

## **Skills for Baltic Wood Industry – European Quality in Vocational Education and Training**

### **CASE STUDY ESTONIA**

#### **Development of the curriculum "First level manager in the wood sector"**

In cooperation with Võrumaa Vocational Education Center Wood Processing and Furniture Production  
Competence Center TSENER and MTÜ Furniture Cluster of South-East Estonia

#### **Summary**

This case study provides an overview of the initial experience of creating and implementing the curriculum "First level manager in the wood processing sector" within the project "Skilled Up" of the Wood Processing and Furniture Production Competence Center of the Võrumaa Vocational Education Center.

We analyze the reasons why we decided to develop the training program for first level managers, describe the curriculum development process and summarize the feedback from the training program participants and employers on the training as a whole.

We also highlight the lessons learned in the case study, based on which we made changes to the curriculum of the new training group.

Training program in the amount of 15 EKAP (390 hours incl. 170 hours of independent work) was carried out at the Tsender in the period of 19.09.2019 - 02.10.2020. The training was conducted as in-service training, based on the principles of "5th level advanced".

The target group of the training was current or future managers of the primary sector in the timber sector. Prerequisites for starting the training were employment at a wood-processing company and having basic knowledge in the wood industry.

#### **Introduction**

##### **An overview of the wood and furniture production sector in Estonia**

The forest and timber sector is one of the leaders of Estonia's foreign trade and the largest exporter. In 2019, wood-based products worth 2.4 billion euros were exported. In 2019, 3.1% of the value added of the entire Estonian economy was created in the sector (769.2 million euros at current prices). The sector directly or indirectly provides employment for 60,000 Estonians, mainly in smaller rural areas.

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According to the official statistics of 2017, the share of people working in the wood sector is the largest in Southern Estonia, but the highest in Võrumaa, where 23.4 people per 1,000 inhabitants worked in the wood sector. In Estonia, the wood sector employed an average of 9.7 people per 1,000 inhabitants.

According to the short review "Forest and Wood Industry 2019"<sup>1</sup> prepared by EMPL (The Woodworking Industry Development Cluster)<sup>2</sup> higher value-added products such as prefabricated houses, sawn timber, wooden construction details, wooden furniture and parts thereof, predominate in the export volume of timber products. In comparison with recent years, it can be pointed out that a significant annual increase in export volumes is in the product group of wooden prefabricated buildings and wooden building components. However, the largest increase in export volume in 2019 took place in the plywood (31%) and wood chips and piles (18%) product group. Exports have been growing since the economic crises of 2008-2009, and in 2019 a total of more than 2.3 billion euros worth of wood-based products were exported. It accounted for 17% of all Estonian exports of goods.

### **Labor needs in the wood and furniture sector**

According to Uku Varblane, an expert of the Development Monitoring Center, the furniture industry is dependent on foreign labor, because no specialists with a suitable salary level can be found in Estonia. Efforts are being made to automate the sector, but it is not possible to reduce the workforce very quickly in all sections of the work.

The forest and wood industry is the most modern industry in Estonia. While 36% of production processes are automated and digitized in Estonian industries, the corresponding figure in the wood industry is 51 %. Such a study was published by Swedbank in April 2020<sup>3</sup>. Thus, this sector needs a skilled workforce, which is a continuing need. The sector's reputation as an employer has grown during the corona restrictions. New employees from other sectors have entered the labor market.

In 2014, the Government of the Republic approved the labor market monitoring and forecasting and skills development coordination system OSKA, which was created to better link the needs of the labor market and the training offer. Within five years, OSKA prepares forecasts of labor and skills needs in all areas of life and compares them with the training offered in vocational and higher education. According to the OSKA report<sup>4</sup> in 2019, the timber sector will definitely need more people in the nearest future, as more complex areas, such as the production of wooden houses, are growing. The share of simpler work is declining, but the number of professionals such as industrial and production engineers and work managers, etc. is growing.

<sup>1</sup> [https://empl.ee/wp-content/uploads/2020/06/2019-metsa-ja-puidut%C3%B6%C3%B6stus-numbrites\\_uuendatud.pdf](https://empl.ee/wp-content/uploads/2020/06/2019-metsa-ja-puidut%C3%B6%C3%B6stus-numbrites_uuendatud.pdf)

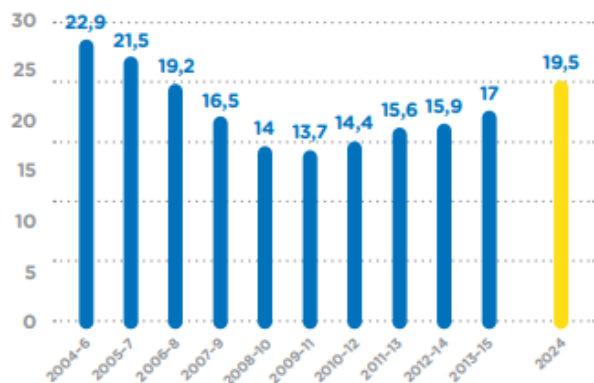
<sup>2</sup> <https://empl.ee/statistika/sektori-ulevaade>

<sup>3</sup> [https://kukkur.swedbank.ee/wordpress/wp-content/uploads/2020/04/Toostusettevotete\\_uuring\\_2020-1.pdf?fbclid=IwAR1eN46e\\_p74AiAsKNqjJVvtWo2vGAgfynE\\_a34c\\_h1jRuUM8dvVJjodw](https://kukkur.swedbank.ee/wordpress/wp-content/uploads/2020/04/Toostusettevotete_uuring_2020-1.pdf?fbclid=IwAR1eN46e_p74AiAsKNqjJVvtWo2vGAgfynE_a34c_h1jRuUM8dvVJjodw)

<sup>4</sup> [https://oska.kutsekoda.ee/wp-content/uploads/2017/02/Eesti\\_tooturg.pdf](https://oska.kutsekoda.ee/wp-content/uploads/2017/02/Eesti_tooturg.pdf)

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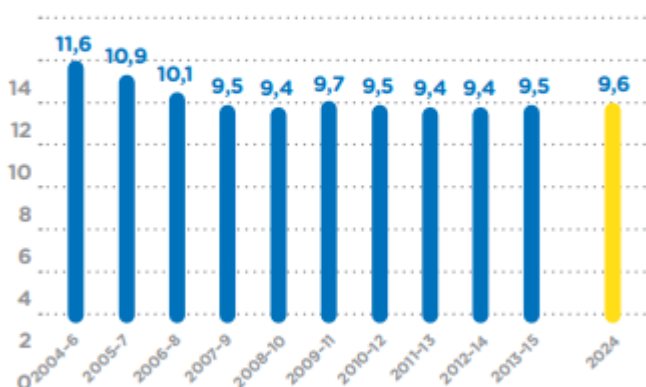
**Joonis 26. Puidutööstuse töötajate arv (kolme aasta keskmine, tuhandetes).**



Allikas: statistikaamet, Eesti tööjõu-uuring, MKM

The Estonian furniture industry has a long tradition. There are almost 600 companies operating in the furniture industry in Estonia and they are employing around 8,000–9,000 people. These are mostly small companies that provide work in rural areas in Northern and South-Eastern Estonia. The largest furniture manufacturers are Bellus Furniture, Antsla Inno, Standard, Flexa Eesti, Valga Gomab Mööbel and Delux. There are no longer large employers in the furniture industry. Mass production does not pay off in Estonia and production is automated. At the same time, the sector is an important output for small producers who implement their design ideas. The same trends will continue in the sector also in the future. The number of employees in the sector remains stable. The share of specialists (product designers, industrial and production engineers and work managers) is increasing and more people are needed.

