowej oraz Ministra Pracy i Polityki Społecznej z dnia 12 października 1993 r. w sprawie zasad i warunków podnoszenia kwalifikacji zawodowych i wykształcenia ogólnego dorosłych (Dz. U. Nr 103, poz. 472) [The Ministry of Education and Minister of Labour and Social Policy of 12 October 1993 on the terms

and conditions of professional skills and general education of adults (Dz. U. Nr 103, poz. 472)]

- Projekt Ministerstwa Pracy i Polityki Społecznej – SPO RZL Opracowanie i upowszechnienie krajowych standardów kwalifikacji zawodowych. Projekt współfinansowany ze środków Europejskiego Funduszu Społecznego [Project of the Ministry of Labour and Social Policy – SPO RZL Development and dissemination of national professional qualification standards. Project co-funded by the European Social Fund]
- „Krajowe standardy kwalifikacji zawodowych dla rynku pracy" aut. Henryk Bednarczyk, Ireneusz Woźniak ["National standards of professional qualifications for the labour market" authors: Henryk Bednarczyk, Ireneusz Woźniak]
- Poziomy kwalifikacji zawodowych – Krajowy Standard Kwalifikacji Zawodowych [Levels of professional qualifications - National Vocational Qualifications Standard]
- Założenia Programmeowe dla zawodu betoniarz-zbrojarz Wielkopolska Izba Rzemieślnicza w Poznaniu stworzone w porozumieniu z Komisją Egzaminacyjną na podstawie „Standardów wymagań" Związku Rzemiosła Polskiego z 2004 r. oraz „Podstaw Programmeowych kształcenia" Ministerstwa Edukacji Narodowej z 1998 r. [Programme assumptions for the profession of concreter-fixer Wielkopolska Chamber of Crafts in Poznań developed in consultation with the Examination Board under the "Standards for the requirements" of Polish Craft Association in 2004 and "Foundations of Education Programme" Ministry of National Education, 1998]
- Standardy kwalifikacji zawodowych dla zawodu murarz , betoniarz-zbrojarz [Professional qualification standards for the profession of bricklayer and concreter-fixer]
- Podstawy organizacji budowy – K.M. Jaworski Wydawnictwo Naukowe PWN S.A. [Basic construction organization – K.M. Jaworski Wydawnictwo Naukowe PWN S.A.]
- MODEL INTERMENTORING – Centrum Zarządzania Projektem Żorska Izba Gospodarcza 44-240 Żory Al. Wojska Polskiego 4 [MODEL INTERMENTORING – Project Management Centre, Żory Chamber of Commerce, 44-240 Żory, Al. Wojska Polskiego 4]
- „Brygadzista to menedżer", J. Mądry, O. Flak ["The foreman is a manager", J. Mądry, O. Flak]
- Kund.i.K. Kundenberaten und Kundenberaterin in KMU - Arbeitsmaterialien für das praxisnahe Lernen typischer Arbeitsabläufe der Kundenberatung in kleinen und mittleren Unternehmen (KMU), Katja Grimm-Vonken, Raul Vitzthum, Susanne Kermantschi, Andreas Hühn, Dr. Matthias Vonken, Nadin Rosbigalle, Eichenbaum [Kund.i.K. Kundenberaten und Kundenberaterin in KMU - Arbeitsmaterialien für das praxisnahe Lernen typischer Arbeitsabläufe der Kundenberatung in kleinen und mittleren Unternehmen (KMU), Katja Grimm-Vonken, Raul Vitzthum, Susanne Kermantschi, Andreas Hühn, Dr. Matthias Vonken, Nadin Rosbigalle, Eichenbaum]

4.3 Experts involved in BusQua Project

Given the substantive tasks of the project including development of materials (curiculum, self-learning materials, etc.). in the field of construction, consulting and training activities, working group had to be set up.

In order to obtain experts there were some contacts made for example with Zespół Szkół Budowlano – Informatycznych in Żory as an institution of local interest in the field of construction. As a result, there were several informational meetings with staff dedicated to the theme of the project, and thus had the necessary knowledge and skills organized. Thanks to that the team responsible for the professional part of the project emerged. As an expert in the field of psychology and human resources management, a person who had a long training and management experience was invited to cooperation.

The working group involved:

- Barbara Grynicka, Ilona Kaźmierczak, Mirosława Strączek, Dawid Wolanin – experts in the field of professional competences

- Bożena Boruta-Gojny – expert in the field of soft skills
- Aneta Bagińska, Gabriela Król – Polish partner actions' coordinators, the persons responsible for the evaluation, consultants.

Persons, who have been involved in the process of creating materials, have very long professional experience.

Experts in the field of construction are: teachers of vocational / construction subjects, persons with experience of coaching, including conducting vocational / construction training for adults, persons included in the commissions of external examinations of professional competences, persons with practice in the building profession. Expert in the field of soft skills is psychologist, trainer of psychosocial skills and Intermentoring, the author of prevention Programmes, director of postgraduate studies of coaching and mentoring, has a thirty-year internship psychological assistance in many areas and experience in managing of workers' team.

4.4 Curriculum

As mentioned in previous chapters, course participants as collar workers for 45 years are at the first and second level of professional qualifications. Through participation in the project they can get qualified to the third level, which includes the following types of qualifications: over trade, general vocational and basic. A detailed description of the various types of qualifications is summarized in Table 1.

Table 1. The specification of different types of qualifications for the third level of professional qualification (works coordinator)

Types of professional qualifications	Skills/ abilities	Knowledge	Psycho-phisical features
Over trade qualifications	– organize working positions in accordance with the principles of work organization tasks, ergonomics and safety at work, – manage a team workers, – share professional experience with other members of the team, – uses a modern information technology in the basic computer maintenance and search for necessary information, – define the employment needs in the enterprise and rules for the personnel selection, – affects the appropriate personnel attitudes, – motivates himself and subordinate workers to the effective work and safe working conditions, – initiates and introduces technical and organizational solutions which affecting the improvement of the conditions and quality of work, – asses the work of supervised members of the team, – foresee attitudes and peoples behavior in situations of stress and human risk, – reacts assertive on workers interest conflicts in the team and in the entire enterprise, – prepare documents related to the start of their own company, – prepare tax documents and the declarations to ZUS, – examine the labour market, – uses in the operation knowledge of social groups arrangements, – observes the work culture principles.	– basics of work regulations, – work planning, – communication techniques, – requirements concerning the organization of building and assembly works, – foreman tasks in the enterprise or in the construction company, – modern techniques of data collection and processing, – rules for the selection bricklayers, carpenters, technicians of finishing works, assemblers of building constructions... and helpers of the team, – team motivation to the effective and safe work, – work regulations and obligations, – basic issues of the work humanities, – rules of the economy market, – obligations of the economic operator regarding to the regulatory element, fiscal, ZUS and own employees, – economical effects of proper work organization.	– leadership, – imagination and creative thinking, – objectivity and tolerance, – ability to take rapid and accurate decisions, – ability for interaction, – technical interests.

