



EURO JOINER

*Report of Intellectual Output 01:
"Curriculum of the Eurojoiner job profile"*

**MOBILITY OF WOOD WORKERS
(JOINERS/CARPENTERS) ACROSS EUROPE**
2015-1-ES01-KA202-015902

EURO JOINER

Coordinator:



Partners:



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Index

1. Introduction
2. Intellectual Output O1: “Development of the curriculum of “Eurojoiner” European Qualification”
 - 2.1. ACTION 01: Compilation by each of the partners of the information contained on job profile of joiner/carpenter in his own country
 - 2.2. ACTION 02: Elaboration of a comparative mapping that contains information about the joiner/carpenter in each of the participating countries
 - 2.3. Action 03: Definition of the skills of the EUROPEAN JOINER, analysis and evaluation of mapping developed in ACTION 02
3. Further steps

1. Introduction

One of the most important job profiles in the woodworking activity is the profile of JOINER (a skilled worker in wood who makes and puts doors, stairs etc... into buildings) or CARPENTER (a craftsman in wood, who holds the art of making things from wood), but the skills defined for this job profile are different depending of the country.

The joiner or carpenter (the suitable name depends on the countries) is an activity directly included in the wood construction or woodworking industries.

The aim of the project will facilitate the **DEVELOPMENT OF A QUALIFICATION AT EUROPEAN LEVEL**, corresponding to one of the job profiles or activities more developed in the wood and furniture companies, which, depending on the country in which it carries on business, has some skills or others.

With the development of the project, it is aimed to unify the skills of a **JOINER/CARPENTER** in all participating countries, defining a European job profile setting out the common features in the scope of the skills of all participating countries in the project, as well as those competencies that are considered that an European carpenter must have, in order to develop the work at any participating country, taking into account both the characteristics of these countries and this job figure, as well as the expected evolution of this job profile in the woodworking sector for the coming years.

For the development of this qualification, will be considered the evolution of business and skills that will be demanded for this job profile, also considering the type of activities that are developed by this professional profile, so that any student or worker with these skills will more easily incorporate in the woodworking industry in Europe.

As this qualification will collect the current demand of companies for the professional profile of the joiner/carpenter, the period of adjustment to a job of this kind for young people with skills, defined in **EUROJOINER**, will be **MINIMAL AND FAST**, so this will lead to **A GREATER RECOGNITION OF VOCATIONAL TRAINING**.

On the project title we initially wrote "**Mobility of wood workers (joiners/carpenters) across Europe**", today we are speaking about the Joiner and the qualification defined is **EUROJOINER**. The reason for this change is because during the first meeting the consortium have decided to change or better don't use the word carpenter. The carpenter activities are included in our joiner definition: the joiner covers more competences and it is the common profile in all the countries.

2. Intellectual Output O1: "Development of the curriculum of "Eurojoiner" European Qualification"

2.1. ACTION 01: Compilation by each of the partners of the information contained on job profile of joiner/carpenter in his own country.

During the Kick off Meeting, the partners recognized that this action is very complicated, because in each country the characteristics of this professional profile is different and has different responsibilities, competencies, activities, etc...

Therefore and to start with, it is important to define the framework in which this professional profile is going to develop activities.

The leader of this Intellectual Output has elaborated a template to compile each partners national information about the joiner professional profile in their country. The template to be filled in is as follows. An example of the Belgian Joiner is provided on the following pages.

Job Profile Description *Joiner (m/f)*

1. General

1.1 Title: Joiner

Example:

Is a combination of interior joinery and exterior joinery (BE), without the installation activities.

1.2 Definition

Example:

The Joiner produces joinery, parts of joinery and frameworks. In this process the joiner

- works (on), processes and shapes solid wood, wood based materials and other materials common to the joinery trade, to make joinery parts and joinery elements like stairs, doors, wooden interior walls, ceilings, wooden floors, frames...
- works with hand tools, electrical hand-operated machinery, woodworking machines
- automatic and computerized machinery
- assembles the parts and/or elements of joinery
- applies a finishing to the joinery parts or elements

The Joiner

- works in accordance with basic health and safety regulations, including environmental protection and efficient energy use
- Works in a customer-oriented manner
- Considers cost- and time-effectiveness when planning and organizing their work in their area of influence
- Contributes to continuous improvement of work processes in the company
- Coordinates work with the rest of the team, report to his team leader
- Cooperates with other departments (administrative, commercial and technical services)
- Assist in the implementation of quality assurance activities

1.3 Sector / Branch

Example:

in BE Joiner is mostly in woodworking industry in (SME) companies for fabrication/making joinery elements, sometimes in construction, mostly in (very) small companies that combines fabrication with installation

1.4 References (qualifications national or EU, existing job profiles, ...)

if there is a national qualification, please translate the national level to EQF-level

Example:

in BE Joiner is EQF level 3

2. Competencies

2.1 Summary of activities

Compulsory

Examples

- Works in a team
- Works safely, with compliance to environment and quality standards
- Organise his/her working place safely and correctly
- Plans and prepares his/her own work in a production situation
- Controls materials (amount needed, quality...)

Optional

Examples

- Metalwork, working with PVC-frames....
- Finishing
- Mounting and installing

2.2 Description of activities

- Knowledge

...

- Skills

...

- Competences

Autonomy in (own) work

Responsability for (own) work

2.3 Attestations / Requirement

3. Labour market situation

3.1. Number of joiners working:

3.2. Number of vacancies for joiners last year (or other reference period):

3.3. Durability

Please indicate and explain

Job profile will not change soon	Job profile has normal 'lifetime'	Job profile will change soon due to...
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

With the template filled out, **general competences** for this professional profile for each country are obtained:

THE NETHERLANDS

Worker in wood processing companies that processes different kinds of wood and (wood based) sheet materials. The focus is on the use of stationary woodworking machines.

TURKEY

A person who constructs wood-related structures by bonding pieces in a small enterprise. One can fix or mend frames, doors and windows. One works in small work places.

PORTUGAL

Make, assemble and repair constructive elements based on wood and its derivatives, using hand tools, electrical hand-operated machinery and woodworking machines.

SWEDEN

The Joiner produces joinery, parts of joinery and frameworks.