**Joonis 44. Mööblitööstuse töötajate arv (kolme aasta keskmine, tuhandetes).**



Allikas: statistikaamet, Eesti tööjõu-uuring, MKM

## **Vocational training and labor needs in the sector**

The main occupations in the sub-sectors of wood processing and production of wood products and furniture, including upholstered furniture are:

- production managers,
- designers of wooden structures,
- product developers,
- technologists, including technologists of furniture products,
- technicians-draftsmen,
- production equipment technicians (mechatronics, automators),
- builders of wooden structures,
- builders or manufacturers of wooden houses (including handcrafted log houses),
- soft furniture manufacturers,
- carpenters, including woodwork finishers,
- woodworking operators, including CNC3 machining center operators,
- line operators.

According to experts, the new (future) main profession in the field is a wood chemistry specialist, who is practically missing from the labor market at the moment, but considering the developments, it will become important in the next ten years.

The wood and furniture production sector specialists are prepared by two higher education institutions and four vocational training centers, including the Võrumaa Vocational Education Center (VKHK), which has a long-term experience in training specialists in the furniture sector. However, VET institutions are not able to prepare professionals to the required extent. Compared to the number of graduates and the labor force forecast, the Estonian wood sector has the largest shortage of line operators (-115), production managers (-45) and wooden house builders (-45).

In-service and retraining, as well as on-the-job training, are seen as a solution to the shortage of specialists, enabling the learner to gain up-to-date knowledge and link it immediately to the workplace context.

According to the Estonian Vocational Qualifications Framework, vocational education institutions can conduct vocational education at levels from 2 to 5.

**See Annex 1 Estonian Qualifications Framework (EstQF)**

**See Annex 2 Description of requirements to 5<sup>th</sup> level vocational training curricula**

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VKHK offers training in the field of wood in 5 professions:

- 1) wood bench operator - level 3
- 2) carpenters - level 4
- 3) wood product technologist - level 5
- 4) CNC woodworking center operator - level 4
- 5) designer-technologist of wood products - level 5 continuing education

### **Summary**

To summarize, it can be said that the development of the wood sector and the furniture industry in Estonia is stable and rather on the rise. The timber sector is historically and also strategically crucial economic sector in Estonia. The development of the timber sector is especially important for South-Eastern Estonia, where the sector is the largest employer after the public sector.

Various reports point out that finding suitable professionals in particular is a problem for the industry. The production in the sector is moving strongly in the direction of automation, which requires the presence of employees with engineering and technical knowledge, as well as the need for competent work organizers and supervisors.

### **Used sources:**

<https://empl.ee/statistika/sektori-ulevaade/>

[https://www.metsamajandusuudised.ee/uudised/2020/11/11/tonu-ehrpais-metsa-ja-puidusektor-on-eesti-majandusele-keerulistel-aegadel-kindel-tugi?utm\\_source=copypaste](https://www.metsamajandusuudised.ee/uudised/2020/11/11/tonu-ehrpais-metsa-ja-puidusektor-on-eesti-majandusele-keerulistel-aegadel-kindel-tugi?utm_source=copypaste)

<https://www.metsamajandusuudised.ee/uudised/2020/11/17/eesti-puidu-ja-paberitoostus-paneb-viiruskriisile-hasti-vastu>

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<https://tsenter.ee/puiduvaldkonnas-tootavaid-inimesi-on-koige-rohkem-vorumaal/>

<https://oska.kutsekoda.ee/wp-content/uploads/2016/04/Metspuit-luhiversioon.pdf>

<https://www.kutsekoda.ee/eesti-kvalifikatsiooniraamistik-ekr/>

## **1. Development of the Curriculum**

### **1.1. Researching the needs of businesses**

In cooperation with Kagu-Eesti Puiduklaster (South Estonian Furniture Cluster), we conducted a survey in December 2018 among the managers of the companies belonging to the cluster. Managers of companies in 11 regions responded to the survey. We introduced to entrepreneurs the aim of the project to create and test a 5<sup>th</sup> level curriculum for specialists in the field of wood, and we asked them what kind of specialists there is a need for. 45.5% of the respondents were interested in the training of their employees and 9.1% were interested only if the curriculum meets the needs of these companies. 45, 5% of respondents were not interested in training and preferred to train the employees themselves. We also asked the entrepreneurs which topics they would like to train their employees on and which specialists they need according to a Level 5 (See Appendix 3). In addition to the survey, we personally interviewed the managers of the largest companies in the region (AS Barrus, AS Wermo, AS Empak). Based on the gathered information, it could be pointed out that companies want to provide additional knowledge primarily to first-level managers. The curriculum for first-level managers should increase knowledge in the field of wood and develop team management skills. Entrepreneurs came up with the idea that in a situation where competing companies can buy modern machines, there is more potential for a company that can motivate its people to work more.

### **1.2. Challenges related to curriculum development**

After being in contact with participating companies, potential problems with the implementation of the curriculum also emerged:

- The companies in the wood sector in the region are very different: there are many micro-enterprises and at the same time there are also several large companies, such as AS Barrus, UPM-Kymmene Otepää AS, Toftan AS, etc. These companies have more than 100 employees. In a large company there are positions related to the first level management but in a small company the first level manager is also the owner of the company. Thus, the need for first-level manager training can vary greatly from company to company. A micro-enterprise may not have subordinates at all to organize its work, in a small enterprise the first level manager is also an owner. Large companies often prefer to conduct trainings as in-house trainings taking in consideration their company needs.
- The companies have very different specializations: some of them produce wooden parts, some wood pellets and furniture, some of them fulfill special orders. It is very difficult to offer a curriculum that goes deep into technological issues because for some participants these topics are not important.

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- There is not enough time to participate in the trainings. Employers were very critical about the idea of long-term training because attendance at training would be predominantly in the working time.

When planning the creation of the curriculum together with the VKHK study department, the following problems emerged:

- Creating a national curriculum is a very long process and may not be approved by the authorities during the project time.
- The approval of the curriculum does not depend only on the initiative of the VKHK but is related to different stakeholders, e.g. the national curriculum must be related to a specific profession, the qualification requirements of which have been approved by the national professional council. Unfortunately, the professional standard of the first level manager of the timber sector has not been developed and its development is not within the competence of the VKHK.
- VKHK already offers level 5 education for wood technologists, so the school does not need another level 5 curriculum in the field of wood technology, although the school is interested in level 5 continuing education curricula. In addition, the school has a curriculum for wood product designer-technologist, so it makes sense to develop a level 5 continuing education curriculum focused on management skills.

