MANUAL

Co-funded by the
Erasmus+ Programme
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DIGITAL WOOD ARTISAN

DIGITAL WOOD ARTISAN is an Erasmus+ project that aims to disseminate good practices at European level through the training of trainers that can provide innovative skills about the wood sector, to disadvantaged learners with innovative, effective and consolidated methodologies.

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DIGITAL
WOOD
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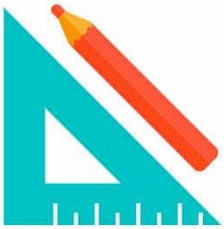
INTRODUCTION

Digital Wood Artisan

SUMMARY PROJECT

"Digital Wood Artisan" is an Erasmus+ project that aims to disseminate good practices at European level through the training of trainers that can provide innovative skills about the wood sector, to disadvantaged learners with innovative, effective and consolidated methodologies.

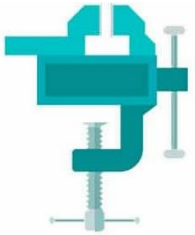


By participating, all participants will be part of a European know-how transfer in the field of wood and the contents of the training will be filmed in order to create videos that will be uploaded on the social channels of the project and on the web platform of the project that will be open to everyone and will be interactive, with a view to learning based on e-learning.

EXPECTED RESULTS

The expected results of the DWA project are the following:

- Manual containing the results of the comparative study in Europe on the old and new woodworking techniques, machines and tools used. The Manual will also provide information about inclusion techniques and teaching methods of disadvantaged learners.



- Theoretical-practical TRAINING course in Portugal for organizations, national training for trainers in each partner country and national training for disadvantaged learners in each partner country. Due to the COVID-19 pandemic, the short term joint staff training event was held online.
- Web Platform containing all the educational material produced during the project.

PROJECT OBJECTIVES

- Support for the involvement of disadvantaged learners;
- Encouraging labor market participation, skills acquisition and poverty reduction;
- Provide young with the necessary tools so that they can anticipate the entry into the labor market and fill the gap between supply and demand for jobs in the digital craftsmanship sector;
- Promote among the disadvantaged people innovative work practices, learning and discussion;

- To improve the level of competences and key skills of trainers;
- Create synergy between the participating organizations, the 'National Agency and the European institutions for European projects;
- Create synergy among stakeholders.

INNOVATION OF THE PROJECT

Our project idea was born from the will of the partnership to create an effective and repeatable model at European level of to disseminate woodworking techniques in a modern perspective, with the help of new ICT technologies. The project aims to promote social integration and offer personalized learning opportunities to learners. We will intervene internationally on the staff of the participating organizations that will trigger a multiplier effect on their territories by training trainers. The trainers will be able to transmit and disseminate the skills acquired to the learners of their territories. All the material produced will be made available online to increase the impact and encourage rural and disadvantaged people, to improve their skills.

TARGET GROUPS

The target groups of the project are:

- Disadvantaged people (NEETs, immigrants, socio-economic disadvantaged, etc.) with basic computer skills;
- Trainers and educators;
- VET organizations, local authorities, companies, employment centers, policy makers, professionals and researchers;
- Participating organizations

DIGITAL
WOOD
ARTISAN

MANUAL PROJECT

The Digital Wood Artisan as an engine of process innovation

Introduction MANUAL PROJECT

The Erasmus + "DIGITAL WOOD ARTISAN" project which, as already indicated above, has as its main objective to spread good practices in the wood sector, but also a much more ambitious second-level objective. The real goal of this project is helping to create new professional figures in the area who are able to draw with equal competence both in the world of new technologies and in the artisan tradition of the different European territories. Although new technologies, such as CNC machines are already widely spread with knowledge and skills that can be acquired by different users (NEET, immigrants, socio-economic disadvantaged people, etc.), the situation is different for traditional woodworking techniques, which are very diverse from each other and extremely linked to their territories of origin. In the Mediterranean area countries as well as the Scandinavian ones, we are able to find very long traditions related to wood products, with very different technical and morphological characteristics. In our opinion, this heterogeneity factor of the entire European area is a great strength not yet fully expressed. Therefore, this unexpressed potential not only concerns the productive sphere but above all the one of social integration, where students and

disadvantaged subjects could start, thanks to these new skills micro-processes of social innovation in the territories where they live through self-employment and cultural animation projects. Starting from these didactic, social and cultural evaluations, our partnership has decided to conduct meticulous research in the territories of their competence, as a theoretical basis for the creation of that effective and repeatable training model at European level that we want to achieve with the Erasmus + Digital Wood Artisan project. The research has been developed along two distinct strands, the first had both traditional and contemporary "woodworking techniques" as its subject, while the second investigated "methods of social inclusion" good practices in social inclusion at 360 degrees, thus to have as many models as possible. Research in the field of "woodworking techniques" has provided remarkable results by gathering information on traditional techniques very widespread at European level such as the inlay that produces very different artifacts depending on the territory in which it is used, but also techniques more related to their territories of origin such as the "illuminations" typical of southern Italy or the "fallas" identity for the city of Valencia. However, contemporary techniques and machinery such as CNCs or revolutionary manufacturing techniques for the world of design developed in the early 1900s in Finland were also studied.