BELGIUM

Preparing own work and materials; setting up, changing over, processing, collecting and dismantling of components for interior and exterior joinery; fixing and connecting the elements to each other or to the carcass structure and finishing of the interior and exterior joinery, for the purpose of interior and exterior joinery such as stairs, interior doors, panelling, curtain cabinets, skirting boards, radiators cabinets, walls, ceilings, wooden floor covering, windows, doors, gates, porches, wall cladding and shutters, on the basis of a work order, to manufacture and to install.

SPAIN

The joiner, who works in a small enterprise and is able to produce and to install tailor-made products. This joiner can also carry out projects for end consumers. someone whose job is to put furniture, etc. into the correct position and make it ready to use. The installer, who is responsible for providing construction services to the end consumers (doors, windows, wardrobes, kitchens....). A skilled worker in wood who puts doors, stairs, etc... into buildings.

EuroJoiner definitive definition

The person who makes, assembles and installs (tailor-made / constructive) elements based on wood and its derivatives, using hand tools, electrical hand-operated machinery and woodworking machines.

2.2. ACTION 02: Elaboration of a comparative mapping that contains information about the joiner/carpenter in each of the participating countries:

This gathered information will consist in:

- Knowledge
- Abilities
- Activities developed
- Materials used
- Jobs in companies or self-employed

Using the templates filled with the information in each country we gathered the similarities and differences in each country:

NETH – SWE – BE

- Works in a team
- Works in a customer-oriented matter
- Coordinates work with the rest of the team, report to his team leader
- Coaches and instructs co-workers

NETH – SWE – ESP – PORT – BE

- Works with focus on safety, environment, quality and well being
- Getting the required quality, in safety, occupational health and environmental conditions
- Assist in the implementation of quality assurance activities taking into account the guidance received and the measures of hygiene, health and safety
- Works safely, with compliance to environment and quality standards
- Organises his/her working place safely and correctly
- Organises their workplace safely and neatly
- works in accordance with basic health and safety regulations, including environmental protection and efficient energy use
- Uses electric power sustainably and limits noise disturbance

NETH – SWE – ESP – PORT – BE – TUR

- Plans and prepares his/her own work in a production situation
- Prepare and organize the work, according to the technical specifications, the characteristics of the tasks ...
- Considers cost- and time-effectiveness when planning and organizing their work in their area of influence
- Operations planning
- Plans and prepares own activities for the production beforehand
- Checks (the stock) of raw materials and other materials (availability, shortages, quantity, quality defects, ...)
- Take data and make calculations for the installation of elements of joinery
- Collects and controls materials (amount needed, quality...)
- Painters of furniture and interior design: One can draw furniture and plan its production processes. One works out of production process and prepares technical deeds before the production.

NETH – SWE – ESP – PORT – BE

- Selects, mounts and calibrates cutting tools
- Proceed with sharpening and tuning of the different tools as well as replacing the accessories of machine tools and their tunings.
- Selects, controls, installs and replaces (cutting) tools on the (woodworking) machines
- Sets up and changes over (wood working) machines
- Setting the machines and making trial runs
- Changes/adapts programs for computerised woodworking machines when needed - automatic and computerized machinery
- Prepares the raw materials on the work order (saws into planks, divides, signs for, pairs, ...)

NETH – SWE – ESP – PORT – BE – TUR

- Works with hand tools, electrical hand-operated machinery, woodworking machines
- Make constructive elements in wood, using hand tools, electrical hand-operated machinery and woodworking machines.
- Processes wood and sheet materials with machines in the desired shapes (sawing, planing, drilling, profiling)
- Make wooden windows and doors installations, cut and shape timber for floorboards, skirting boards and window frames
- Checks the safety features of the (woodworking) machines and processes components with (wood working) machines
- works (on), processes and shapes solid wood, wood based materials and other materials common to the joinery trade, to make joinery parts and joinery elements like stairs, doors, wooden interior walls, ceilings, wooden floors, frames...
- Technician of interior design and machine technology: One works for factories and workshops in the process of furniture production.

NETH – SWE – ESP – PORT – BE – TUR

- Assembles components (bonding, joining, clamping, nailing, stapling, screwing, detachable assembling, ...)
- Assembly: make and assemble doors, window frames, staircases and fitted furniture
- Assembles the parts and/or elements of joinery
- Assembles and arranges fittings, door and window furnishings and seals on interior and exterior joinery (hinges, handles, locks, window handles, sliding door fixtures, rotary/tilt systems...)
- Technicians of woodwork cutting: One is a worker who produces and installs doors and windows for the constructions.

NETH – SWE – ESP – PORT – BE

- Treat surfaces of interior and exterior joinery (sanding, protecting, finishing...)
- Adjustment and finishing elements of woodworking facilities
- applies a finishing to the joinery parts or elements
- Making wood finishing operations, namely, grinding, scraping and sanding.
- Industrial spraying of joinery work

NETH – SWE – BE

- Carries out preventive basic maintenance of the (wood working) machines
- Does small maintenance
- Controls production processes
- Contributes to continuous improvement of work processes in the company
- Transports raw materials, construction components and materials (internal, on the site, ...)

ESP – PORT

- Install on-site construction elements in wood, assembling them and/or fixing them, applying fittings and accessories and proceeding to the necessary adjustments.
- Fit wooden structures, like floor and roof joists, roof timbers, staircases, partition walls, and door and window frames (first fixings)
- Install skirting boards, door surrounds, doors, cupboards and shelving, as well as door handles and locks (second fixings)
- Build temporary wooden supports to hold concrete in place while it sets, for example building foundations (formwork)
- Make and fit interiors in shops, bars, restaurants, offices and public buildings construct sets
- Carry out installations of wood finishes – sidings (?)
- Repair and/or transform constructive elements in wood, repairing them and reconstructing them.

With this information the consortium arrived to define a **workflow based activities**, this information is necessary to elaborate the training material.