### **Conclusion and decisions:**

After several discussions with wood and training experts, we made the following decisions:

- Since it takes a very long time to draw up a national curriculum we started training as additional training for adult learners. We named a year-long training program "Development Program for Wood processors". As a target group we saw the current and future first level managers in the wood industry. All training program should follow the principles of the curriculum for the Level 5 Advanced.
- We needed to be flexible, taking into account the schedules of companies and participants so we decided to divide our development program into 3 parts:

Part 1: Introduction to the training, business, legislation, personnel career, team management and communication topics

Part 2: Topics related to the work processes organization and quality management

Part 3: Technological issues and project management (practical task by the teams)

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2) We understood that the collaborative project curriculum cannot be transferred 100% because:

- It is too large and deep and we cannot manage it in time. VKHK already provides curricula for learners who need wider knowledge about wood technology.

- Trainers by partner institutions have different background and knowledges. We do not have common training materials and full teacher`s trainings are not include into the project activities.

So we decided to follow the main principles and topics from the joint curriculum and adapt them to our conditions for testing.

## **2. Preparation for implementation of curriculum**

### **2.1. Preparing teachers for implementation**

Curriculum was prepared by teachers of VKHK and experts-entrepreneurs representing the South-East Furniture Cluster. We had several meetings where teachers and experts discussed the themes of the curriculum and training plan to be sure all subjects will support each other and will not overlap. The teachers also visited different companies and had joint meetings with entrepreneurs before the main principles of the curriculum were worked out.

VKHK has a long experience of providing courses for the working people, but this programm was longer (1 year) and experimental. In some cases we did not have appropriate teachers in our institution so we needed to find new teachers among our experts in Cluster and Tsenter.

Group of experts and teachers worked through the project joint curriculum and adapted it according to our time frames. The aims and expected learning outcomes were agreed upon in the meetings of the expert groups. On basis of these agreements the school curriculum and training plan were worked out. All 10 modules were shared between 3 parts.

According to the curriculum the training plan was prepared for the 1st testing group. ( See training plan in attachment No. 4).

### **2.2. Determining the target group and ways to reach the target group**

Before the start we conducted a survey among the wood companies to understand the needs of entrepreneurs. The survey showed that there is a need to train the first level managers for wood companies. Anyway the preparation for the trainings was full of challenges.

Finding the participants was not easy, because for employers it meant their their best employees will out of work at least 3 days per month. Therefore, the training schedule should be prepared as early as possible, to give possibility for entrepreneurs and learners to adapt work-life to the trainings. Both the



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employer and the employee must believe they will benefit from this training, so they need information about the topics and planned outcomes of the training.

However, since this is an "experiment" – this was the first attempt to prepare and implement such curriculum in Estonia, putting together training program for a year has been a challenge for everyone. As the future developments showed, no one could predict the Covid-19 quarantine and the original training plan had to be modified in spring 2020.

Before announcing the training, we introduced the idea of the training at many meetings, shared information with the project flyer, held private meetings with entrepreneurs, etc. Despite that, few weeks before the training was starting, there were not enough registrations for the course. Therefore, we welcomed even 8 people from one company (UPM Kymmene Otepää Plywood Factory). The company showed up high interest to the in training and we had free places. By the start of the training we received exactly 20 participants- from a total of 8 different companies.

After the first training days the interest to the training programme increased, so we compiled the back up list for potential participants. Dropping out rate from the course was very small, approximately after every big part 1 person was changed in the group. Finally 20 people from 11 companies graduated the last part of the course. 14 participants completed the entire programme (all parts).

As an organizer of the training one must support and motivate participants - our participant comes from work and sometimes gets to training straight from the night shift - this must be taken into consideration.

Participants were very different by prior experience:

- Great workers with a long work experience;
- Masters, wood technologists;
- Managers and owners of small businesses.

12 different companies were represented in different parts of the training programme: from internationally well-known corporation: UPM Kymmene - Otepää Plywood Mill till to the type of one person company. This was the biggest challenge to prepare the training program. How to build the training so that it offers something for everybody?

When we met our training group first time, we understood - this is really our target group. Most participants were already working in the position of the first level manager, did not have any trainings for a long time or never in this field.

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**The first group started on 19.09.2019**



**3. Description of Training Programme Implementation/Evaluation**

Estonian partners divided 10 modules into 3 parts. The first two parts consisted of 3 modules each and last part consisted of 4 modules. The volume of all training program was 312 hours which included independent work by students. Trainings took place 3 days (on Thursdays) per month regularly. After every training part, the feedback from the learners and teachers was asked to analyse – what was working and what should be changed.

For communication with participants there have been 3 different ways used by TSENTER and Furniture Cluster of South-East Estonia: individual phone calls, e-mails and closed Facebook groups. The highlights of the project life have been reflected in the regular newsletters for entrepreneurs and other partner institutions published by TSENTER (unit responsible for the project department at Võru

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County Vocational Training Centre) monthly and in its Facebook postings and by Cluster`s media canals (The main target groups for Cluster and TSENER are mainly same, so sometimes the information about the project was not doubled).

The progress of project activities was presented regularly at events and meetings of the Vöru County Vocational Training Centre the South-East Furniture Cluster.

After every training module the learners were asked to fill the feedback questionnaire and every lecturer wrote a self-analyse. Afterwards the expert group analysed the feedback from both sides with aim to improve the quality of training.

In the feedback questionnaires the learners were asked to evaluate if the module was related to their work and was it useful for them. We asked their opinion about the volume of the module and importance in point of the curriculum. The teachers analysed how the themes of the module were received by learners, do time and volume of the modules were enough to achieve the learning outcomes and what methods worked well and what did not.

Below are the overviews about the training issues and summaries of the feedback from participants and teachers.

## **Part I Managing People in a Wood Processing Company (for the first level managers)**

### **(September – December 2019)**

The aim of the training was to enhance skills and knowledge to manage people at the first level of the wood processing enterprise, to raise their economic, including labor market awareness, and to develop communication skills for teamwork.

#### **Introduction to the course**

12 participants attended an opening lecture about woodworking today and tomorrow, most of whom considered the topic was very necessary and over half of the respondents thought that more time could have been devoted to the topic.

In the opinion of the trainer, this topic should be more structured in the future, for example, to deal separately the trends at furniture sector, etc. This time the emphasis was on technologies and general trends in wood industry.

The optimal length of the topic could be 2 x 2 classroom hours, while the trends can be discussed separately on separate topics, for example trends of finishing can be introduced in the module of finishing.