As well as the woodworking techniques, the research on "methods of social inclusion" has produced important results, bringing to our knowledge projects and good practices which represent very valid models on which to set the guidelines of the training that this project wants to achieve. Examples of these valuable models are the participatory laboratories of "Matera 2019 Capital of European Culture" or the Slovenian company "OZARA" in Maribor, which rehabilitates disabled to social and working life.
In conclusion, given the excellent results achieved by this research phase, the partnership has decided to collect within this manual some synthetic cards of the researches developed, so as to make these contents accessible to all the subjects that will want to interface with the Digital Wood Artisan project.

SUMMARY MANUAL PROJECT

Brief description of the parts that make up the MANUAL PROJECT

- **INTRODUCTION**

  Summary of contents, objectives and targets of the Erasmus + Digital Wood Artisan project.

- **MANUAL PROJECT**

  Introduction and guidelines of the Digital Wood Artisan project manual.

- **Research**
  WOOD WORKING TECHNIQUES

  Summary sheets of the research carried out by the partnership, on traditional and contemporary woodworking techniques in Europe.

- **Research**
  METHODS OF SOCIAL INCLUSION

  Summary sheets of the research carried out by the partnership, on good practices and experimental projects in the field of social inclusion at an international level.

- **TRAINING GUIDE SUMMARY**

  Index and key concepts, a guide to design and implement educational training on wood.

DIGITAL WOOD ARTISAN

research

WOOD WORKING TECHNIQUES

index

1. CYPRUS HANDICRAFT SERVICE

Website:

- www.mcit.gov.cy/mcit/chs/chs.nsf/home2/home2?openform (Greek only)

Short description of its main activity:

The aim of the Cyprus Handicraft Service is the systematic revival of traditional folk art on the basis of modern handicrafts. The Handicraft Centre on Athalassa Avenue in Lefkosia houses experimental workshops in the fields of embroidery, weaving, woodwork, pottery, metalwork, general handicrafts, leatherwork and costume making. Since ancient times, Cyprus has been known for its forests that covered almost the entire island. Wood, as the first raw material, was used for the construction of ships, agricultural and domestic tools, as well as building material and as a form of energy.

Picture 1 Image of craftsman at work

Detailed description of old woodworking techniques, machine and tools used in Europe:

Wood carving in Cyprus is divided into two categories:

Picture 2 handmade product

A. Ecclesiastic wood sculpture flourishes mainly from the 16th century when the tall wooden carved icon screen is established. Here we see the power of expression on wood in iconostasis, pilgrimages, despotic thrones, pulpits, coulombs, female women, scenes, wooden hexaffects, doors and windows, and micro sculpture, etc.

Picture 3 handmade product

Picture 4 Image craft chairs

B. The cosmic wood carving is divided into two categories, in urban and folk or rural wood sculpture.

In Cyprus, there are various woodcarving techniques in decorating the various motifs:

- *Embossed*: The simplest form of expression attributed to unpainted scratches on the flat surface of the wood.
- *Extruding*: This technique carries out the various decorative motifs and then removes the background.
- *Relief*: With this technique, the volumes of the shapes are rendered with reduced depiction of the real.
- *Oval*: With this technique the volumes of the shapes are rendered uniformly in all dimensions and with the reduction of the actual scale.

Picture 5 Craftsman at work

Necessary instruments in the hands of the woodcarver are the bench, the clamps, the corners, the buoys, the saws, the rocks, the scissors, the scrapers, the veneers and the chopper.

Any other information

The Cyprus Handicraft Service offers organized training courses in various crafts, including woodworking techniques. These courses take place in the experimental workshops in the Cyprus Handicraft Service in Nicosia and they are open to everybody interested in learning a craft. Training programmes are also organized in rural areas for groups of people who wish to learn a particular craft or to produce on the basis of piecework for the Service. Cooperation with the private sector is also a very important extension of the activities of the Service. This cooperation is divided mainly towards the improvement of standards, techniques and the design of their production and the use of raw materials and equipment.

Conclusion:

With the industrial revolution, growth rates have changed and consumer goods bombard us daily. Today, everything handmade is "expensive" and "unprofitable", so the Cyprus Handicraft Service of the Ministry of Commerce, Industry and Tourism has assumed the responsibility of reviving and preserving the traditional hand-crafted woodcarving, which is inherently the heritage has come through the centuries in our hands.

2. CNC Technology Wood working Industry

Website:

- www.mieek.ac.cy/index.php/el/programmata-spoudon/cnc-technologia-xylourgiki-viomichania (Greek only)

Short description of its main activity:

The Cyprus Ministry of Education and Culture offers an educational and training program focusing on CNC Technology and Woodworking. The aim is to prepare learners pursue a career both in the woodworking industry, as well as other manufacturing industries specializing in CNC-controlled machine tools. The Program uses a combination of theory and practice, which are both required for successful employment in the Woodworking and other related industries.