General qualifications	– signs contracts with subcontractors, – takes measurements in advance, – creates the work schedule, – takes measurements of done work, – takes measurements of works in advance, – takes the reception measurements for the valuation of done work, – marks construction site in accordance with the obligatory regulations: health and safety, fire-fighting, against the intrusion of third parties, – instructs colleagues at the workplace in the field of health and safety and fire-fighting rules, – marks the dangerous place on the construction site and at working place, – ensures social rooms for workers, – uses the documentation, catalogues and standards in the accounts, – sets out the scope of the assembly works, – makes periodical work evaluations and attitudes of subordinate workers, – ensures the proper level of subsidiary team qualifications.	– principles of creating contracts for construction works, – principles of creating schedules of works, – principles of implementing of measurements in advance and measurements of works, – principles of implementing of the receiving measurements, – the legal basics of labour protection, – principles of storage and warehousing of materials preserving health and safety rules, – knowledge of equipment and construction machinery – provisions of tax law in the field of construction activity, – legal acts in force regarding to the construction activity.	– ability to shift from one operations to the other, – ability of easy speaking, – abilities of accounting, – logical reasoning ability, – have imagination and creative thinking capacity, – independence, – emotional resistance, – stereoscopic vision, – technical abilities, – initiative reveal, – persuade ability.
Basic qualifications	– verifies compliance of works execution with the design documentation and the relevant regulations, – checks permissible deviations from horizontal dimensions of spaces and of the whole building, – checks permissible deviations from designed vertical dimensions of spaces and of the whole building, – checks deviations of walls thickness, horizontal and vertical deviation of building elements, – designates the building axles, – stabilizes the measuring points on the site.	– the technical conditions of implementation and receiving of the works, – values of permissible horizontal and vertical deviations from the project of spaces and of the whole building, – permissible deviations from designed horizontal and vertical dimensions of the spaces and of the whole building, – types of geodetic measurements.	Not identified.

The training Programme was designed so that after its completion the participants were equipped with the necessary knowledge and acquire the necessary skills to the tasks of coordinating the work. However, taking into account several factors such as:

- industry,
- level of education of participants,
- their previous experience with further training and self-study (and above all the lack of it),
- wide range and complexity of the tasks of the coordinator,
- the responsibility that lies on the future coordinator,

Programme of the course involves not only the process of self-learning, advice or consultation but also it involves essential training package, which will be discussed in detail in subsequent chapters.

4.4.1 Structure and content of the Programme for further training

It took about 4 months to develop the first version of the materials. As a result of the work of a working group “Programme of further training in the field of activities of works coordinator at the level of foreman in the small and medium enterprise in the construction industry” in the first place was created.

The structure of the Programme of further education has been as follows:

- Objectives of training
- Characteristics of recipients
- Characteristics of professional occupations
- Presentation and description of the professional qualification standards
- Specification of over trade qualifications for third-level qualifications / work coordinator /
- Specification of general vocational qualifications for third-level qualifications
- Specification of basic skills for third-level qualifications
- Equivalence of National and European qualification levels
- Training plan based on professional standards
- Teaching material
- Conditions for the implementation of the Programme (laboratory equipment for teaching, teaching materials, qualified trainers)
- Methodical guidebooks for Programme implementation (implementation of the training methods, forms of work)
- Evaluation.

In the course of developing a training Programme, 10 subprocesses illustrating the complexity of coordinating the construction works’ process at the level of foreman were separated (according to the order of carrying the works). They created a coherent integrity as a whole. The diagram below shows the range of the main process of coordinating the implementation of investment - from the time of the order until the completion of construction. The six subprocesses concerned with the vocational tasks of: analysis of documentation, planning of works, costing, scheduling and organizing and work acceptance. In the area of personal competence four of the subprocesses were shown: identification and preparation of human resources, team management at the stage of organization and completion of works and supervision, coordination of human labour.