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## **Basic Principles of Business Management**

As usual the module of business management means developing and presenting a personal business plan. We changed the approach to this issue – however the aim of the training program was not to prepare new entrepreneurs but to help to understand the operating mechanisms of the companies and the general economical situation. As an home-work the participants were asked to analyze the companies where they work in point of economical trends in the world.

### **Topics covered:**

- Possible forms of entrepreneurship to realize business ideas
- Vision and mission of the company
- Why the company needs a strategy?
- The need for SWOT analysis within the company
- Waste in production and how to recognize waste
- Valuing time - how to achieve more with less
- What is salary and what are its components
- Variable and fixed costs
- Bankruptcy - a natural part of business

### **Learners' feedback**

88% answered that the training broadened their horizons.

77% said that this topic was important for the first level management (in wood sector) training.

65% said that the training helped them better understand the structure and aims of the company where they are working.

59% confirmed that knowledge have got during the training is helping them at work.

3 students thought this topic could be more in the program. In the opinion of the trainer, the training volume could be somewhat larger - up to 16 hours.

## **Basic issues in employment legislation**

### **Topics covered:**

- Contract of employment and alternative contracts for employment, characteristics and peculiarities. Recommendations for specific cases. Recent changes to the law
- Entering an employment contract and required agreements
- Employee Responsibility for Quality of Work. Possibilities of sanctions. Recovery of damages.

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- Termination of Employment
- Work trips. Internal and external to Estonia. Terms and Conditions
- Temporary and Migrant Laboratory. Risks and Requirements
- Termination procedures and requirements
- Labor Dispute Resolution.
- Presentation of Supreme Court case law on all topics

### **Trainer`s comment**

More time could be planned in the future about contract law (Law of Obligations Act).

The training volume could be slightly increased as all training days were always overdue at the request of the students.

### **Learners' feedback**

94% said that this topic is important for the first level management training.

71% said the training will actually help them at work.

### **Labor Market and Career Planning**

*Comment: career planning is a must-have part of national curricula in Estonia.*

#### **Topics covered:**

- Career possibilities today and the development of a career plan
- CV, motivation letter (feedback to CVs)
- Current labor market situation
- Different generations in the labor market and working with them

### **Learners' feedback**

82% said that the training broadened their horizons

65% said in the training is helping them at work.

41% of respondents considered the volume of the topic to be enough in training.

### **Communication and teamwork skills**

#### **Topics covered:**

- Communication skills - as important skills when You are working with people

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- Analysis of your personality and communication skills (SWOT)
- Disagreements arising from personal perception
- Self-esteem and its impact on communication
- Causes of conflict and how to deal with them
- Active listening techniques for conflict resolution
- Self-esteem behavior in conflict prevention and resolution
- Stress and coping with stress, self-regulation.
- Leader's role in the group, different levels of leadership, different leadership styles
- Motivating, recognizing, giving and receiving feedback
- Public performance

### **Trainer's comment**

Topics that should have more attention:

- Organization culture (values) and leadership
- Time management
- Preparation and conduct of meetings

### **Learners' feedback**

**The theme was rated in 6-point system (6 is very important) by students:**

5,8 points - Importance of communication topics in training of first level manager at wood sector

5,4 points – The knowledge can be used in their daily work

Average rate for the trainers - 5.7

There could be even more communication training, there were many topics that were wanted to be covered more.

## **Part II: "Organization of Work in the Wood Company (for the First Level Manager)"**

**(January-February 2019)**

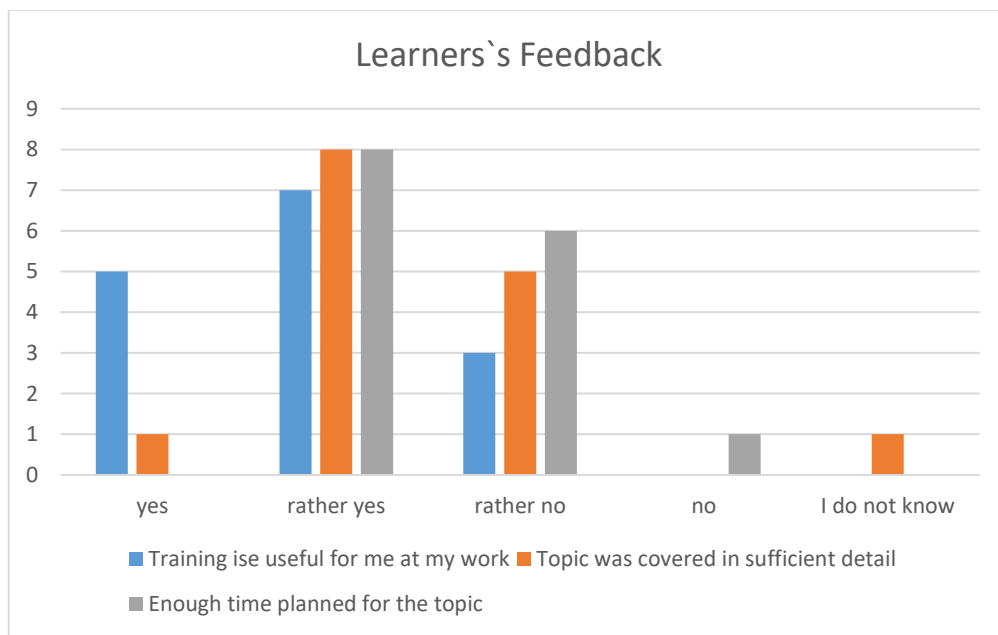
The aim of the training was to raise awareness and enhance practical skills to work effectively organizing and ensuring the safety of the working environment at a woodworking company.

### **Organization of work processes in a company**

**Topics covered:**

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- An overview of different information systems for increasing the efficiency of production and work organization in the company: ERP, MRP, optimizers, document, knowledge management, etc.
- Definitions related to production processes, production documentation.
- Work operations, their sequence, product technological ma
- Standardization of working time: measurement of the work operation, working day photography
- Basis for calculating pay, different pay systems and bonuses.