Detailed description of old woodworking techniques, machine and tools used in Europe:

The overall goal of this program is to prepare learners during their entry in the woodworking industry that specializes in CNC technology. The program offers a wide range of subjects regarding CNC Technology, like machine tools workshops, laser cutting, furniture production, woodworking machines, and use of computer and digitally controlled production machines.

Yet, the program is not restricted solely to the learning of the CNC technology technique.

That is, individuals enrolled in the program acquire knowledge regarding computer-aided programs, costing, industry-related English and issues related to hygiene and safety in the working environment. The expected learning outcomes of the program include:

- The systematic use and application of personal protection and hygiene measures as required by the existing law
- Understanding and ensuring that learners comply with the specifications and technical instructions to safely operate and manage CNC machine tools
- Selection and maintenance of the necessary equipment, like appliances, instruments, tools, and materials for maximum performance of CNC machine tools
- Identification of preventive risks that may arise while working on CNC machines and ensure that such risks or mistakes can be avoided, ensuring the high quality of their work and the endresult, without damage.
- Computer-aided design and use of CAD/CAM programs.
- To read and understand Mechanical and Construction Design.
- Cost accounting for material and labor

- Handle of software like Word, Spread sheet, Power Point, search engines etc
- Organization and management of projects by setting appropriate schedules, application of good behavior in a professional manner, and organization of the working environment.

Picture 6 Image of industrial machine at work

Sitography:

https://youtu.be/W0UsySccJiE (Greek only)

Conclusion:

Construction technology is evolving rapidly in recent years and has achieved considerable improvements both in the quality of construction and productivity growth. The automation of production with CNC-control machine tools creates a new image for the modern workplace. Therefore, is workers or individuals involved in industries like the woodworking sector to keep up with the technological trends and enrich their knowledge with modern technological technique, so they can easily adapt to today's industrial requirements.

The content of the curriculum offered, apart from assisting in the comprehensive development and integration of the individual, it also provides learners with the necessary knowledge base for their integration into the professional and social life. It also contributes to lifelong learning and training, so learners may adapt to an ever-changing world.

3. DECORATIVE WOOD BURNING (PYROGRAPHY)

Website:

- https://bit.ly/2OLIPTM (Interview in Greek)

Short description of its main activity:

Pyrography is a wood burning decorative technique, whereby craftspeople draw upon wooden surfaces. Although it has ancient origins, it is still popular in a number of countries around the world.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Picture 7 Craftsman at work

Pyrography follows a very simple craft process: the artisan uses a heated metal to draw upon pieces of wood and plywood, and then render it on the surface using pyrography. After the burning stage, the drawing is coated with a colourless varnish. Craftspeople might use burn marks, natural dyes, or coloured inks to draw upon the wood. The drawings can be anything, from sketches, to sentences, or simple drawings. Usually, a pyrography pen is used with fine tips for more detailed drawings.

The drawings can be applied to different wooden surfaces, like panels, boxes, coasters, chopping boards, etc. Depending on the way and length the pen is interacting with the wooden surface, the burning area can vary between having a very light brown to a very dark black colour.

Picture 8 Craftsman at work

Pyrography requires good preparation of the working desktop in order to achieve the best results, mainly a fireproof and heat-resistant pyrography tool to draw upon (ceramic saucer, tempered glass, ceramic mug etc). The drawing is achieved by lightly stroking on the wooden surface without pressing too hard. Different wood types can be used, especially softer surfaces, like pine.

Picture 9 Handmade products

No special or advanced skills are needed to master this technique, yet young learners are encouraged to start with producing simple drawings, as pyrography

Picture 10 Handmade products

requires a very steady hand and caution when using the burning surface of the drawing pen. More advanced drawings involve a lot of strokes and intricate patterns.

Sitography:

/

Conclusion:

Although an ancient technique, pyrography is still used as a modern woodworking practice in Cyprus, mostly for commercial purposes, whereby artists draw various symbols representing the Cypriot folk art, religion, and traditional culture. The art of pyrography is also passed on through various events and art festivals, where artists represent their work.

Picture 11 Handmade products

4. "LAS FALLAS"

UNESCO heritage born in Valencia

Website:

- http://fallespatrimonicomu.info/es/artesanias

Short description of its main activity:

Fallas is the main holiday in Valencia. The Valencian Fallas festivity is a celebration of rituals and traditions involving the creation and the destruction by fire of a central element called the "falla" monument build by craftmen. The "falla" is an ephemeral construction with a wood structure built over a period of various months leading up to the festivity by Fallas artists and craftsmen (painters, sculptors and carpenters) and it is burned to ashes in a bonfire on the evening of St. Joseph's Day, March 19th, symbolising the coming of the Spring.