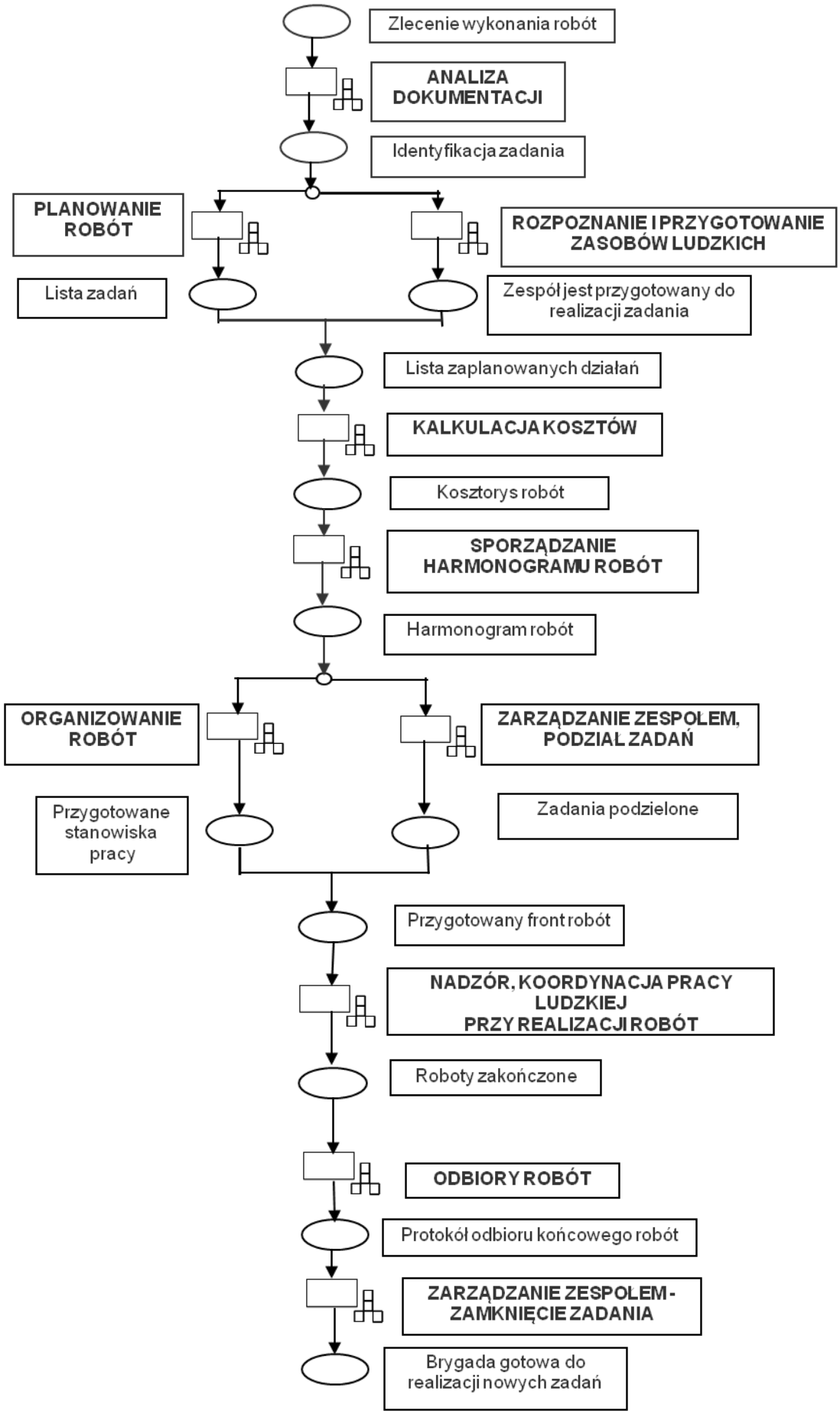

Diagram 1. The main process of coordinating the construction works

Subprocess: Documentation Analysis

The main aim of this subprocess is detailed identification of documentation. Prior to beginning of construction works an investor chooses prime building contractor, a site manager and a construction inspector. An investor delivers constructor all technical and architectural data as well as Technical Specification of Performance and Reception of Construction Works, which is an indispensable part of construction contracts. Its aim is to accurately identify the scope of the work.

Technical specification of performance and reception of construction works contains all requirements necessary to outline standards and quality of construction works, materials quality as well as standards of works' quality evaluation.

After making a decision about undertaking the task, contractor signs the agreement with investor and is assigned an order to perform a task. Contractor's responsibility is implementation of the project in accordance with design documentation and the guidebooks contained in the technical specification. The quality of work as well as its compliance with the documentation decide on the reception of atrophic work and subject to covering, as well as a final acceptance of facility. This is why the key issue is thorough analysis of documentation on each step of construction process.

Subprocess: Works Planning

Subprocess "Works Planning" aims to identify the activities and tasks related to the implementation of individual building components or the whole object - in conjunction with the necessary production means. The purpose of planning is to ensure that all work shall be completed within the prescribed period and at optimum cost. Proper planning of the work has an impact on the proper organization and execution of works.

Subprocess: Identification and Preparation of Human Resources

After identifying the task which is the answer to the question – "What is to be done?" there is necessity to answer the question "Who is to do it" And that is the aim of this subprocess. Next steps lead to a state of full discern the level of competence of individual workers and the whole brigade. Following this procedure the coordinator knows:

- whether the team has all the necessary qualifications for the job and at what level of competence,
- what is the performance of individual employees,
- what are the personal staff competences important for quality of execution,
- what are the strengths and weaknesses of each,
- how hard the team is integrated,
- what is the ability to adjust to work in the changing subassemblies.

This knowledge allows to make changes in the team, to form a belief what ways of managing this particular group will be effective. Full knowledge about the state of readiness of human resources to achieve this objective will allow realistic planning of the works, taking into account the human factor and respond effectively to the organizational problems and human resources problems.

Subprocess: Costs Calculation

Costing is a set of computational activities aimed at assessing the effectiveness of the works and their costs. The calculation determines the cost of construction of the object, which an investor can expect. It is also important reference point for contractor. Contractor, on the basis of calculation can determine how much material, what equipment and how many workhours he will need to perform a given investment.

The coordinator as the owner of a construction company, undertaking the investment performance, should be able to plan the cost of the works, to determine, what is the most important for him, ie. cost effectiveness of works undertaken. If the contractor signs the

contract with the investor for construction works, there should be an initial unit price of labour, equipment and materials included in the contract. If the contractor proceed to tender for the works, he gets from the investor a bidding estimate (“blind” estimate) He looks for a unit price of the works on the basis of market data or the commonly used current publications. After determining the unit prices for construction measurement and capital expenditures are calculated price of labour, materials and equipment. Adding to the profit markups, indirect costs and costs of construction materials he draws up the estimate.

Subprocess: Works Schedule

The schedule of works is a plan of courses of action in time. The schedule can only point sequence, can be completed by the anticipated (or expected) duration of actions, may also contain the required (or calculated) dates (date, time) of start and end activities. Schedule helps you realize the scope of activities and relationships between them, also facilitates monitoring and early detection of threats. The schedule determines the ratio of human resources and equipment to the time of implementation of each element.

Subprocess: Works Organisation

Subprocess "Works Organisation" aims to ensure the smooth execution of the provisions and principles of occupational health and safety, fire protection, paralysis protection, and environmental protection on construction sites. Proper organization has an impact on the proper conduct and coordination of work, improving efficiency and reducing construction costs.

Organization of work is determined by the technical documentation and on its basis method shown there should be conducted. If there is no project organization in the technical documentation, then the way of conducting the work shall be based on technical design.

Subprocess: Team Management – Tasks Division

The division of tasks is the next step before the executive part of the project. This act is a fundamental human resource management activity. The aim of this subprocess is to assign tasks according to abilities and limitations of staff, preparation of an efficient system of communication, information flow, respond in difficult situations and, if necessary - the current flexible exchange of tasks. Efficient coordination of work depends on a good division of labour and a plan for cooperation in task-teams. Natural or learned style of managing people is very important here. It affects the way in which the coordinator communicates with employees and uses the feedback to the efficiency of work.

Subprocess: Supervision, Coordination of Human Labour during the Implementation of works

This is the main and largest area of management coordinator (in terms of duration and energy commitment). The purpose of this stage is to lead the team from preparing (the organization of work) to completing the job through the difficulties and problems, both professional and interpersonal occurring during the direct execution of works. The last stage of the team management is associated with obtaining a new level of experience, competence and satisfaction of employees. Along with the final acceptance of works is a formal assessment of employees conducted, grant any awards. It is also accompanied by a ceremonial drama, recorded the tradition that belongs to a professional or corporate culture. It fulfills an important role - social gratification, the integration of the group and satisfaction.