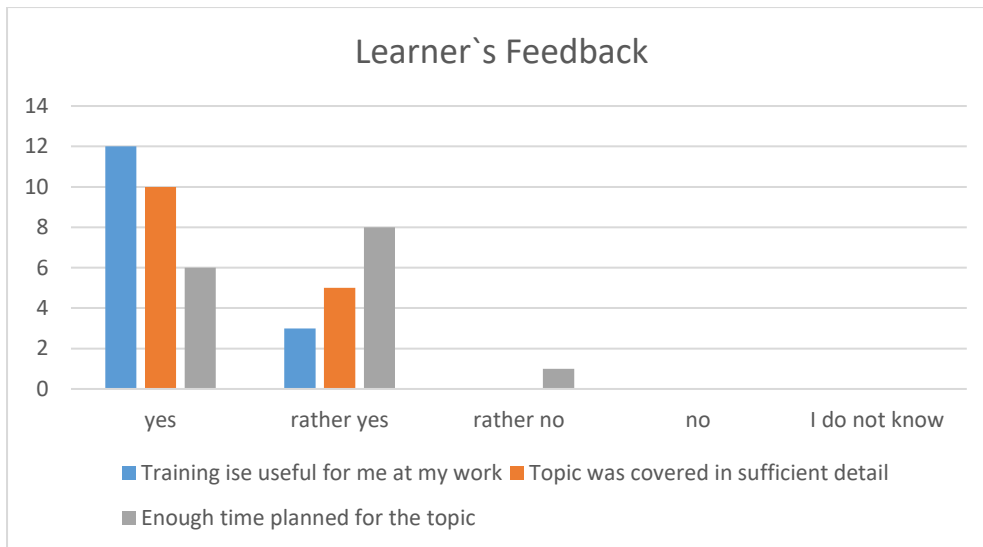


**Quality systems**

**Topics covered:**

- Introduction to LEAN (history)
- 7 + 1 wastes in production
- What is quality and how to ensure it
- 5S - Workplace Cleanup Tool
- SMED Analysis - Workplace Efficiency Tool
- PDCA table - problem solving table
- Problem solving and different analysis tactics
- Effective maintenance of TPM equipment.

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**Trainer`s comment**

“I would not widen the range of topics, but would plan more time for discussion and feedback on homework”.

**Safety at work environment**

**Topics covered:**

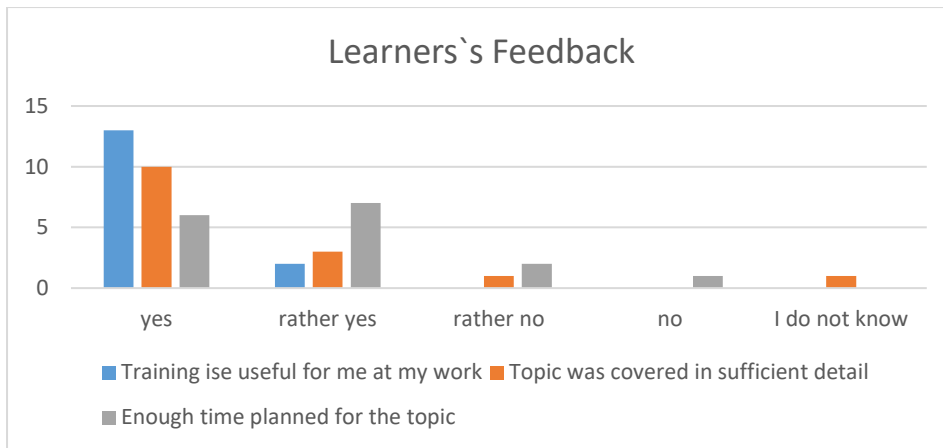
- Organization of occupational safety in the company
- Work instructions and employee guidance
- Protective equipment
- Hazards in the work environment
- Fire safety
- Dust
- Noise
- Risk analysis
- Ergonomics

**Trainer`s comment**

There should be planned 4-8 hours more for the issue. Definitely, more time is needed for ergonomics.

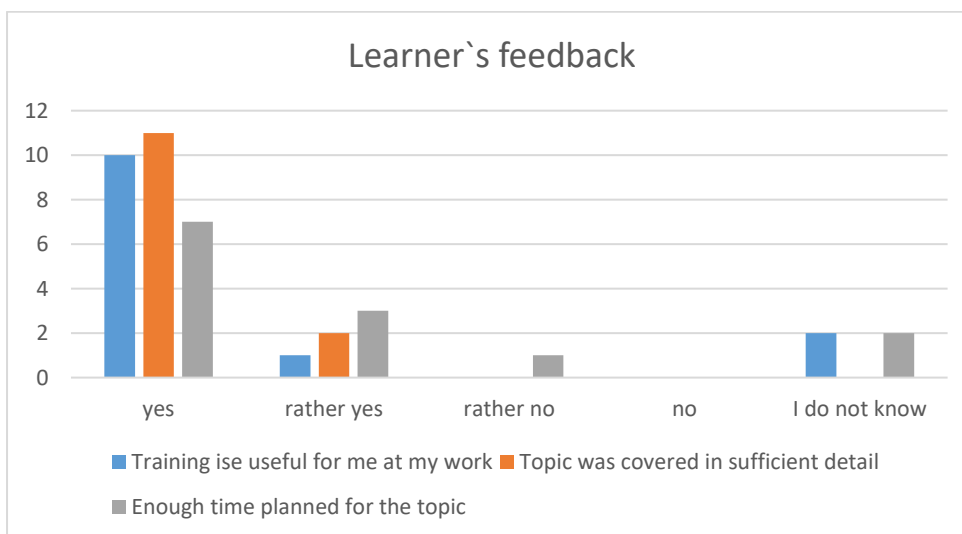


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### First Aid at Work

As we prepared the training, we realized that the ability to provide the first aid in the workplace could be within the competence of a first level manager. By law, the employer is responsible for ensuring that there are first-aiders within the institution who should have 16 hours of basic and continuing training every 3 years. As the training group included recent graduates, participation in the training was voluntary for them. 12 people completed the training.



### Part III „Product Development and Technology (for Woodworking First-Level Managers)“

(March - October 2020)

The aim of the training is to provide learners with an overview of the various stages of the wood product development process and the experience of using programs and equipment essential to product development. The module was planned very practically – learning by doing. The main learning

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task was to create a real wooden product with the 4-5 participants in a team. This time the teams were asked to design and build a dollhouse as their final project.

**Planned learning outcomes:**

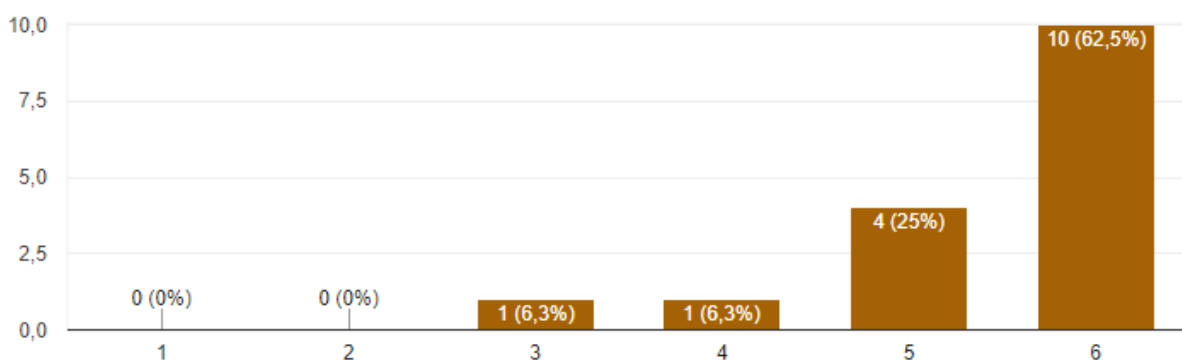
**The Learner:**

- knows product development processes and industrial design principles;
- has basic knowledge of how to calculate the consumption rates of various materials used in the wood and furniture industry;
- is able to read technical drawings and knows the requirements for drawing technical drawing;
- can use basic CAD program to draw work drawings and SolidWorks to design joints, details and assemblies of wood products;
- knows how to use different CNC machine tools to create a wood products;
- is aware of the various options for finishing a wood product;
- can work effectively in a project-based team ( team should develop product from the first concept to the final presentation).