Picture 12 tools for craftsmanship

Origins of Fallas and the technique in the beginning:

The origin of the Fallas festival dates back to the ancient tradition of the carpenters of the city, who on the eve of the feast of their patron Saint Joseph,19th of March, used to burn in front of their workshops, in the streets and public squares, the old

pieces of wood not needed anymore together with the so-called "parot" or mast on which they would hung the lamp that it had been illuminating throughout long and dark winter evenings. The arrival of spring brought more hours of light, so that stick could be burned together with others added useless objects or old junk from the workshop.

Picture 13 Image of the history of the "Fallas"

Picture 14 Image of the history of the "Fallas"

Detailed description of old woodworking techniques, machine and tools used in Europe:

What kind of products/objects can be realized using this technique?

Picture 12 Image of "Fallas"

Nowdays the falla is created by using a wood pine structure, the same that was used in the past. What changed a lot is the exterior part, that now is every time more impressive and spectacular, using light material like cork to build very high fallas. In the XVII century, the Fallas were reduced to pyres of combustible materials that were called Fallas and burned on the eve of Saint Joseph. They went evolving and being loaded of critical and ironic sense, being shown especially in the monuments falleros scenes that reproduced censurable social facts until nowadays. The monument was created with wood, wax and fabric.

Thus becoming a mean of popular expression of cultural, social and political ideas against certain status or social privileged. The holiday was used also as a mean of community cohesion.

Today the technique used to create fallas is very renowned nowadays thanks to the evolution of the past years in creating the fallas and also because the festival is now known in all Europe.

What kind of professional profile/artisan use this technique?

- The creation of the faller artist profession (carpenter, architect, painter, sculptor, engineer, decorator).

The Fallas have given rise to the profession of fallero artist, a professional which has been able to update the old artisan techniques adapting to new technologies. Fallas artists make unique and creative products in the world every year. But also, thanks to the most enduring new materials, the activity of the fallero artist has evolved into fields of decoration, being able to develop other artistic products such as decorative floats, stage sets for theater or cinema; thematization of interior or exterior spaces, such as theme parks, etc. They are a mixture of architects, sculptors, painters and decorators of immense versatility, imagination and creativity. The Artisan Guild of Artists Falleros is the professional association that supports the activity of these plastic artists.

- The importance of Fallas within the education system.

The Fallas have become so important that in 2011 a high level qualification cycle has been created for the ones that want to get trained in building Fallas. The education cycle is called " ARTISTA FALLERO Y CONSTRUCCIÓN DE ESCENOGRAFÍAS" – Fallas Artistry and Stage Decoration.

During 2 years students attend 2000 hours divided as following.
Teaching hours: 2000
Hours of training in work centers: 220
Training hours at the educational center: 1780

PROFESSIONAL MODULES
First course:

- Technical design of scenographies and fallas;
- Organization of the production of structures and scenic machinery;
- Organization of the production of corporeal figures and ninots;
- Organization of the Plantá (installing the Falla);
- Training and career counseling;
- Business and Entrepreneurship;
- Technical English / Schedule reserved for the module taught in English.

Picture 13 laboratory for the construction of the "fallas"

Second course:

- Production planning;
- Organization of the production of props;
- Organization of the set-up of sets;
- Atmosphere and show service;
- Design project of scenographies and fallas;
- Technical English / Schedule reserved for the module taught in English.

Is this technique still in use/ passed on? If yes how?

- What are Fallas today? From antic carpentry methods to the plastic arts and digital world.

The festival of the Fallas has become nowdays a set of practices, rituals, expressions, knowledge and techniques that gravites around elaboration and destruction through the use of the fire of the main element: the falla. Through the development of the plastic arts, painting, sculpture and, even, architecture a work of ephemeral character is generated through the months by the falleros artists and craftsmen (carpenters, painters, sculptors,) to be burned on the day of San Jose. Computers and digital technologies have entered fully into the Fallas, using the modeling in 3D system to create the model in small scale. What was previously modeled with clay and mud, today is been digitally sculpting, improving the precision and quality results that allowed the coexistence of a multitude of styles ranging from figuration to caricature.

What is still used from the old technique of creating the fallas?

Picture 14 Image of "Fallas" costruction

1. The main structure of the Falla remains still made out of pine, and the rest of the base-structure out of poplar tree. Until the early twentieth century, the Fallas were tall boxes with three or four wax dolls that were dressed with fabric clothes. Things have changed and the artisans incorporated a new procedure: the reproduction of cardboard molds. Traditionally, the dolls or 'ninots' were made of paper, cardboard and wood. Currently the most voluminous figures are made of white cork, because this material allows lighter and larger shapes. From the beginning of the '90s most of the monuments are made of expanded polystyrene (polyexpan) easily moldable and that gives more brightness to the piece. In addition, they are supported by a wooden frame.

Picture 15 Image of "Fallas" costruction

Thanks to these materials, the current Fallas can reach up to 30 meters. Nowdays it is easier and more convenient to use new materials, such as porespan, resin or fiberglass. These new materials make the monuments lighter and the fallas artists can dare to create innovative forms. The laser cut machine has been introduced in the process in the last years, shaping the falla faster than before with the advantage of having a precise outcome.