Workflow based activities

1. **Preparation and planning**
 - Plan and prepare the work and work process, according to the technical specifications and the characteristics of the tasks
 - Consider cost- and time-effectiveness in their area of influence
 - Collect data and make calculations for the (elements of) joinery
 - Draw designs and plan its production processes
 - Program for automated and computerised woodworking machines
2. **Selection (materials and machines)**
 - Collect and control materials (amount needed, quality...)
 - Select, control, mount, replace and calibrate (cutting) tools on the (woodworking) machines
 - Set up and change over (woodworking) machines
 - Select program(s) for automated and computerised woodworking machines
3. **Processing**
 - Check the safety features of the (woodworking) machines and process and shape solid wood, wood based materials and other materials common to the joinery trade, to make joinery parts and joinery elements
 - Use hand tools
 - Use electrical hand-operated machinery
 - Use woodworking machines
 - Use automated and computerized machines
4. **Assembly**
 - Assemble components and/or elements of joinery by different techniques
 - Arrange fittings, furnishings and seals on interior and exterior joinery (hinges, handles, locks, fixtures...)
5. **Finishing**
 - Prepare surfaces for finishing (sanding, removing glue...)
 - Prepare the products for basic finishing
 - Apply a basic finishing to the joinery parts or elements / treat surfaces of interior and exterior joinery
 - Make small repairs, when needed
 - Preparing for transport
6. **Install on-site**
 - Check on-site situation and prepare the installation
 - Install on-site joinery elements, assemble them and/or fix them, apply fittings and accessories and proceed to the necessary adjustments
 - Repair and/or transform joinery elements
 - Final quality control
7. **Completing work assignment**
 - Report to his team leader
 - Finalise work and documents (work orders...)
 - Work process evaluation

Each partner is responsible of developing the skills, knowledge and competences of one of this activities with their tasks defined. For this activity the consortium use as reference the model used for the Portuguese partners to develop the Portuguese qualifications.

Template to be filled in per activity

ACTIVITIES – SubActivities	
TASKS	SKILLS - KNOWLEDGE - COMPETENCE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

Results:

WORKFLOW BASED ACTIVITY 01

Preparation and planning

ACTIVITIES – SubActivities	
Preparing and planning <ul style="list-style-type: none"> ▪ Plan and prepare the work and work process, according to the technical specifications and the characteristics of the tasks ▪ Collect data and make calculations for the (elements of) joinery ▪ Draw designs and plan its production processes ▪ Program for automated and computerized woodworking machines 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
1. Making preparations according to plans and technical specifications	SKILLS <ul style="list-style-type: none"> ▪ A joiner prepares the to-cut list of workpieces ▪ A joiner embeds workpieces that are to be cut on the plaque with the slightest wastage ▪ A joiner plans to cut the workpiece out of a timber with the slightest wastage KNOWLEDGE <ul style="list-style-type: none"> ▪ A joiner reads and realizes the design planning ▪ A joiner reads and realizes the technical specifications ▪ A joiner selects the most suitable material according to the plan ▪ A joiner identifies the fiber direction of the material ▪ A joiner knows the place of furniture to add electrical and electronical accessories on COMPETENCE <ul style="list-style-type: none"> ▪ A joiner makes preparations according to plan and technical specifications
2. Doing calculations according to plan and technical specifications	SKILLS <ul style="list-style-type: none"> ▪ A joiner makes a specified measurement from a work drawing ▪ A joiner calculates the amount of the material and the timber to be used in production KNOWLEDGE <ul style="list-style-type: none"> ▪ A joiner transforms measurements ▪ A joiner knows the type of measurement according to the nature of material COMPETENCE <ul style="list-style-type: none"> ▪ A joiner does calculations according to plan and technical specifications



EURO JOINER

<p>3. Planning design drawings and production processes</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ A Joiner plans the cutting processes to be applied on platforms ▪ A joiner plans the duration of the whole process ▪ A joiner prepares the accessories to be added on the product according to the design <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ A joiner knows the most suitable connection apparatus related to the work ▪ A joiner knows the most suitable way of assembling related to the work ▪ A joiner knows the accessories to be added on the product <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ A joiner plans the design drawings and production processes
<p>4. Preparing programs for automated and computer-controlled machines</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ A joiner gets NC and CNC machines ready mode to cut and take actions ▪ A joiner prepares necessary programs of cutting and taking actions to be run on NC and CNC machines <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ A joiner knows how to program on NC and CNC machines <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ A joiner prepares programs to be run on automated and computer-controlled machines
<p>5. Making machines prepared for production</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ A joiner prepares machines to be worked on cutting processes ▪ A joiner inserts cutters into machines according to the nature of materials to be used <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ A joiner knows the cutters according to the nature of materials to be used <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ A joiner makes elementary operation machines ready to be used for production

WORKFLOW BASED ACTIVITY 02

Selection of machines and materials

ACTIVITIES – SubActivities	
Selection (machines and materials)	
<ul style="list-style-type: none"> ▪ Collect and control materials (amount needed quality...) ▪ Select, control, mount, replace and calibrate (cutting) tools on the (woodworking) machines ▪ Set up and change over (woodworking) machines ▪ Select program(s) for automated and computerised woodworking machines (CNC) 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCES
Collect and control material (amount needed quality...)	
1. Identify the main types of wood used in joinery	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Select woods depending on requirements ▪ Identify defects in the woods and its consequences ▪ Make the materials to elaborate according the process and minimum waste <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Wood, types, properties ▪ Wood diseases and wood defects <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Identify the main wood types used in joinery and furniture, relating its characteristics with applications
2. Select wood based products and other materials	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Identifies boards according to the characteristics ▪ Select wood veneer and coating materials ▪ Select adhesives <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Boards timber, types and characteristics ▪ Wood veneer / (plywood) ▪ Adhesives <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Select wood based products and other materials used in joinery and furniture, justifying its application depending on the result to be obtained

Select, control, mount, replace and calibrate (cutting) tools on the (woodworking) machines

<p>3. Set-up conventional machining machines</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Select portable machines tools ▪ Setting up the working tools in portable machines ▪ Check working tools status and setting (cutting wheels, milling cutters and drills...) ▪ Check working parameters <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Portable machines types and characteristics ▪ Preparation of portable machines. Regulation parameters ▪ Prevention measures <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Selects and prepares conventional machines for further machining, checking the status and complying standards of labour risk prevention
<h2>Set up and change over (woodworking) machines</h2>	
<p>4. Set-up industrial machining machines</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Mount cutting tools ▪ Set machine elements ▪ Install safety features and power machinery and equipment ▪ Check optimal conditions in work area to start machining <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Conventional machines: types and characteristics ▪ Preparation machines: setting work tools, regulation of parameters ▪ Prevention measures in conventional machines <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Prepares conventional machines used according to the specified process, using the preventive elements according to existing regulations
<p>5. Program structure for CNC technology / ISO programs</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Be able to designate axis for different machine types ▪ Analyze why it can go wrong <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of the coordinate system construction ▪ Knowledge of incremental and absolute programming, ie how drawings interpreted into machine control system ▪ Knowledge of the radius compensation ▪ Knowledge of program information such as feeding, cutting depth, cutting speed and contour ▪ Understanding of the CNC machine control and how drawings interpreted to the machine control system via the postprocessor <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Independently prepare a simple detail based on the drawing