**Learner`s feedback**

As usually, we asked opinion from the participants after finishing the module. The participants had really different professional background and ambitions, so we really were worried – how the they will accept the most technical and practical part of the program.

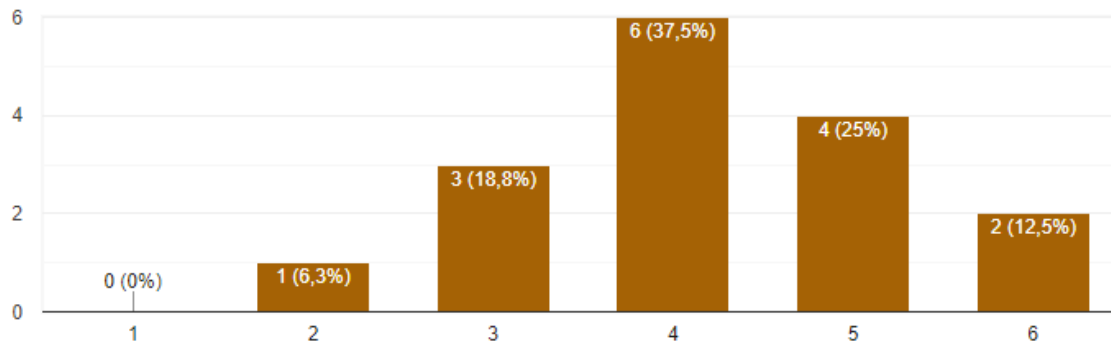
16 students answered the question whether the "Product Development and Technology" part is important for the training of the first level manager in the field of wood in a 6-point system. 87.5% of respondents considered the part important or very important.



We also asked the students to evaluate in a 6-point system, to what extent they can apply the knowledge gained in their daily work?

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As expected, this block of training was rather horizon-developing for many, but only 37.5% thought it was important or very important in their work. 37.5% thought that they used knowledge rather rarely.



We also asked the respondents which topics they considered most important to them.

The technical drawing and design course was considered the most necessary, the implementation of a practical project (completing dollhouses in form of teamwork from initial idea to final product) was also highly evaluated.

For all parts, we also asked for feedback about the trainers. The project manager gave the trainers' feedback to the trainers personally. The average feedback to teachers was relatively high, but there is more room for improvement for those who made their debut as teachers within the project (experts and entrepreneurs whose main job has not been teaching). The cooperation between the teachers, the interrelation of the subjects and tasks were highly evaluated.



Teams started to work with ideas of dollhouses.

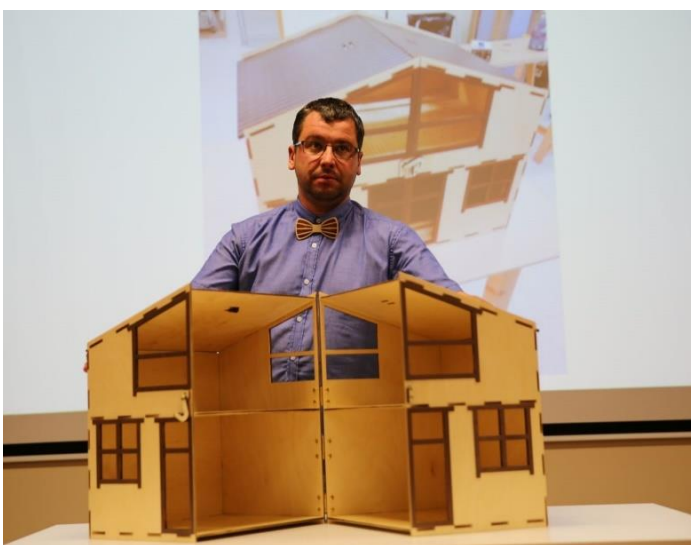
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As part of the project work, the teams completed 4 dollhouses. Due to the Covid-19 pandemic, the completion of the course and the completion of projects were postponed to the autumn. We also realised that more time as one expected had to be planned for doing the practical work.

On October 2, 2020, all the teams introduced the completed dollhouse to the experts and analyzed how their team achieved the result. It was also announced to which children's institution it is planned to donate the dollhouse.

All projects were of high quality, submitted on time and all team members were involved in the creation. Completing the training was very emotional and full of positive feedback to the project and the Tsender.

These are the final projects:



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*All the dollhouses were distributed to different kindergartens as gifts. Picture: childrengroup "Otikesed" from Kindergarten "Pähklike" in Otepää*

At the end of the training program, we asked for feedback on the training as a whole from both learners and employers. The feedback was positive on both sides. In a 5-point system, learners evaluated training

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with 4.7 points on average. Entrepreneurs also assessed the impact and necessity of training for employees with more than 4 points in all categories. The only thing that was not very much affected by the training was the income and career of the employees. However, at least one participant in the training admitted that due to the training, she gave up paid work and founded a small business. The training program was highly valued by small entrepreneurs, for whom it was a relatively fast and compact training in the field of wood-processing. See the feedback in Annex 5 and Annex 6.

Based on the experience gained with the first training group, we put together a training plan for a new training group, which started the training in September 2020. There were no fundamental changes in the program, but we increased or decreased the volumes of various topics somewhat. If earlier we compiled 3 separate curricula for training, then the new school curriculum all modules have been joined and curriculum meets more to the requirements for 5 advanced level. The volume of the training has been raised up to 15 credit points.

We also reduced the size of the training group, instead of 20 students we accepted 16. The group filled up quickly, from which it can be concluded that the training has a good reputation. More than half of new students have previous higher education and they all small entrepreneurs or on manager`s position in the companies.