2. The “plantá” act has changed nowadays. In the past, when no machines were used, it was very commun to use the lying-down building technique that is a method of assembling the monument with the help of many Falleros, manually, with no mechanical crane, with the top parts of the "falla" assembled horizontally and then lifted into place. Old way of setting the Falla that is still used today in a few occasions. The structures of Fallas now are so high that they need also mechanic assistance.

Picture 16 Image of “Fallas” costruction

In the picture below you can see that this process today is mechanic.

Picture 17 Image of "Fallas" costruction

Picture 18 Image of "Fallas" costruction

Sitography

- http://comunitatvalenciana.com/que-hacer/fiestas/fallas/historia
- https://www.anticcolonial.com/naturelovers/manolo-garcia-el-mago-de-la-carpinteria-artistica/
- http://www.ingenioygracia.com/arteydiseno/tecnicas.html
- https://ticnegocios.camaravalencia.com/servicios/tendencias/la-industria-4-0-transformacion-digital-mueble-la-madera/#La_fabrica_del_mueble_y_la_madera_40
- http://lestoc.com/es/noticiario/
- https://www.educaweb.com/estudio/titulacion-tecnico-superior-artista-fallero-construccion-escenografias/
- https://blogs.ua.es/historiavalencia16/2014/01/05/las-primitivas-fallas-en-la-valencia-del-xvi/
- http://www.jdiezarnal.com/valenciagremiodemaestroscarpinteros.html
- https://ticnegocios.camaravalencia.com/servicios/tendencias/la-industria-4-0-transformacion-digital-mueble-la-madera/#Maquinas_inteligentes
- http://lestoc.com/es/noticiario/
- http://www.agevalcee.es/index.php/lista-centros-valencia

- http://www.fallaramonycajal.com/Historia/Origen/origen.htm
- https://blogs.20minutos.es/yaestaellistoquetodolosabe/cual-es-el-origen-de-las-fallas-y-los-ninots/
- https://blogs.ua.es/historiavalencia16/2014/01/05/las-primitivas-fallas-en-la-valencia-del-xvi/
- http://www.ceice.gva.es/es/web/formacion-profesional/publicador-ciclos/-/asset_publisher/FRACVC0hANWa/content/ciclo-formativo-artista-fallero-y-construccion-de-escenografias
- https://www.europapress.es/sociedad/noticia-fiesta-fallas-diez-preguntas-20150318131659.html
- https://es.wikipedia.org/wiki/Monumento_fallero
- https://www.lavanguardia.com/local/valencia/20180314/441517328634/impresion-3d-fallas-valencia-sostenibles.html
- https://infomadera.net/modulos/noticias.php?id=8235
- https://www.20minutos.es/noticia/2978571/0/tecnologia-fallas-nuevos-materiales-proyectos-digitales/
- https://www.anticcolonial.com/naturelovers/manolo-garcia-el-mago-de-la-carpinteria-artistica/

Conclusion:

Today in Valencia this technique continues being used not only to build fallas for the main holiday in Valencia but as well theatres order different pieces of fallas for arragining the scenoraphy. Fallas are also adapting to the change of mentality connected with creating a more environmental friendly fallas, so that is why a lot of them are, in the last past years, created without cork, using only eco friendly materials such as wood, rice straw Rice straw and sawdust could mark the future of Fallas as they are products coming from another process: rice straw from the cultivation of this cereal and sawdust from carpentry, used as a combustible organic base and that do not contain toxic substances for combustion. The creation of the falla has been revisited also in terms of the machines used to create the different shapes and in this an important role has been taken by the laser cut machine that offers very defined shapes in a very low period of time.

5. VARETA - THE WOODEN RODS

Website:

- http://manologarciacarpinteria.com/category/fallas/

Short description of its main activity:

Wooden rods are carpentry elements that offer multiple uses. They can be manufactured of various dimensions and multiple species of wood such as pine, filar or poplar. The rods are characterized by their dimensions; they can have round or rectangular sections of small diameter in relation to their length (1 cm per 0,5 cm). The "vareta" is being created starting from a long piece of wood such as in the picture.

With the help of a band saw machine, the carpenter divides this long and big piece of wood into tiny piaces until arriving at the dimensions of the "vareta".

Picture 19 Image of "Vareta"

Picture 20 Image of industrial machine at work

Picture 21 Image of industrial machine at work

Detailed description of old woodworking techniques, machine and tools used in Europe:

What kind of products/objects can be realized using this technique? With the vareta is possibile today to create different products with different uses. Once the carpenters created the “vareta” (rod) he can use it for different purposes. The most common uses of wooden rods are: Joinery, carpentry, decoration, assemblies, DIY, crafts, games, models, kites, modeling, and even to simulate columns of a scale construction or industrial profiles of some product. In Valencia thanks to the technique of the carpenter artist Manolo Garcia the rod acquired a major importance in the creation of the Fallas, but as

well for decorating restaurants and hotels, stand during fairs or decorations for fairs, ecc.