In the course of this subprocess immediate supervisor affects the motivation to work, relationships, inspires an active and creative attitude towards the tasks. It is done deliberately and systematically, according to his management style or without insight into their own mechanisms to influence people, which may result in loss of managerial capacity.

Subprocess: Final Acceptance of works

This subprocess is the final assessment of the actual execution of the works in relation to quantity, quality and value. The result of this subprocess is final acceptance protocol, which is drawn to the technical model. The Protocol confirms realization of works covered by the agreement and the additional works, the need for which arose during construction. This protocol provides the basis for completing the payment on terms of the agreement, which the investor agreed to pay the contractor.

Subprocess: Team Management – Task Closure

This subprocess follows the final acceptance of works and is very important for the closure of the task in terms of personnel and in view of future team tasks. It is important for the integration, self-esteem of employees and the loyalty to the company. This is the stage of evaluation and gratification of the whole team and individual members of the team. Not surprisingly, the development of culture has created a whole range of customs and rituals surrounding this step.

Each of the above mentioned subprocesses is described in details in the “Manual for self-study”. Complement of the information contained in the “Programme of further education” is a “Handbook for trainers (training materials)”.

4.4.2 Structure and content of the Handbook for trainers

“Workbook for trainers (training materials) in the areas of coordinator work at the level of foreman in the small and medium-sized construction company” is a sample set of exercises for teaching and learning, which the beneficiaries can pursue with the help of a trainer and developed the ”Manual for self-study” .

Training exercises for each module are the part of the coordinator’s work at the level of foreman in various areas of its activities, both in the area of professional and psychosocial competence. It is proposed to implement the various modules (Table 2, Table 3) according to the scheme overall work process. A trainer can benefit from the exercises and guided them by carrying out the proposed training materials. The trainer can also propose and carry out exercises according to his/her wishes.

In the training materials trainers will find information about:

- training aims, through the implementation of which participants can acquire or increase their professional and social competence,
- scenarios for training classes with exercises of varying difficulty,
- information concerning workplace equipment and means of learning,
- attachments used for trainings.

4.4.3 Process of evaluation

Participants of the course were resolving problems under the directions of their tutors. The scopes of the problems were: reading technical documentation, planning, organizing and accomplishing building works with the building final inspection. Their knowledge and skills were checked at several stages:

Stage I- knowledge and skills already acquired:

- analysis of weak and strong points, motivation research to reach a higher level of professional qualifications, educational needs research complementing essential competences.

Stage II - knowledge and skill acquired during the training:

- observations
- evaluation sheets.

Stage III - knowledge and skills acquired after the training:

- drawing up a design of constructional element accomplishment

- observations
- evaluation sheet.

Tutors adapt the substantive part of the course, considering recipients' competence, knowledge and expectation. It allowed to evaluate the prepared materials. In terms of the module and after completing the whole cycle of training evaluation surveys were conducted

4.4.4 Certification

At the stage of a project in which it appeared that carried its actions will focus on the construction sector there was some research about possibilities of the certification course carried out. To that end the regional institutions that carry out training, vocational courses or training, and deal with the issue of relevant certificates were contacted with. The result of these discussions was the formation of an agreement between the three institutions, and the central point was the preparation and conduct of final examinations and the issuance of certificates.

Institutions involved in the certification process in the project were:

- The Chamber of Crafts and Small and Medium Entrepreneurship in Katowice, which is one of the most important certification institution in the field of vocational qualifications in the Voivodeship. Their certificates are recognised in the region and country. They are responsible also for master and journeyman examinations in the voivodeship.
- The Guild of Various Crafts in Zory
- Zory Chamber of Commerce.

At the end of the course there was an exam scheduled, which was to examine the level of knowledge and skills including of construction and human resources management. Self-evaluation was complemented by the development of construction projects, and then disputation during the final exam. Confirmation of participation in the course and exam had been a certificate issued, signed by all members of the committee.

4.5 Learning process

4.5.1 Training package

Supplementary exercises for competences of the beneficiaries in the areas of coordinator were carried out in two cycles of training:

- I training part includes training in psychosocial competence (Module I-IV),
- II training part aims to train of professional competence (Module V - VIII).

The following tables detail the matters taken at a workshop in the framework of each training part.

Table 2. I training part: training in psychosocial competence (expected execution time: 24 hours)

MODULAR UNIT	SCOPE OF THE TRAINING UNIT	HOURS
MODULE I	**ENVIRONMENT CHANGE'S ADAPTATION TRAINING** The opening of the group, presentation of participants and expectations Analysis of advantages and disadvantages due to the environment change Professional competences in view of changing labour market	3h
MODULE II	**HUMAN RESOURCES IDENTIFICATION & PREPARATION** Interpersonal communication Techniques of communication with employees Human resource management in preparation for the task team Communication on the staffing of work, preliminary discussions of	6h

	training, building relationships	
MODULE III	**TEAM MANAGEMENT** Creating of the managerial, leadership role Creating of the mentor role Leadership styles The role of feedback Assertiveness, acceptance and giving criticism **SUPERVISION, COORDINATION OF HUMAN LABOUR DURING THE IMPLEMENTATION OF WORKS** Stressful situations- ways of dealing with stress The formalities associated with the supervision and coordination of human labour Problem solving, conflict resolution	9h
MODULE IV	**TEAM MANAGEMENT – TASK'S CLOSURE** "Finis corona opus" psychological and social sense of the task is completed Formal gratuities and sanctions The importance of psychosocial skills for the smooth management team - a summary of the training - test	6h

Table 3. II training part: training of professional competence (expected execution time: 40 hours)

MODULAR UNIT	SCOPE OF THE TRAINING UNIT	HOURS
MODULE V	**DOCUMENTATION ANALYSIS** Computer skills, searching for information Types of documentation Reading of documentation	10 h
MODULE VI	WORKS PLANNING Practical calculations **COSTS CALCULATION** Types and analyses of estimates, material expenses Manual preparation of estimates Computerized preparation of estimates **WORKS SCHEDULE** Preparation of works schedule	10 h
MODULE VII	**WORKS ORGANIZATION** Material storing Industrial health and safety on the building site First Aid **WORKS ACCOMPLISHMENT** Technical problems at works	10 h
MODULE VIII	**BUILDING FINAL ACCEPTANCE** Building final acceptance procedures Drawing up a design of constructional element accomplishment Consultations	10 h

It is proposed to implement the individual modules according to the scheme overall work of coordinator process. During the implementation of the modules the age, level of technical expertise and interests of beneficiaries, their suggestions and needs of the workplace must be taken into account.