EURO JOINER

<p>6. CNC machine structure and function</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Be able to describe different CNC machines and the connection to the processing method <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of CNC machine's principal construction and CNC machines principal structure and field of application range <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Disclose co-workers information about the machine's basic function
<p>7. Tools and production equipment</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Be able to rig the machine with respect to both the tool material <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of tools and production equipment ▪ Knowledge of measuring and presetting of tools and equipment ▪ Knowledge of principles and methods for chucking and fixing ▪ Understanding of the use of tools and related production equipment <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Independently fix up the machine with respect to both the tool material ▪ Independently set up for grind compensation after new tool
<p>8. Hardware and system components</p>	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of the constituent system components pneumatics, hydraulics, control technology, and sensors ▪ Understanding of the basic functionality and uses
<p>9. The control system</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Be able to start up and commissioning of the machine for production ▪ Be able to enter the program ▪ Be able to enter the tool data ▪ Be able to select different modes, for example manual <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of CNC machine control system and its functions ▪ Understanding of CNC machines principal structure and governance <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Independent boot up and start the machine for the production, activate the software, enter the tool data, select different operating modes e.g manual



EURO JOINER

10. Material properties	<p>SKILLS</p> <ul style="list-style-type: none">▪ Be able to read and understand the material standards and retrieve information from the relevant tables and data sheets▪ Be able to ensure the right materials based on work orders <p>KNOWLEDGE</p> <ul style="list-style-type: none">▪ Knowledge of common materials classification and properties▪ Knowledge of materials designations▪ Understanding of materials are divided into groups regarding machinability <p>COMPETENCE</p> <ul style="list-style-type: none">▪ To make the correct and optimal choice of material.
11. Machinability	<p>SKILLS</p> <ul style="list-style-type: none">▪ Be able to select the right processing parameters based on the material to be processed▪ Be Able to ensure the right materials based on work orders <p>KNOWLEDGE</p> <ul style="list-style-type: none">▪ Knowledge of chip formation in various materials and understanding of the importance of good chip formation <p>COMPETENCE</p> <ul style="list-style-type: none">▪ Be able to choose for the purpose the right tools

Processing

ACTIVITIES – SubActivities	
Processing <ul style="list-style-type: none"> ▪ Check the safety features of the (woodworking) machines and process and shape solid wood, wood based materials and other materials common to the joinery trade, to make joinery parts and joinery elements ▪ Use hand tools ▪ Use electrical hand-operated machinery ▪ Use woodworking machines ▪ Use automated and computerized machines 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
1. Operate with hand tools	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Check the safety and health standards to operate with hand tools ▪ Saw wood pieces according drawings and plans ▪ Use the planes for rebating, grooving, molding and other techniques ▪ Use the chisel and the gouge to make chamfers, grooves and other techniques ▪ Sand wood pieces using different techniques and types of abrasives <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Identify personal protective equipment and use requirements ▪ Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications ▪ Identify types of saw (hand saw, back saw, saw for cutting curves, special saws) ▪ Identify types of planes and bench planes (using rebate, grooving, moulding and others) ▪ Identify types of chisels and gouges for sharpening, cutting and carving ▪ Identify types of sanding and different abrasives ▪ Recognize wood grains <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Make basic operations (elements) for joinery with hand tools
2. Operate with electric hand-operated machinery	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Shape or cut materials to specified measurements, using electric hand tools ▪ Use the circular saw for cutting wood and its derivatives ▪ Use the power drill for making holes ▪ Use the jig saw for cutting curved and circular patterns ▪ Use sanders (random orbital sander and others) ▪ Use miter saw for cutting compound angles for chamfers ▪ Use the router for making grooves and profiling <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Identify personal protective equipment and use requirements ▪ Enumerate safety and health rules for using hand-operated machinery ▪ Identify all the electric hand-operated machinery and its functions <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Make joinery elements using the electric hand-operated machinery



EURO JOINER

<p>3. Operate with woodworking machinery</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Observe and check gauges, dials, or other indicators to make sure a machine is working properly.- Control all the operations of machinery ▪ Shape or cut materials to specified measurements, using woodworking machinery ▪ Use band saw, table saw, compound miter saw and jigsaw for cutting the materials ▪ Use thickness planer for shaping and modify materials ▪ Use shaper to cut profile shapes on the edge or face of the materials ▪ Use drill press and mortisers for drilling wood and tis derivatives ▪ Use jointer for straightening the faces of warped boards, jointing edges of boards to be glued, rabbeting, squaring, bevelling, and tapering ▪ Use wood lathe for shaping into round cylindrical shapes ▪ Use sanding machines to treat surfaces of wood and its derivatives ▪ Make maintenance of equipment, performing routine maintenance on machinery and determining when and what kind of maintenance is needed <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Identify safety and health rules for woodworking machinery ▪ Identify personal protective equipment and use requirements ▪ Describe the structure of machines and tools, including their designs, uses, repair, and maintenance ▪ Identify raw materials, production processes, quality control, costs, and other techniques for maximizing the processing of materials <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Set up and operate specialized woodworking machinery to transform wood and its derivatives into finished products adhering to health and safety standards ▪ Make joinery products or elements, as windows, doors and hoops, partition structures, wainscoting, ceilings and floors by cutting, modelling and sanding according to specifications
<p>4. Operate with automated and computerized machines</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Make processing operations with computerized machines, using specific programs ▪ Use the commands of the machines and the system of control ▪ Install the proper cutting tools according to specifications ▪ Make the quality control of the processing products <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Identify safety and health standards for automated and computerized machines ▪ Identify personal protective equipment and use requirements ▪ Identify the commands of the automated and computerized machines ▪ Identify different types of cutters ▪ Identify raw materials, production processes, quality control, costs, and other techniques for maximizing the processing of materials <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Make joinery products or elements as windows, doors and hoops, partition structures, wainscoting, ceilings and floors by using automated and computerized machines adhering to health and safety standards