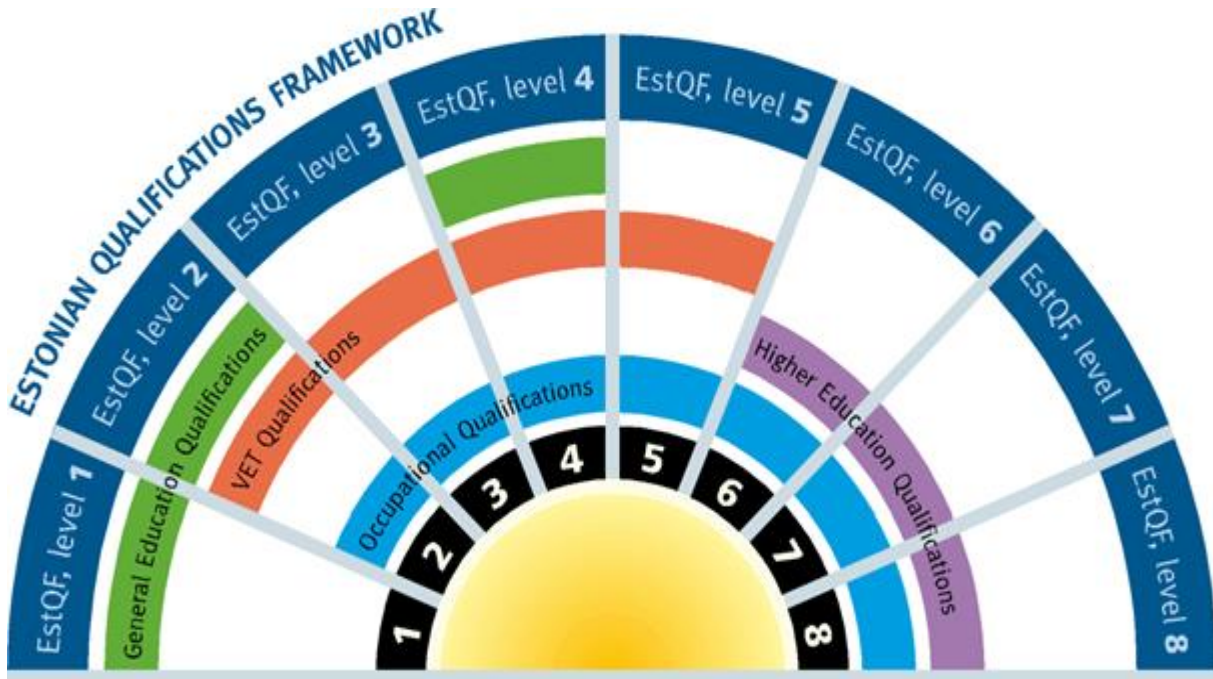
## Conclusions

This project enhances the cooperation between different sectors: the Furniture Cluster as organisation of entrepreneurs and TSENER as a part of educational institution. It also enables to do new things in a new way and be more flexible. A special value of the project is in its internationality. The materials and information from the partner organisations can be used in every stage of the project work. The training program received positive feedback from both participants and employers and proved itself to be useful for the wood sector.

However one of the main difficulties is the process of recognition the curriculum on the state level. It is a long process, especially in the situation there is no professional standard established yet. The process can last 4-5 years. The needs of entrepreneurs could change easily and the curriculum would not be up-to-date anymore during this time.

**Part V Additional Materials**

**Attachment No. 1 Estonian Qualifications Framework (EstQF)**



- 2nd Level vocational education is a vocational education without the requirement for the basic education
- 3rd Level vocational education is a a vocational education based on basic education
- 4th Level vocational training means that besides vocational training the student also acquires secondary education. Vocational secondary education is conducted based on national curriculum.
- 5th Level vocational training, also known as a specific vocational training was established in Estonia during the 2013/2014 academic year – there was no equivalent level of vocational training available previously.

The learning outcomes of all types of vocational training, meaning the knowledge, skills and attitude mastered during the studies, are described by Occupational qualification standard (OQS)

More information about OQS on the page of Estonian Qualifications Authority:

<https://www.kutsekoda.ee/en/>



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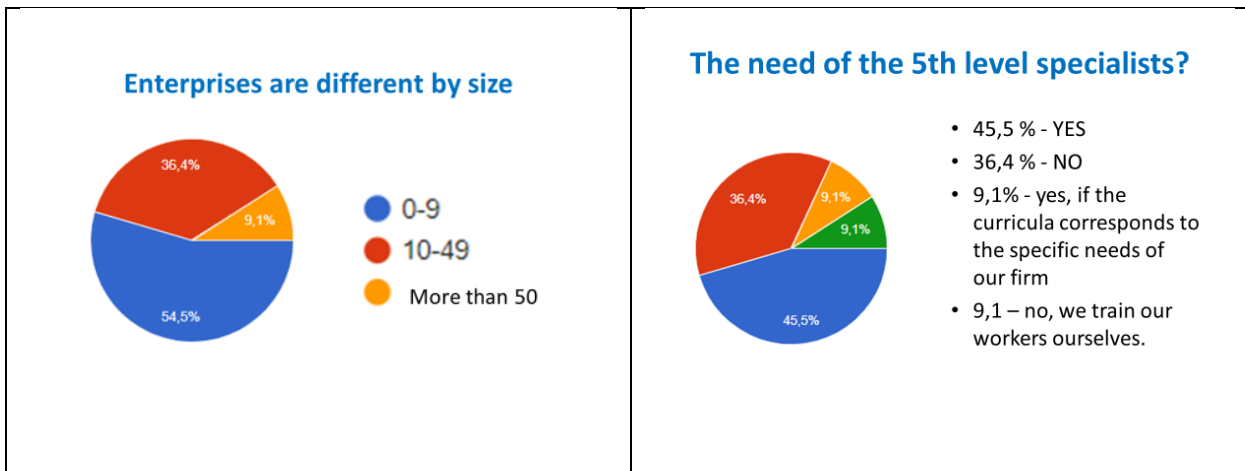
## Attachment No. 2 Description of requirements to 5th level vocational training curricula

Vocational training curricula for level 5		
	Basic training	Advanced training
<b>Educational requirements for commencing studies</b>	Secondary education	<b>Secondary education + the competences required for level 4 or 5 qualifications</b>
<b>Study volume in credit points</b>	120-150 <i>Military and internal security curricula ranging between 60-150</i>	<b>15-60</b>
<b>Ratio of practical work assignments</b>	at least 50%	<b>at least 50%</b>
<b>Opportunities for further study</b>	Level 5 vocational education continuing training. *Vocational higher education or bachelor's studies	<b>Vocational higher education or bachelor's studies</b>
<b>Corresponding labor market requirement</b>	Intermediate level specialists, technicians, and officials	<b>Complex tasks involving machines and devices, craftsmanship and skilled labor, highly skilled laborer</b>

1 EKAP – credit point in Estonian vocational training training; responds to academical 26 hours

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### Attachment No. 3 Summary of the questionnaires for entrepreneurs (preparation)



The preferred themes in the curriculum by entrepreneurs

#### What curricula should contain?

- 55% **Team work and management**
- 55 % **Development of professional skills**  
(wood processing sector)
- 46% Quality control methods
- 46% Planning, project management
- 36% Communication skills
- 27% Instructing of trainees.
- 27% IT skills improvement
- 18% Working enviroment
- 18% Inside development work and trainings

The themes should be handled in the curriculum:

- Price calculation principles
- Work planning
- Ergonomics (right movements in work process)
- Internet marketing (web-shop running)
- New finishing methods for wooden products.
- It is important not only to work, but to work quickly and effectively.