The objectives that guided the education division for the above modules were:

- Psychosocial adaptation of participants to a new professional role
- Preparation of participants for:
  - team management
  - team's work organisation
  - problem solving, conflict resolution
  - making decisions
  - analysis, reading and identification of documentation
  - works planning
  - scheduling of works and funding
  - organizing and implementing of works
  - works' final acceptance, from work acceptance of partial works to the final acceptance of works.

4.5.2 Kick-off meeting

At the beginning of the course opening meeting has been organized, for which participants of the project and working group were invited.

During its first part the staff was presented as well as the project objectives and planned schedule of course, ways of communication were indicated and responsibilities were shared. There were also printed materials given from which the participants will use during the course. An important point of the meeting was clarifying the rules for working with materials. At first the structure of manual for self-study was presented (the first part concerned individual processes and guidebook). Then, the main goal and the process of division of labour (ie. the main process of coordinating the construction works) for the individual subprocesses were discussed. There was also the principle of using the graphical user manual (coordinator's operations) contained in the schedules for the various subprocesses presented.

The second part of the meeting ran in smaller groups. Its participants were the beneficiaries themselves, and an expert in the soft competences. The purpose of that meeting was psychological preparation of participants for a new role. This involved the definition of motivation, assessment of individual needs to supplement the competences and possible concerns. During the workshops participants were discussing their motivation possibilities and analyzing the strengths and weaknesses.

4.5.3 Manual for self-study

In order to allow participants to study by themselves the Manual for the self-study was developed. It has been called "The works coordinator at the level of foreman in the small and medium-sized construction company". Its structure is as follows:

1) Introduction which contains of:
   - Information about coordinator's work,
   - The characteristics of recipients - to whom the Manual for the self-study is addressed?
   - The content
   - Hints on how to learn and to work with manual for self-study?
2) The overall process of coordination of construction works

   General arrangement presents a comprehensive look at the coordination process of works of several or more team of employees in the implementation of the work.
3) Description of common operations in coordination with the division for the subprocesses.

Typical steps in the coordination of works for the individual subprocesses have been recorded in graphic form (diagrams / operating procedures) and descriptive way for each subprocess.

4) List of literature useful for a coordinator's work
5) Guidebook, which contains a social competence in solving human problems both technical and creative, interpersonal conflict resolution, and supplementary materials and attachments.

Diagram of the main process and subprocesses with a brief description was presented in one of the preceding chapters. The following section presents the description of one of the subprocesses, which in practice reflects the structure of working materials developed.

Subprocess: Works Planning

This subprocess aims to define the activities and tasks related to the implementation of individual building components or the whole building object - in conjunction with the necessary means of production. The aim of planning is to ensure that work is completed within the prescribed period and at optimal costs. Proper planning of the works has an impact on the proper organization and execution of investment works.

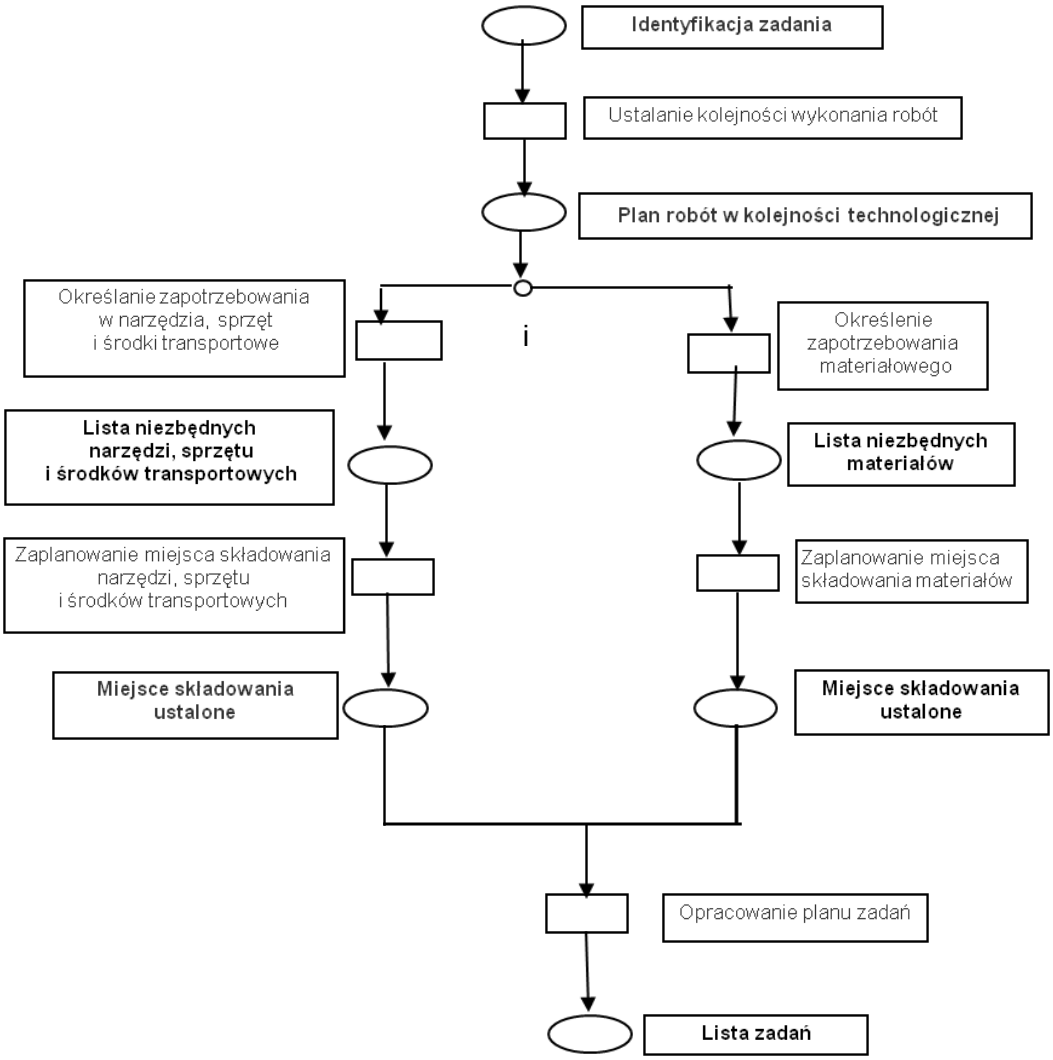

Diagram 2. Subprocess: Works Planning

Operations

- Planning of activities related to the works.
- Determine the conditions necessary for the proper execution of works.