Picture 22 “Vareta” costruction

Picture 23 “Vareta” costruction

Picture 24 “Vareta” costruction

Picture 25 “Vareta” costruction

Picture 26 “Vareta” costruction

What kind of tools, machines are used for this technique?

For creating the vareta all that is needed are pieces of wood (preferable poplar), a band saw machine and a carpenter specialized in this technique.

Picture 27 "Vareta" costruction

Is important to have first the drawn of the object that the carpenter wants to create, in order to decide the correct scale of that object. Nowdays with the drawn and a laser cut is easy to obtain the real proportiones of the object and to create like this the skeleton of the object. Once produced is important that the rods are left in water containers to moistened so to facilitate their curvature in order to adapt easily to the structure. Once moisturized the rods have to be stapled to give the desired shape.

Picture 28 "Vareta" costruction

All the dipsticks are placed meticulously side by side and modeled following the sinuous shape of the structure as if it was a skin, dressing and providing the monument with a subtle armor and of great visual effect.

What kind of professional profile/artisan use this technique?
The professionists that use the varetas are mainly carpenters, interior designers, designers, wood furniture designers, architects.

Is this technique still in use/ passed on? If yes how?
The technique of creating the vareta is still used today and passed on to the new generations of carpenters, designers and architects. What has modified is for sure its use, as many restaurant, fairs, companies and hotels discovered its design value and decided to have an interior object or decoration made with vareta.
The vareta has also a lot of succes when it comes to build high and impressive Fallas, Manolo Garcia being one of the most important representatives of this technique. In the picture below the Falla has been build using wood with fusion of porexpan marbleized.


Picture 29 "Vareta" costruction

Sitography

- http://manologarciacarpinteria.com/manolo-garcia/

Conclusion:

The wooden rod technique has been already translated into the modern context, a brilliant example of this are some of the Municipality fallas.

1. Created by the artists Pichiavo.

Picture 30 "Vareta" costruction

Picture 31 "Vareta" costruction

That structure was a symbol of carpentry tradition combined with graffiti style. In the usual rod wooden technique the Falla is made with a small separation between strip and strip, everyone being able to see the wood part. In the last City Hall Falla the strips/rods were joined together, with no air between them, creating a compact volume, being afterwards painted by the artists.

2. The Manolo Garcia fallas
The highest falla

Picture 32 "Vareta" costruction

Picture 33 "Vareta" costruction

6. Curved furniture Fenicia Mobiliario best practice

Website:

- http://www.feniciamobiliario.com/es/

Short description of its main activity:

FENICIA MOBILIARIO is a company from Valencia that produces furniture for privates and companies. The company designs and creates furniture that captures and transmits the best trends in decoration and lifestyle, being an expert in curved furniture. They are responding to all the necessities of the clients, offering high standard furniture with a modern design. The product that distingues Fenicia Mobiliario from the other companies in the sector is its curved furniture. Still this technique is not new, as the first designer to develop the wood bending technique is Michael Thonet which patented the technique in 1841 and was first used in the elaboration of chairs.

Picture 34 istitutional photo of the FENICIA mobiliario

Detailed description of old woodworking techniques, machine and tools used in Europe:

- What kind of products/objects can be realized using this technique?

By using the technique of curving wood it is possible to create all sort of final products, such as furniture for the living room, for the kitchen, bathroom and bedroom. It is also very demanded by companies that want to impress with the curvy style of the furniture in their reception or meeting rooms. Hotels also request a lot curved furniture both for reception or for the guests' rooms.

Picture 35 image work space of the FENICIA mobiliario

- What kind of tools, machines are used for this technique?

To create curved furniture Fenicia Mobiliario is using 3 techniques:

1. Specialized machines that cut wood in very thin layers are used in order to create the effect of curved furniture.

Picture 36 image work space of the FENICIA mobiliario

2. Thin layers of wood are joint together in the curved shaped requested. The curved pieces of wood can be less or more curved, depending on what they are needed for as in the pictures.

3. In Fenicia Mobiliario thay also have a special machine called CNC 5F that is a machine that can be programmed to work and cut the piece of wood in all the positions (see the picture) Fenicia is also appling the Wood bending grooves technique where wood is exposed to steam to make it pliable. Heat and moisture from steam can soften wood fibres enough so they can be bent and when cooled down they will hold their new shape as in the picture.

- What kind of professional profile/artisan use this technique?

As the market of curved furniture is really highly demanded for its very impressive and elegant

aspect, more and more furniture providers are offering this kind of product.

Picture 37 image products work in progress of the FENICIA mobiliario

Still, unlike other trades related to wood, this is a special process that demands deep knowledge related to the behavior of the material and species, high quotas of patience, great artisan work, an admirable level of understanding to manipulate and understand the limits and wood possibilities, and a constant and judicious experimentation of the technique itself, to obtain satisfactory results.For which, even if is highly demanded there is a limited number of companies and carpenters that offer this kind of product.

- Is this technique still in use/ passed on? If yes how?

There are different techniques of curving and bending the wood, giving the furniture a very elegant and glamour aspect.