WORKFLOW BASED ACTIVITY 04

Assembling

ACTIVITIES – SubActivities	
Assembling <ul style="list-style-type: none"> ▪ Assemble components and/or elements of joinery by different techniques ▪ Arrange fittings, furnishings and seals on interior and exterior joinery (hinges, handles, locks, fixtures...) 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
1. Collect and transport joinery parts and elements according to received specifications	SKILLS <ul style="list-style-type: none"> ▪ Read work drawings and plans ▪ Deduct which (detachable) parts may be assembled ▪ Take note of work order and internal coding of joinery parts ▪ Move items effectively, safely and in an ergonomically responsible manner ▪ Temporary stocks part in a systematic way while avoiding damage ▪ Use tracking system in automated industries KNOWLEDGE <ul style="list-style-type: none"> ▪ Various joinery constructions and joinery parts used in the industry ▪ Technical terminology of joinery products ▪ Ergonomic guidelines ▪ Safety protocols COMPETENCE <ul style="list-style-type: none"> ▪ Collect and controls materials ▪ Follow instructions and procedures ▪ Put materials and means into use ▪ Plan and organise ▪ Consult chief and co-workers
2. Collect and adjust electrical and pneumatic hand tools and auxiliary equipment	SKILLS <ul style="list-style-type: none"> ▪ Choose the most effective tools for the job ▪ Adjust tools needed to do the assembly work effectively, mount tooling (drills, bits...) KNOWLEDGE <ul style="list-style-type: none"> ▪ Function and use of electrical and pneumatic hand tools COMPETENCE <ul style="list-style-type: none"> ▪ Put materials and means into use ▪ Plan and organise

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<p>3. Select glues, fasteners and sealants and arrange their application tools</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Select appropriate glues, adhesives, fasteners and sealants according to given specifications of future use (indoor/outdoor/humidity levels...) ▪ Observe <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Standardised specifications of the joinery trade and quality certification labels for joinery work. ▪ Different types of glues, adhesives, fasteners and sealant and their properties and use technical descriptions of materials needed <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Put materials into use ▪ Consult chief and ask explanation if work assignment is not understood. ▪ Keep updated with new developments in the domain of joinery
<p>4. Sand parts where needed before assembly</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Determine the parts that need sanding or preparation before assembly ▪ Use sanding techniques effectively and according to specified result <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Various joinery constructions and joinery parts used in the industry ▪ Different sanding techniques and different appropriate grades of abrasives <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Find balance between quality needed and working speed
<p>5. Join parts and elements into the assembly according to specifications</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Read work drawings and plans ▪ Apply glues /adhesives according to manufacturers specifications ▪ Bond parts effectively with the use of manual and machine clamping techniques ▪ Apply mechanical jointing techniques (nailing, stapling, screwing...) ▪ Check the squareness, quality and dimensioning of the assembly ▪ Use electrical and pneumatic tools ▪ Use press machines ▪ Use measuring and control tools ▪ Use hoist and tilting machines <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Construction and connecting techniques for interior and exterior joinery ▪ Industrial assembly processes (logistics, internal quality control, lean producing, procedures and regulations) ▪ Effective assembly strategies, logical work sequence ▪ Glues and their properties and application ▪ Clamping techniques ▪ Functioning of hand electrical and pneumatic tools ▪ Functioning of press machines ▪ Functioning of hoist and tilting machines <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Practice expertise ▪ Learn, keep updated with new developments in the domain of joinery and assembly of joinery work ▪ Deliver quality

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<p>6. Check and rectify surface alignments after assembly, control quality</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Use sanding equipment ▪ Reject or replace assemblies not meeting specification standards ▪ Repair damage <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Quality standards, values and tolerances ▪ Methods of rectifying and repairing <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Deliver quality
<p>7. Select and mount hinges, handles, locks and fittings according to specifications</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Select hinges, handles, locks, fittings... ▪ Install hinges, handles, locks, fittings... ▪ Install turning, tilting and sliding systems according to manufacturers' specifications or best standard practice ▪ Adjust systems to length when needed ▪ Control moving parts (turning, sliding, tilting...) ▪ Install glass according to standards ▪ Apply sealant, mounting or bedding compound <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Hardware, fittings and glazing systems for interior and exterior use ▪ Sealants and other auxiliary materials for joinery assemblies <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Follow instructions and procedures ▪ Deliver quality
<p>8. Transport joinery assembly for stocking and further handling</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Use authorized transport means ▪ Move items safely and in an ergonomically responsible manner ▪ Add temporary solutions to avoid deformation and damage in the production facility ▪ Fasten and secure work pieces against transport risks <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Different transport means ▪ Methods and regulations for working according to safety and hygiene rules ▪ Packaging and protecting
<p>9. Arrange the workplace and deal with waste</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Sort out and dispose waste according to guidelines ▪ Put tools and auxiliary material away safely ▪ Clean workplace ▪ Prepare workplace and tools for next workflow ▪ Perform small maintenance on tools and equipment to ensure functionality <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Waste disposal according to safety and environmental regulations <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Organise workplace safely and correctly

Finishing

ACTIVITIES – SubActivities	
Finishing <ul style="list-style-type: none"> ▪ Prepare surfaces for finishing (sanding, removing glue...) ▪ Prepare the products for basic finishing ▪ Apply a basic finishing to the joinery parts or elements / treat surfaces of interior and exterior joinery ▪ Make small repairs, when needed ▪ Preparing for transport 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
1. Prepare the surfaces before applying finishing	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ The ability to check and carry out the work order according to the planning, working drawing and plans, the instructions and product sheets ▪ The ability to adjust the (sanding/finishing) machines in the event of deviations in the processed workpieces ▪ The (visual) ability to identify variances and defects in the raw materials and end-products <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of materials and electrical and pneumatic tools ▪ Knowledge of technical instructions and recommendations in relation to own activities ▪ Knowledge of peripheral equipment ▪ Knowledge of types of glue <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Removing glue, grease and dust of (elements of) interior and exterior joinery ▪ Sanding of (elements of) joinery using sanding machines ▪ Filling nail holes ▪ Making small repairs of the surfaces
2. Quality control	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ The ability to appropriately react to problems related to quality, safety, environment, process and technique taking into account the instructions/procedures ▪ The ability to adjust the work order in the event of unforeseen circumstances ▪ The ability to resolve simple problems with the environment of the product during installation ▪ The ability to adapt own planning to changed circumstances ▪ The proactive ability to take appropriate measures in the event of safety risks taking into account the instructions/procedures ▪ Having an eye for quality and customer satisfaction by working with care, dedication and a sense of aesthetics <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of quality standards, values and tolerances <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Visually checking the quality of the treated surfaces ▪ Making small repairs or retouches of the finishing