- Define the scope of works.
- Define technology implementation of the various types of works
- Determine works organization and methods of implementation
- Determine the number and specialties of needed workers
- Do the necessary calculations.
- Draw up a list of necessary materials.
- Draw up a list of needed equipment, tools and technical equipment and transport means.
- Calculate the planned construction costs: labour, materials and equipment
- Determining the time frameworks to complete works
- Draw up a works schedule
- Draw up an action plan - to determine a concrete list of actions

Fields of competence:

Skills/Abilities
- Ability to plan
- Ability to make decisions
- Ability to use information.
- Ability to combine and organize knowledge.
- Ability to draw up a list of necessary materials, tools and equipment.
- Ability to draw up schedules.
- Ability to calculate costs.
- Ability to improve their professional skills.

Knowledge
- Knowledge of principles, the construction process.
- General Knowledge in the field of building.
- Basic knowledge in the field of Mathematics.
- Knowledge of estimate principles in the construction sector.

Tools
- Technical Documentation (Specification)
- Literature
- Calculator

A detailed description of each of the subprocesses is located in the aforementioned Manual and has the following (repeating) structure and sequence:
1) a brief introduction about the area of subprocess (general information to take account in their description of the objective meaning of a subprocess, etc.)
2) schematic presentation of a typical course of operations (in graphical form - specific operating procedures)
3) operations' description
4) the extent of the competence of a given area of operation (abilities / skills, knowledge, tools)
5) practical example of each operation (for individual subprocesses)
6) list of useful literature.

An important part of the Manual for the self-study is a guidebook. Its aim is to supplement the competences of coordinator in the field of communication and team management.

Preparing workers with decades of work experience to the role of the coordinators we should be aware that the construction work they know by heart, and sometimes teach the others, however in the context of new tasks, they will get additional responsibilities - managing the team, work organization, problem solving, decision-making (sometimes difficult and risky) conflicts resolving, monitoring, evaluating people and a significant number of office tasks.

This text is meant to be an individual help and test if all necessary skills are possessed. It should be practiced during training, group work together or with personal coach.

The educational aim is: to acquire by candidates (planning to be promoted for work coordinator) all the skills and knowledge which will enable them to:

1. To recognize own motivation, strengths and weaknesses needed for the new role.
2. To manage efficiently a small team of workers, especially:
   - to know foundation of interpersonal communication and to be able to utilize it, in particular:
     - receive and give information
     - refuse assertively
   - to solve problems including technical ones
   - to solve conflicts
   - to deal with stress constructively
   - to outline formal, personal and professional requirements from workers
   - to be able to evaluate competence and work performance of workers, their strengths and weaknesses
   - to be able to implement intermentoring among workers and coaching
   - to know rudiments of work organization
   - to know basics of office and human resources know-how required by law for coordinator of team management

To the guidebook there are supplementary materials attached, which in a concise and understandable manner, presents selected issues in management and communication. The participants will find in Annex answer sheets and keys for tests.

4.5.4 Meetings with experts

During the course participants had the opportunity to consult with experts - practitioners, both in the construction field as well as communication and human resource management. Issues discussed during these meetings included the assistance in developing schedules and calculations and personnel issues - such as problems with subordinates (insubordination, lack of motivation, etc.).

Due to the complexity of the tasks of the coordinator meetings with experts had been an essential element of education.

4.5.5 Learning counselling

During the training under the project there was also provided the opportunity to consult with advisors in the learning process. Participants could have asked how to work with the materials, how to read the test results or how to improve the efficiency of learning.

4.5.6 Final examination

After completion of the training an examination was carried out and certificates were awarded. The final examination were divided in two parts: written form and oral form (defence of individual projects). The examination committee included representatives of three institutions, who for the proper implementation of this action have signed the relevant agreement.

5. Implementation

This chapter will discuss issues related to the pilot implementation of a training Programme developed. At first the process of recruiting participants will be described, characteristic of beneficiaries will be presented, and then learning process with its individual components will be shown.

5.1 Recruitment of participants

5.1.1 Recruitment process

In order to obtain the participants, i.e. those over 45 years, working as a worker in the construction sector there was an active recruitment in the SME environment carried out through direct meetings, telephone contacts and distribution of information by traditional mail and e-mail. As part of the information - promotional leaflet was created and distributed to potential participants, there were also some news published on the local websites and on Żory Chamber of Commerce's website www.zorig.zory.pl. On several occasions, there were some information published in Chamber's bulletin. This theme has also appeared at the meetings of the Management Board of Żory Chamber of Commerce. An additional element was establishing of direct contacts with the institutions of business environment in terms of presentation of the objectives of the project and asking for support in the recruitment process.

The result of this was recruiting of three beneficiaries.

All three participants fulfilled the whole training cycle, ending the course of proceeding with the final exam and passing it.

5.1.2 Participants' characteristic

In the course have taken part workers over 45 years old. The average age of the participants was 52.3 years. Participants have been working in building sector for average 26 years. One of the participants has been performing his current job in his company for more than 15 years, the second one for between 11-14 years and the third one for between 6-10 years. They have never participated in trainings relating to their current job before.

The reasons for participating in BusQua Project that participants pointed are shown in the table below, with the numbers of answers given:

Table 4. Why are you participating in the BusQua training?

Why are you participating in the BusQua training?	*totally agree*	*tend to agree*	*tend to disagree*	*totally disagree*
Topic is interesting for me	3			
Prepare for new / additional working tasks	3			
Better chances on the labour market	3			
Updating my knowledge and skills	3			
Learning something new	3			
Improving my qualification	2	1		
Training is relevant for my job	2		1	
Job security / advancement in my company	2		1	

As an additional, important reason participants pointed the chance to change their position in the company. One of the participants also pointed the chance to get higher qualifications. In all of the cases it was an employer who decided on sending the participants to this training.

During their whole professional career, the participants were taking part in trainings, conferences and lectures very rarely or even never. The exact answers are shown in the table below:

Table 5. How often have you already attended the following kinds of training in your working life?

How often have you already attended the following kinds of training in your working life?	*frequently*	*rarely*	*never*
Practical instruction / support of colleagues		2	1
Lecture / presentation		2	1
Learning with others (e. g. project group)		1	2
Seminar / course		1	2
Practical training / learning by doing			3
Counselling by an expert			3
Distance / computer learning course or Programme			3

Participants tend to agree on how important are things like time frame, support or feedbacks for them. The details are shown in the table below:

Table 6. How important are the following points for you with regard to training in general?