The technique is highly used and demand nowadays, as the market is requiring it in hotels, restaurant, private houses, offices, fairs, ecc. Its charm, in addition to the unusual shapes, is in the high resistance achieved by its curved pieces thanks to the continuity of the fibers that extend along the entire folded piece. That is an effect impossible to obtain and reach using other methods.

Any other information

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Conclusion:

The technique is already translated to the modern context. From 1841 on carpenters used the various techniques in their work to create impressive pieces of wood. The effect that this technique gives to the final product makes consumers demand such kind of product. The technique has remain more or less the same one, what has been revised and extended are its use. It started as a way to manufacture musical instruments, which over time successfully covered the fields of carpentry and joinery. At the beginning the act of bending wood seemed like an "attack" against the rigid and imposing structure of any timber piece, however, its almost unlimited versatility allows it to challenge the laws of logic, adopt highly stylized, aesthetically sculptural and visually surprising shapes.

7. BENT PLYWOOD

Website:

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Short description of its main activity:

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Detailed description of old woodworking techniques, machine and tools used in Europe:

In 1924 designer Aino Aalto and architect Alvar Aalto started to experiment with the bending of wood. This research led to the revolutionary designs of the 1930's: Bonding veneers together and moulding plywood. With the help of furniture manufacturer Otto Korhonen, Aaltos developed a combination of cutting and steaming local Birch wood in order for it to become malleable. After being soaked in water, multiple vertical saw cuts are made in the end of a piece of wood a few millimeters apart – the deeper the cut, the bigger the bend. Then, thin strips of veneer are inserted into these slits and glued, increasing the stability of the finished component. One of the most innovative chairs at the time is named Model No.41 (picture 38).

Picture 38 Image of chairs model N°41

The beauty of the L-leg (picture 39) is its versatility.

It can be used as the basis for any number of seats, stools and tables. It has quite literally propped up hundreds of variations since it was patented in the 1930s. The technique has also spawned bending experiments in other materials, like steel and concrete (picture 40).

Picture 39 Image of the L-leg

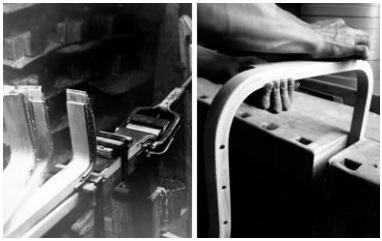
Picture 40 Image of curved wooden

In industrial use, wood is bent with machinery: (picture 41) presents the bending machine.

Picture 41 Image of bending machine

Plywood is light, durable and doesn't get swollen too easily. Industrial plywood is used for example in molds for concrete structures and design furniture. Artisans bend wood using handtools like in picture 42 and 43: molds on which the layers are bent and screw clamps.

Picture 42 craftsmen at work



Picture 43 craftsmen at work

Bent wood is still used by artisans in pictures 44-47 an artisan is bending plywood to make a guitar stand.

Picture 44 Image of handicraft products

Picture 45-46 handicraft products process

Picture 47 handicraft products

Conclusion:

Bent wood is in use in many forms and purposes: skate ramps (picture 40), containers, constructions etc. Molds for plywood bending can be producer using digital technologies: 3d molds or cnc routed molds for example (picture 41). Different surface treatments create more durability for the plywood and can also serve as anti skid device. UPM Grada is a new plywood bending technology developed from Aaltos' original system.

8. TARU HAKKARAINEN

Photographs to graphic prints material and print experiments. BA thesis at the Lahti UAS, Finland.

Website:

https://www.theseus.fi/handle/10024/13359

Short description of its main activity:

The purpose of this Bachelor's thesis was to examine and design graphic illustration by illustrating photographs and to combining them to prints on different kind of surfaces.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Designing graphic illustration and illustrating photographs to produce prints on wooden surfaces like plywood, using digital printing; here printer Agfa Anapurna XL2. Collaborating companies were Leeviprint and Kantosen Puutyö.

The influences to the designs were photographs from Northern Carelia, possibilities with collaborative companies to print pictures to different surfaces, target group, and processing techniques and new working methods. Purpose was to try new working methods, use photographs and photoshop them, and combine hand drawn line and computer modified pictures. Purpose was to show printgraphics using different

printsurfaces and printing possibilities. The finished product graphics turned out to be beneficial for co-operative company as they didn't have this kind of print products in their collection. Taking print part of the interior design is also trendy at the moment. Printing can produce personal, meaningful products via unique patterns. It may attract visual thinkers and hence support gender balance in male dominated woodworking scene. No master-scale handwork skills are needed, which brings the technique in reach of students and hobbyists as well. Scale of the works can vary from smallest accessories to large installations. Plywood surface needs thorough polishing and steady side bindings to remain clean look. Large plates of plywood tend to twist and are heavy. Plywood is fairly expensive, depending on the thickness and quality of wood. Graphic designer, furniture designers, pattern designers, jewellery makers, builders, architects, advertising companies, upholsterers, theater set decorators etc. can use this technique.