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#### Attachment No. 4 Training programme

Themes	No of classroom hours	Corresponding to the themes of the joint project curriculum	No of module
<b>Part I Managing People in a Wood Processing Company (for the first level managers)</b>			
Trends in wood processing industry today and tomorrow	4	Business management	
Basic principles of business management	8	Business management	
Basic issues at employment legislation	8	People management	
Trends at Labor market and career planning	4	Leadership & (personal) development	
Communication skills	24	Communication methods	
Team management and leader`s role in the team.	16	Leadership & (personal) development	
Presentation skills	8	Communication methods	
<b>Part II Work organization in a woodworking company (for the first level managers)</b>			
Organization of work processes in the company	16	Planning Control	
Quality systems, Lean, 5 S	16	Planning Control	
Safety at work environment	8	Work environment	
First aid at workplace	16	Work environment	
<b>Part III Product development and technology</b>			
Product idea development and industrial design	12	Industrial design	
Technical drawing	12	Industrial design	
Material cost and accounting	12	Operational costs	
Construction of wooden products	16	Industrial Technology	
Principles of working on CNC machines	4	Industrial Technology	
Different finishing techniques	16	Industrial Technology	
Practical task - creating and presenting a product as a team project.	8	Project management	10
Classroom work total including practical work	208	72 +56+80	
Independent work	104	32+35+37	
Tot	312		
EKAP (credit points)	12		

## Attachment No. 5

### Summary of the feedback to the training program for primary managers in the wood processing sector 2019/2020

15 respondents

#### 1. Did the program meet your expectations?

In the five-star system – 4,7

#### 2. How did the employer react to the training? Did participating in the program contribute to or interfere with the main work? Has participation in the training contributed to a professional career?

#### Comments:

- Employer`s attitude was very positive. Be sure to bring only benefit from such training, especially for the first level managers just started in this position.
- However, the employer recommended the training himself, the attitude to the training was good. The main work was not interrupted by the training.
- An employer was understanding. Yes, it was still somewhat messing when there were hurry times, but I believe that everything should be done was done. At the same time, a new knowledge and using new skills in practice made work processes faster and more efficient. Does the training contributed to my professional career – I have not felt still.
- An employer`s attitude to the training was good. The training supported my main job. During the training, my working tasks have been changed and a new knowledge has been to my advantage. I have gained a lot more courage and confidence.
- Some parts of the training were particularly well received by the employer. In general, the trainings did not disturb me in my work.
- Sometimes the trainings disturbed my work, but in general I have got lot of useful from the training.
- Participation in the program was useful and very interesting. Being an entrepreneur myself I could not participated in all training days and this is really pity. I started in the program as an employee and perhaps this training causing me to start with my own business.
- Well
- My manager has been very supportive. Thank for the training I have started to look at my own work and the work of others with a broader and more critical look.

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- My boss was supportive and the training supported my career.
- I am a self-employer, so my attitude to the training was supportive. The training definitely helped me in my work career. There were some situations when the work schedule did not allow to participate in the training.
- The employer himself suggested me to participate in the program. Of course, sometimes the working day and the school day overlapped, but I think the knowledge and experience I gained from this course is worth it.
- I have not feel the career was rising, yet.
- The employer himself selected me to participate in the training programme. I am sure the course contributed to my job and helped me in my working career.
- The employer was supportive, and the training have been helped me in my working career a lot.

At least 5 respondents have indicated that the training has contributed to their professional career. Cross-cutting idea - support from employer to the learner is really important.

### **3. Are you planning to study further in the field? Which trainings would be of interest?**

50:50 – approximately 50% from answerers are interested to learn more about wood processing: LEAN production, sales trainings, teamwork, professional trainings, study trips, marketing, economics.

### **4. Was the online training form right for you?**

In the 5-point system the answer is 3.93 (Scores were from 2 to 5)

### **5. Suggestions for the future**

- Some subjects should have more volume in hours. For example, drawing and design.
- More hours to the technical design and construction of the products.
- Budgeting, calculating the price of the product .. this part was confused.
- Involve more practitioners in teaching.
- On a practical side, the use of newer materials and finishing tools.
- The trainers already know how to make the training even better.
- 5 respondents thought that everything was OK.

## Attachment No. 6

### Summary of the evaluation forms from entrepreneurs

5 answers

In total 19 learners from 11 firms finished the course. Same time 7 from learners from 19 were employers for themselves, so they already answered to the feedback questions as the participants. 5 employers reacted to our request fill the questionnaire positively. One of the representatives of the firm was a quite new on his position and he was not informed enough to answer the questions about the training. 1 firm did not react to our proposal to fill in the questionnaire.

### Learning outcomes

1	Did the course help your employee to work more independently, with little or no supervision?	The question was not asked
2	Do You see a significant improvement of the employee`s knowledge about the subject matter?	4
3	Did the employee already have a good pre-knowledge about the subject matter?	The question was not asked, however only students with previous knowledge and work experience in the wood sector could join to the course.
4	Did the employee show the clear positive progress after participating the training programme?	4,6
5	Was the employee able to provide own innovations, solutions, or ideas?	4
6	Has there been an opportunity in your company to address the issues/topics to be solved by your employee in the working environment?	4,8
7	Has the course provided a positive impact on the employee` work at your company?	4,2
8	Do You see potential in the course for the future?	4,2
9	Do You plan any promotions for the employee after completing the course?	2,8
10	Do You plan any salary raises for the employee after completing the course?	3,2
11	Do You think the course added value to Your employee?	3,8

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12	Would You send further employees of your company to participate in this course?	4,2
13	Were you as an employer informed about the contents of the individual modules?	The question was not asked

## Overall opinion

### 2.1. Did the training meet your expectations as an employer?

4 persons (80%) answered „Yes“and 1 person – „ I do not know.“

Comments:

- The mind of the employees who participated in the training broadened through communication with other participants of the training. They came up with new ideas for organizing their own work.
- The employee understands better the requirements of the company, cooperates better and makes proposals to organize work processes better.
- Hard to evaluate right now. Apparently, the effect will be felt over time.

### 2.2. In Your opinion, what were advantages and disadvantages of this course?

- The employee will have a better understanding of entrepreneurship and the problems related to it.
- The advantage is the development of employees; in our case the disadvantage was the quite long distance from the training place.
- The employee got a very good overview of the legislation and could use it to his advantage (minus); the issues of health protection and employee-friendly work environment became clearer to employees (plus)
- The plus was flexibility from the side of organizers and activation of participants. As the disadvantage the duration of training could be mentioned. The schedule of the training put the company in a difficult situation due to the lack of employees.
- Hard to say

### 2.3. Will You support such forms of studies in the future?

Five „Yes“(100%)

### 2.4. What needs to be changed or improved for the next course?

- Independent work with own employees in the company.

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- The number of people participating in the training from one company could be more limited. In some cases, the whole attention was focused on one company.
- Skip the Corona virus☺. Maybe to handle business module more deeply.
- More flexibility to organise time.
- Hard to say

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*Date 2021*