How important are the following points for you with regard to training in general?	*very important*	*important*	*unimportant*	*very unimportant*
Certification of the acquired know-how	3			
Support by an experts	2	1		
Learning together with others	2	1		
Feedback on learning results	2	1		
Self-determined time frame for learning	2	1		
Learning counselling	1	2		
Training aids (e. g. work sheets)	1	2		

Participants expect to gain new knowledge and skills during the training. They all pointed out that the training aids which they would like to receive are books and brochures. One of the participants also pointed CDs.

Participants all expect concrete knowledge from experts. Referring to learning counseling they expect to be taught how to learn by themselves and to discuss some important problems. They also require competency in counselling.

5.2 Time frame

Training was carried out during the period from April to June 2010. At that time, numerous meetings of participants with experts and advisors in the learning process took place. Complemented by self-study process were also conducted training and workshops based on the Handbook for trainers. The process of education completed an examination carried out in August 2010. Throughout the duration of the course evaluation was conducted.

Enhancing of professional skills was done on the basis of the first part of working materials (Manual for self-study), and psychosocial competencies, mainly based on the guiding text contained in the second part of the Manual.

The implementation of the workshop provided training in two training parts divided into modules, discussed in section 4.5.1. The order of the individual modules according to the scheme of the main coordinator of the working process included in the Manual for self-study has been adopted. Given the hardware requirements, some classes were conducted in the computer rooms so that the implementation of selected modules could use computers and proper software (Word, Norma, etc.).

Table 7. Schedule of operations

Implemented Modules (training hours)	**Training subject**
Module: I (3h)	Environment change's adaptation training (workshops)
Module: II (4h)	Human resources identification & preparation (workshops)
Module: V, VII (6h)	Documentation analysis (computer skills, searching for information, reading of documentation, computer workshops)
Module VI (4h)	Works planning (computer workshops)
Module VI (4h)	Works planning : scheduling (computer workshops)
Module III (4h)	Team Management - Tasks (workshops)
Module III (4,5h)	Supervision, coordination of human labour during the implementation of works (workshops)
Module: V, VI, VII, VIII (5h)	Building final acceptance Example of the building project (trainings)
Module IV (4,5h)	Team management - task closure (workshops)

After consultations with the employer training took place at an average rate of one meeting per week during working hours. In practice, part of the training took less hours than originally expected, from 64 hours decreased to 39 hours. This state of affairs can be ascribed to one side in a smaller group of participants than originally planned, and thus the more efficient conduct of workshops, on the other hand participants showed great interest in the issues, and absorbed new information easily. The beneficiaries appreciated the flexibility of coaches, who inspired the one of the principles of mentoring that is "follow the pupil". An important element of the training was computer work, which has brought much satisfaction to participants, because the knowledge gained will be useful to them, not only at work but in their personal lives.

5.3 Learning activities

The process of learning coordinator works included work with the Manual for self-study and participation in a workshop organized in two training parts. In addition, participants had consultations with experts of various fields of interest to them.

Training proceeded according to the schedule of training shown in the point 5.2. When solving tasks from training materials for each module, the participants used the schemes of the subprocesses which were included in Manual for the self-study. They were getting to know computer Programmes and used the portals to find the information they needed. They solved the sample project, which included all the professional subprocesses - they practiced the customary procedures for individual subprocesses according to their corresponding schemas. They received training aids useful in the industry in which they work.

The modules on human resource management skills, the majority of trainings took place in a workshop form. Participants took part in simulation games such as: business meetings conducting, interviews with job candidates, team solving technical and human problems leading (including conflicts).

Complementing of the learning process was preparation and documentation of individual construction project on the basis of instructions contained in the working documents, supplemented by notes in the field of management.

The beneficiaries' problems of professional nature or related to the learning process were consulted primarily in person at meetings, rarely by telephone.

If the course was conducted in the traditional form of vocational education, which offers a similar professional skills would probably last about 1.5 years. It would include the technical schools after vocational school.

At this point it should be mentioned that today there are no courses / trainings, which has comprehensive approach to the theme given which is preparing employees for the role of the coordinators of physical works in terms of both professional and psychosocial competence.

All of the participants indicated teaching methods as the main advantage of the course. One additionally pointed educators' qualifications and skills. Participants couldn't see any disadvantages.

The question about easy, clear and difficult aspects of the training brought following answers:

Tabela 8. To what extent do you agree to the following statements?

To what extent do you agree to the following statements?	*totally agree*	*tend to agree*	*tend to disagree*	*totally disagree*
It is clear for me …				
… how to work with the material.	3			
… how to conduct an own project.	3			
… how to document my own project.	3			
It is easy for me…				
… to learn with the material on my own.	3			
… to transfer the training contents into my work.	2	1		
… to conduct an own project.	2		1	
It is difficult for me…				
… to arrange the training with my work.		1	1	1
… to apply the training contents at work.	1		1	1
… to motivate myself for the training.				3

The average time of working on the received self-learning materials was 54h. Participants were studying materials at home or at work during their free time. They thought that the training materials were quite useful. As the reason for this answer they gave the better understanding of the problems and possibility to get higher qualifications. In addition to the training materials participants use workplace-related papers, notes from colleagues

performing similar tasks, notes they made at work, notes they made during or after the expert or learning counselling, information they gathered on their own from the internet, books, etc.

All participants had consulted the experts more than 3 times each. All of those meetings were useful for them, mainly because of the great competency of educators. They also had consulted learning counselling experts more than 3 times each. It also was useful for participants as they pointed that thanks to it they have bigger knowledge and more courage to start new challenges.

During the training period participants were supported by an employer and their colleagues. The support from employer was shown by possibility of partly exemption of work. The participants claimed that they unfortunately hadn't used gained knowledge in practice. As the reason they pointed that most of the knowledge was useless at the current position and that the time after training was too short to have been able to use it.

As the suggestion for improving the training one of the participants pointed that the amount of training hours should be bigger but amount of questionnaires should be smaller.

6. The effectiveness of the training package

The sixth chapter describes the results achieved at the end of the course from the perspective of the participants and trainers. There will be found review of the beneficiaries and the answer whether the project had the intended effects or not.

6.1 Learning effects according to the experts

Participants improved significantly their skills and acquired new ones. As the most fundamental may be mentioned: development of cost estimates, preparation of schedules of work, learning the rules of warehousing and material storage. Thus, they had to refer to the applicable laws in the field of construction. Confirmation of qualifications in this regard is self-development of individual projects, confirmed by an examination.

The results in the field of complementing the "soft" skills - human resources management at all stages of the construction process - were very good, as observed during the time of training, consultations and selfperformed exercises. Participants very quickly adapted to this new role, realistically assessed their strengths and weaknesses, and willingly committed themselves to new tasks. Finally the final exam confirmed that.