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<p>3. Preparing for transport or storing</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ The ability to apply the correct ergonomic hoisting and lifting techniques <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Basic knowledge of storage and stacking techniques ▪ Knowledge of ergonomic hoisting and lifting techniques ▪ Knowledge of labelling and product identification ▪ Knowledge of (internal) transport means ▪ Knowledge of packaging techniques <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Protecting finished workpieces and storing them ▪ Applying internal coding (stickers, labels...)
<p>4. Notifies problems/defects to supervisor/person responsible</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ The oral and/or written ability to report to the supervisor and to efficiently communicate with colleagues and third parties ▪ Exchanging information with clients, colleagues and third parties in a constructive and user friendly manner ▪ Paying attention to dangerous situations, respecting safety signage in the workplace and using and maintaining PPE and CPEs with care

Installing on-site

ACTIVITIES – SubActivities	
Installing on-site	
<ul style="list-style-type: none"> ▪ Check on-site situation and prepare the installation ▪ Install on-site joinery elements, assemble them and/or fix them, apply fittings and accessories and proceed to the necessary adjustments ▪ Repair and/or transform joinery elements ▪ Final quality control 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
Check on-site situation and prepare the installation	
1. Inspection of work place	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Check on-site situation, location, measurements, and elements; the compliance of the conditions of the project or proposal are considered also the design plan ▪ Health and safety conditions are stipulated, along with checking that the materials and tools can be used in the job site the distribution and position of elements are also revised ▪ Complementary installations are revised to comply with project ▪ Possible architectural problems are checked so as not to delay the job, other problems (cracks, leaks, dampness, etc...) are taken into consideration <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Basic knowledge of installation and main elements ▪ Basic knowledge of plans, scales, etc... ▪ Basic knowledge of security and mandatory rules of facilities ▪ Knowledge of structural elements in buildings <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Pre inspection of the place of installation
2. Preparing on-site	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ The workplace cleaned and space is made for materials ▪ The space where the materials are to be stored will comply with the supplier storage requirements ▪ Complementary installations (electricity, telephone, water etc...) will be handled by corresponding technician to comply with health and safety laws <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of materials, as well as preventive measures and security for storage ▪ Knowledge of the machine to use, also their power requirements, air or suction <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Inspection of storage space, work place as well as the means available

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<p>3. Preparation and supervision of materials</p>	<p>SKILLS</p> <ul style="list-style-type: none"> All materials received will be checked, in quantity, quality and reference number <p>KNOWLEDGE</p> <ul style="list-style-type: none"> Knowledge of the packaging conditions of each material Knowledge of the optimum characteristics for the acceptance of materials Knowledge of tools to revise reception of materials (barcode control, PDA, etc...) Knowledge of order of use of material to ensure they are stacked in an appropriate manner <p>COMPETENCE</p> <ul style="list-style-type: none"> Verification of the existence of the necessary materials for each action of the installation
<p>Install on-site joinery elements, assemble them and/or fix them, apply fittings and accessories and proceed to the necessary adjustments.</p>	
<p>4. Fitting of elements</p>	<p>SKILLS</p> <ul style="list-style-type: none"> Necessary adjustments will be made to allow correct fitting, manually or mechanically following technical procedures The process will comply with health and safety laws <p>KNOWLEDGE</p> <ul style="list-style-type: none"> Knowledge in techniques of adjustments in elements of the installation. Both manually and using portable machines Knowledge of security measures for the use of machines and equipment necessary for making adjustments <p>COMPETENCE</p> <ul style="list-style-type: none"> Adjustments of installation elements
<p>5. Installation of all elements</p>	<p>SKILLS</p> <ul style="list-style-type: none"> The support base (brick, tile, plaster, wood, etc...) will be taken into consideration during the installation The joinery of different parts will be carried out taking into account the elements of joinery and furniture; necessary tools will be used Other installation other than joinery will not be carried out The revision, maintenance and installation of other elements (water, electricity) should be taken into account when installing <p>KNOWLEDGE</p> <ul style="list-style-type: none"> Knowledge of different materials to be used Knowledge of different types of joints for the union of elements of joinery Knowledge of the needs of installation of other elements or facilities through the elements of joinery to install (water, electricity, etc.) <p>COMPETENCE</p> <ul style="list-style-type: none"> Typology of elements to be installed

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<p>6. Fitting of shelf units and iron fittings</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Iron fittings, complements and auxiliary elements will be fitted ▪ Assembly instructions will be followed ▪ Resistance will be checked in all iron fitting to allow correct function <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of strength of materials and their suitability for certain functions ▪ Knowledge of joint systems and which iron fitting to be used ▪ Knowledge of requirements for use of materials and iron fittings <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Materials and iron fittings in installation
<p>Repair and/or transform joinery elements</p>	
<p>7. Repainting and adjusting joinery elements</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Set the default criteria, locating them and marking them. Define the level of finished product required to get the service level appropriate and established for the whole in general ▪ Establish the appropriate repair system for each of the defects, using appropriate tools and materials. Following the correct procedure of execution, indicating the repair of the product ▪ Select materials to execute the correct repair. Set the criteria of use according to the instructions of the manufacturer or distributor, always following the criteria of safety and prevention for health <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge for finish and repairing of elements for installation ▪ Knowledge of reparation techniques <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Reparation and adjustments of elements of the installation
<p>Final quality control</p>	
<p>8. Quality end control</p>	<p>SKILLS</p> <ul style="list-style-type: none"> ▪ Check that the elements have been fixed and assembled properly, fulfilling the necessary mechanical requirements (of resistance and load) ▪ Check that all the dynamical elements like doors or drawers. Know their movements properly, without extraordinary efforts. As well as that the movements are carried out in full (opening closing) position ▪ The requirements of resistance of materials to the functionality of element, capabilities, load, weight and distribution of them are fulfilled ▪ Check the tolerances, adjustment between elements and installation (hardware) fitting <p>KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Knowledge of the minimum requirements of functionality and aesthetics required in the facility ▪ Knowledge of the possibilities of compliance depending on the materials used, both in terms of strength, durability and aesthetics <p>COMPETENCE</p> <ul style="list-style-type: none"> ▪ Quality control of the installation