The total results of the exam, work and participation in the consultation showed that the number of training hours and individual modules are scheduled in an optimal manner. An additional positive result is clear raise of self-esteem, interest in its new role and the desire to continue work on the new position. This result is of particular importance in the context of the European and national challenges. It is about the need to extend the working life of Poles and preparation of legal solutions to raise the retirement age.

6.2 Learning effects according to the participants

Participants agreed with one another that they would like to recommend the training to other persons, because the lectures were very good, they learnt new aspect and they have positive feelings about it. If they could they would participate in such training once again, as they would like to improve their knowledge and skills.

To the question about benefits from the training, participants gave the following answers:

Table 9. How did you benefit from the BusQua training?

How did you benefit from the BusQua training?	*totally agree*	*tend to agree*	*tend to disagree*	*totally disagree*
Gathered relevant information for work	1	2		
Updated my knowledge and skills	2	1		
Acquired new knowledge and skills	2	1		
Job security in company improved	1	2		
Occupational status improved	1	1	1	
Payment improved		1	2	

As the additional benefit one of the participants pointed improvement of vocational qualifications.

The next question concerned experiences the participants gained during training. The answers were as follows:

Table 10. Which general experiences did you make during the training?

Which general experiences did you make during the training?	*totally agree*	*tend to agree*	*tend to disagree*	*totally disagree*
It was clear for me …				
… how to work with the material.		3		
… how to conduct an own project.		3		
… how to document my own project.		3		
It was easy for me…				
… to learn with the material on my own.		3		
… to conduct an own project.		3		
… to transfer the training contents into my work.	1	2		
It was difficult for me…				
… to apply the training contents at work.	1		2	
… to arrange the training with my work.		1	2	
… to motivate myself for the training.		1	1	1

As the easiest thing during the training participants pointed easy acquiring of the knowledge.

Participants used expert and learning counseling more than three times each one and the meetings were very useful for all.

Participants claimed that they can use just part of the knowledge gained in practice. By the time of the survey they had already used the knowledge gained. The main aspects they had used were connected with stress managing skills and improvement of communication with their colleagues.

At the end of the questionnaire participants were to rate the training. They claimed that they liked the way of conducting the training and practical IT classes the most.

A measure of the effectiveness of the course are also positive results of the final exam. It consisted of examining the professional qualifications and the psychosocial skills. The results are shown in Table 10 below.

Table 11. Final exam results

	Part I Professional competence test	Part II Psychosocial skills test	Part III Disputation
Interim results:			
Participant 1	95%	95%	Very good
Participant 2	100%	91%	Very good
Participant 3	90%	91%	Very good
Average	95%	92%	
Final result:			
Positive	3	3	3
Negative	-	-	-

6.3 Quality assessment of Manual for self-study

Participants also assessed the developed materials – Manual for self-study. Answers were as follows:

Tabela 12. Assessment of Manual for self-study

	totally agree	tend to agree	tend to disagree	totally disagree
The training material was…				
… structured clearly	3			
… not structured well			2	1
… too comprehensive		1	2	
… too brief			3	
The contents of the material were…				
… too easy			3	
… too complicated			2	1
… too theoretical		3		
… too practical			3	

Beneficiaries pointed that materials had very clear structure and enough information. They were said that Manual was a little too theoretical. They did not find difficulties in working with those materials..

7. Summary

The last chapter of the final report contains the conclusions, suggestions for changes / improvements and opportunities for further implementation of materials developed.

7.1 Conclusions

1) The training for works coordinator was both started and finished by three participants.
2) In the course took part workers over 45 years old. The average age of the participants was 52,3.
3) The average time of working on the received Manual for self-study was 54h. Training package took 39h.
4) Participants had consulted the experts more than 3 times each. They also had consulted learning counselling experts more than 3 times.
5) All participants passed the final exam (the average percentage of the test of professional qualifications was 95%, and psychosocial competence - 92%)
6) According to experts, the participants very quickly adapted to this new role, realistically assessed their strengths and weaknesses, and willingly committed themselves to new tasks.
7) According to experts, an additional positive result has been clear raise of self-esteem, interest in its new role, the desire of continuation of work on the new position.
8) Participants are able to develop a building project that contains i.e. plan to work in a technological order, the list of necessary materials, tools and equipment, the composition of working groups, work schedule, cost calculations, etc
9) Participants acquire specific skills such as analysis, reading and identification documentation, preparation of cost estimates and schedules of works.
10) Participants expanded their knowledge of: principles of warehousing and storage of materials, planning of work (professional development account) and health and safety rules.
11) Participants acquired new knowledge and skills in the field of human resources' management.
12) Participants have acquired skills of using the computer for business purposes.
13) If the course for a works coordinator was conducted in the traditional form of vocational education, which offers a similar professional skills would probably last about 1.5 years. It would include the technical schools after vocational school.

7.2 Suggestions for improvements

The main idea behind the transnational project BusQua was self-studing. In the case of Polish project transformation of construction worker into a manager is difficult to obtain solely through self-education. Thus, a large proportion of direct training with trainers. Improvement of the project in the direction of increasing self-studying would be possible only on the basis of an Internet educational platform, which would include in its Programme, the restrictions resulting from a narrow range of knowledge and lack of ability to search for sources of new knowledge among workers employed for many years at one position. Creating an Internet education platform, which would satisfy specific requirements, could raise participants' self-sufficiency of training. However, it is complex and expensive task.

7.3 Perspectives

On the basis of the materials listed in the Manual for self-study training and self-learning process can be provided. Tasks developed are applicable to various construction branches and allow the coordinator to complete the necessary work competences in different professions.

During training exercises the tasks elaborated in the Manual for self-study can be used. Other tasks also can be developed, depending on the recipients of training. Adjust the projects used in the process of self-learning to the performance of other profession.

In the materials for the trainers there is given a longer duration of each module. Time spent on training depends largely on many factors, including:

- the level of beneficiaries' competence at the entry stage
- the time for which the employer may delegate staff
- the participants' commitment to training and self-study, etc.

Time spent on the implementation of training could be longer, because as we have seen the degree of competence at the entry stage (accounting or related to servicing your computer) of the participants of the training was at a different level.

Practice tasks were tailored to the audience, knowledge and professional competence at the entry stage and professional competence of coordinator's level which were acquired after completing the second part of training.

Training group willingly participated in the training and the process of self-studying. Beneficiaries wanted to refresh existing knowledge and gain new knowledge and skills. Beneficiaries in the process of self-studying shared their own experience on a number of professional issues.

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