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9. Quality aesthetic
end control

SKILLS

- Check the level of the finished product of each of the elements set out in the project according to its purpose and functionality

KNOWLEDGE

- Knowledge of the aesthetic level required for the installation and determine the possible fulfillment of the materials used for finishing it
- Knowledge of the materials used for finishing and determine the optimum for aesthetic requirements requested in the installation

COMPETENCE

- Quality control of finishing and aesthetics of the installation

Completing work assignment

ACTIVITIES – SubActivities	
Completing work assignment <ul style="list-style-type: none"> ▪ Report to the team leader ▪ Finalize work and documents (work orders...) ▪ Work process evaluation 	
TASKS	SKILLS - KNOWLEDGE - COMPETENCIES
Report to the team leader	
1. Coordinates work carried out according to the manufacturing orders	SKILLS <ul style="list-style-type: none"> ▪ Interprets and carry out the instructions with diligence received and the responsibility of the assigned work ▪ Monitors the implementation of the work of the entire team checking their conformity with the specifications ▪ Complies with the channels of communication established in the workplace. Transferring the results wort to the other process ▪ Identifies and applies rules of safety and occupational health, depending on the equipment, materials and process performed KNOWLEDGE <ul style="list-style-type: none"> ▪ Procedures, rules and specification to be followed in joinery ▪ Manufacturing orders, interpretation ▪ Risk prevention legislation ▪ Protection elements COMPETENCE <ul style="list-style-type: none"> ▪ Coordinates the work of the workers under their command, according to the norms of the workplace fulfilling the requirements of the manufacturing orders and specifications applying the rules of the risk prevention and heathy
Finalize work and documents (work orders...)	
2. Performs maintenance of hand tools, conventional maching and daily report of manufacturing orders	SKILLS <ul style="list-style-type: none"> ▪ Reviews and evaluates the tools and protection systems ▪ Checks and prepare machines and protection systems ▪ Interprets the manufacturing orders ▪ Control of times by process and material used in the process ▪ Carries out cleaning operations, and maintenance of first level ▪ Indicates the type of material, quality, number of parts and operations carried out in the part of work ▪ Checks that made processes specified in manufacturing sheet match KNOWLEDGE <ul style="list-style-type: none"> ▪ Tools, types, use and maintenance ▪ Machinery and equipment, accessories and protection systems ▪ Concepts of basic maintenance on machines and equipment ▪ Manufacturing orders ▪ Technical specifications ▪ Roadmap COMPETENCE <ul style="list-style-type: none"> ▪ Fills in the daily task according to the manufacturing orders report indicating, the time used for the work and materials used, as well as information that allows knowing and evaluating the work done

Work process evaluation

3. Control the quality at workplace and finished product and eliminate waste

SKILLS

- Uses the documentation of the quality system according to the process
- Checks that all aspects contained in the memory of the installation have been met and that presents no inconsistencies
- Identifies defects in the process rejecting those which you do not meet the specified quality criteria
- Checks that the installation location is in a position to deliver to the client
- Develops parts of non-conformity, where necessary
- Uses the technical process instructions
- Prepare final customer documentation

KNOWLEDGE

- Quality of product and process standards
- Quality procedures
- Non-conformities
- 5S
- Waste management
- Maintenance of products installed on customer house

COMPETENCE

- Performs the quality control of products and processes. Checks the installation carried out. Applies environmental regulations collecting and eliminating waste generated

Note:

NL needs a mentioning in a level 3 qualification for the following competences;

- Address co-workers on unsafe behaviour
- Correct co-workers if needed
- Motivate co-workers

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The partners decided this qualification is **European level 3**

GENERAL COMPETENCE

The person who makes, assembles and installs (tailor-made / constructive) elements based on wood and its derivatives, using hand tools, electrical hand-operated machinery and woodworking machines.

SKILLS

MAKING PREPARATIONS ACCORDING TO PLANS AND TECHNICAL SPECIFICATIONS

- Complies with the procedures and rules of the workplace
- Interprets and carry out the (technical process) instructions/ manufacturing orders with diligence received and the responsibility of the assigned work
- Monitors the result of the work (fills in the daily report of manufacturing orders) and check their conformity with the specifications

WORKS WITH FOCUS ON SAFETY, ENVIRONMENT, QUALITY AND WELL BEING

- Identifies and applies rules of safety and occupational health, depending on the equipment, materials and process performed and checks the condition of the machines and systems of protection
- Reviews and evaluates the systems of protection
- Quality control:
 - Applies the quality standards at workplace
 - Uses the documentation of the quality system according to the process
 - Carries out inspections of quality control processes in which it participates and identifies defects in the process rejecting those parts of non-conformity, where necessary
- Applies the environmental regulations depending on the products used, as well as the waste generated
- Preparing for transport or storing

WORKS IN A TEAM

- Complies with the channels of communication established in the workplace
- Coordinates the work with the rest of the team
- Monitors the implementation of the work of the entire team

PERFORMS MAINTENANCE OPERATIONS ON MACHINES AND TOOLS

- Carries out cleaning operations, and maintenance of first level
- Reviews and evaluates the status of employed tools
- Basic activities of cleaning and sharpening of tools for perfect operation

OPERATE WITH WOODWORKING MACHINERY

- Operate with hand tools
- Operate with electrical and pneumatical hand-operated tools/machinery and auxiliary equipment
- Set-up conventional machining machines: prepares machine(s), spare parts and accessories for use, checks the correct functioning of the machine (rotational speed of the tool, the material feed speed, type and assembly...)
- Checks that made processes specified in manufacturing sheet match - machinability
- Preparing programs for automated and computer-controlled machines (program structure for CNC technology / ISO programs, CNC machine structure and function, Hardware and system components)
- Operate with automated and computerized machines

CHECKS (THE STOCK) OF RAW MATERIALS AND OTHER MATERIALS (AVAILABILITY, SHORTAGES, QUANTITY, QUALITY DEFECTS ...)

- Select wood based products and other materials (identify the main types of wood used in joinery and the material properties)
- The control system: indicates the type of material, quality, number of parts and operations carried out in the part of work
- Control of times by process and material used in the process
- Select and prepare the product(s) for (protective) wood treatment and/or finishing of joinery
- Apply the (protective)wood treatment and/or the primer, intermediate and finishing coatings (manually or mechanically - spraying)

INSTALLATION

- Collect and transport joinery parts and elements according to received specifications; transport joinery assembly for stocking and further handling
- Checks that all aspects contained in the memory of the installation have been met and that presents no inconsistencies, checks that the installation location is in a position to deliver to the client

- Checks the installation / workplace taking into account the standards of cleanliness and hygiene
- Prepare the surfaces before applying finishing: select glues, fasteners and sealants and arrange their application tools; sand parts where needed before assembly
- Join parts and elements into the assembly according to specifications; check and rectify surface alignments after assembly, control quality
- Select and mount hinges, handles, locks and fittings according to specifications
- Preparing on-site
- Installation and fitting of all elements (shelf units and iron fittings)
- Repainting and adjusting joinery elements
- Arrange the workplace and deal with waste

KNOWLEDGE

- Design planning and manufacturing orders
- Drawing (interpreting, technical)
- Knowledge of procedures and rules, processes and specifications in joinery
- Knowledge of (raw) materials: wood, veneer, boards and plywood (types, properties, and defects), adhesives (different types and properties of glues), fasteners and sealant and their properties and use; finishing materials, types of sanding and abrasives
- Various joinery constructions and joinery parts used in the industry, technical terminology
- Techniques for maximizing the processing of materials
- Industrial assembly processes (logistics, internal quality control, lean producing, procedures and regulations), logical work sequence
- Construction and connecting techniques for interior and exterior joinery
- Communication systems in enterprises, between the workers and the management, daily report of the tasks
- Machinery and equipment, accessories and protection systems: portable machines types and characteristics; conventional machines: types and characteristics; tools (types, use and maintenance)
- Preparation machines: setting work tools, regulation of parameters
- Program on NC and CNC machines
- Safety and health rules for using hand-operated machinery, for woodworking machinery and for automated and computerized machines
- Concepts of basic maintenance on machines and equipment

- Risk prevention legislation and prevention measures
- Personal protective equipment and use requirements
- Finishing techniques for interior and exterior joinery
- Techniques of adjustments in elements of the installation (both manually and using portable machines)
- Installation of other elements or facilities through the elements of joinery to install (water, electricity, etc.); principles and methods for chucking and fixing
- Finishing, rectifying and repairing of elements for installation
- Quality standards, values and tolerances; minimum requirements of functionality and aesthetics; quality procedures, non-conformities; documentation of the QMS
- Ergonomic guidelines: ergonomic hoisting and lifting techniques
- Packaging and protecting conditions of each material
- Labelling and product identification
- Different transport means
- Environmental regulations, such as EMS and waste management
- 5S

COMPETENCES

- A joiner makes preparations and calculations according to plan and technical specifications
- A joiner plans the design drawings and production processes
- Organise workplace safely and correctly
- Collect and controls materials following instructions and procedures
- Identify the main wood types used in joinery and furniture, relating its characteristics with applications and select wood based products and other materials used in joinery and furniture, justifying its application depending on the result to be obtained
- Selects and prepares the right tools and woodworking machines (hand tools / portable electrical and pneumatical / conventional / CNC) for further machining, checking the status (disclose co-workers information about the machine's basic function) and complying standards of labour risk prevention
- A joiner prepares programs to be run on automated and computer-controlled machines
- Make joinery products or elements, as windows, doors and hoops, partition structures, wainscoting, ceilings and floors by cutting, modelling and sanding according to specifications



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- Make basic operations (elements) for joinery with hand tools
- Make joinery elements using the electrical/pneumatical hand-operated machinery
- Set up and operate specialized woodworking machinery to transform wood and its derivatives into finished products, adhering to health and safety standards
- Uses finishing tools and equipment
- Performs basic maintenance of machines and tools (cleaning, sharpening...) according to the instructions
- Pre inspection of the place of installation, inspection of storage space, work place as well as the means available; verification of the necessary materials for (each action of) the installation
- Reparation and adjustments of elements of the installation
- Develops activities at workplace or at the place of installation by applying the rules of risk prevention and occupational health using the required personal protective items
- Applies environmental regulations and waste management
- Fills in the daily tasks according to the manufacturing orders report; applies internal coding (stickers, labels...)
- Deliver quality and find balance between quality needed and working speed; performs the quality control of products and processes by checking if the quality specifications are met by identifying defects, rejecting products that do not meet the criteria of quality and filled the parties of non-conformity
- Consult chief and co-workers, ask explanation if work assignment is not understood

GENERAL COMPETENCES

- Works in a team: address co-workers on unsafe behaviour, correct co-workers if needed, motivate co-workers
- Works with focus on safety, environment, quality and well being:
- Organises their workplace safely and neatly
- Having an eye for quality and customer satisfaction by working with care, dedication and a sense of aesthetics
- Exchanging information with clients, colleagues and third parties in a constructive and user friendly manner
- Paying attention to dangerous situations, respecting safety signage in the workplace/site and using and maintaining PPE and CPEs with care
- Carefully and accurately using (wood working) machines, tools and materials
- Uses electric power sustainably and limits noise disturbance

3. Further steps

Once defined this professional profile, taking into account the activities that have been developed in the previous actions, in accordance with the methodology of development of material and taking into account the definitions of CEDEFOP of learning outcomes, competences, skills, abilities, the consortium is now defining the training material, which will be subsequently translated and hosted on the Moodle course platform.

With respect to the self-assessment, based on the learning outcomes obtained and the knowledge to achieve these learning outputs, it will be established the structure of a self-assessment tool that will allow the current and future Eurojoiners to know if they have or not the right skills and if not, which training can be followed for which skills that should be acquired.