Conclusion:

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9. CNC MACHINES

Usage of CNC machines for direct manufacturing of furniture on 3 axis machines. Researching advantages of CNC technology in furniture by Vítězslav Gaja and Adam Kořený at Mendel University in Brno.

Website:

- https://bit.ly/2FtutCH (p. 112)

Short description of its main activity:

Advantages of CNC technology in public waiting room furniture manufacturing and construction. Typology of given furniture and specifics of waiting rooms equipment. Introduction of the use of 3 axis CNC machine for furniture manufacturing and examples of practical use of this approach for sitting and table furniture. CNC machining allows very fast manufacturing, working, and shaping of a material. On classic (old) machines we need to change position of tools manually, while CNC machines are able to be repositioned much faster.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Furniture like chairs, benches and tables can be made using cnc. High quality of finished furniture could be reached with used of quality materials and technology which are used in professional manner. All this is eco-friendly saves material because objects can be designed for maximum material usage. In this research, a 3 axis CNC router machine was used. The furniture can be further developed, like upholstered; so also upholsterers and interior designers/ architects can make use of this technique, besides woodworkers. CNC technique is used in furniture industry and many other design industries worldwide. It is taught in vocational institutes and higher education organisations and in non-formal education.

Sitography

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- Ryan, V. (2004). Advantages and disadvantages of CNC machines. Retrieved November 7, 2008, from http://www.technologystudent.com/cam/cncman4.htm

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- Douglas, C. (2006, May 12). Knock-Down/Drag-Out Chairs (and Tables...) | Apartment Therapy Chicago. Retrieved February 15, 2009, from Apartment Therapy Chicago. http://www.apartmenttherapy.com/chicago/seating-stackingfolding/knockdowndragout-chairs-and-tables-008886
- Because We Can, LLC. (n.d.). Because We Can. Retrieved October 31, 2008, from http://www.becausewecan.org/

Conclusion:

Construction and technology are involved in furniture design. Furniture in public interior is exposed to much higher mechanical stress than usual furnishings. This requires appropriate construction dimensioning and other adjustments. Sitting furniture – chairs - are more dynamically stressed and therefore appropriate construction and material has to be used. This involves also chosen manufacturing technology. CNC technique is used in furniture industry and many other design industries worldwide.

10. LUMINARY

Website:

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Short description of its main activity:

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Detailed description of old woodworking techniques, machine and tools used in Europe:

The “luminarie”

They are luminous decorations which decorate the streets and monuments during religious and lay festivities. In fact the word "luminaria" comes from the Latin "lumen" which means "object that diffuses light". It is not easy to date precisely when this kind of artistic expression was born, at least in the forms in which it is understood today: it is very likely that already in ancient times for occasion of particular ritual and religious ceremonies it was used to light lamps, torches and rudimentary bonfire to illuminate certain places in the cities that became the centerpiece of the festival. However, their greater diffusion occurs with more certainty in the Baroque age in conjunction with religious celebrations in honor of the patron saints of particular localities or communities, as well as on the occasion of secular ceremonies such as the visit to the city of a sovereign or more generally of an illustrious character.

In these circumstances there was the custom of preparing, by decorating them in various ways, the places along which the effigy of the patron saint would pass in procession as well as the appropriate place where it would be deposed. Similarly, the streets were adorned to make them worthy of the passage of an important political figure, and the place where their arrival in the city would be celebrated.

The art of the decorators

Even before the luminarie, when more dignity had to be given to places, to prepare them for an event that was often religious, wall decorations were made using more or less precious fabrics. These were made by the so-called decorators, a very ancient profession, in fact already in the classical period decorations were performed for furnishing of the aristocratic domus or for the sumptuous late-Hellenistic amphitheatres scenography. During the Middle Ages, the decorators used to drape various kinds of fabrics by hanging them on the upper part of the walls and moving them aside to frame the openings of doors and windows and to hide rough or unfinished parts of the wall. The wall decorations are born, therefore, as decorations for interiors of noble palaces and churches: drapery, liturgical crowns, thrones, altars, sepulchres, catafalques, fences, etc.

Later they are also used outside in the forms of arches, pediments, chandeliers, espaliers, harmonic dome and galleries for the decoration of streets and urban spaces. In the Renaissance, in fact, with the economic progress in the main Italian cities as well as in the European capitals, the use of organizing festivities to celebrate the reigning families spreads. On these occasions the ephemeral apparatuses became protagonists of the public spaces designed by important artists such as Brunelleschi, Mantegna, Leonardo, Michelangelo, Bernini, Vaccaro and several others who put their artistic talent at the service of the royal courts or the Church to animate and give substance to the concept of "wonder" for the duration of the festivities. In the sixteenth century the model was developed and in 1565 Vincenzo Borghini, a Florentine expert on festivities, on the occasion of the wedding of Francesco de 'Medici and Anna of Austria, created the classic model of the triumphal arch that from that moment will be used in Italy.

Picture 48 Anonymous, papal procession in Piazza del Campidoglio for the possession of Alexander VII

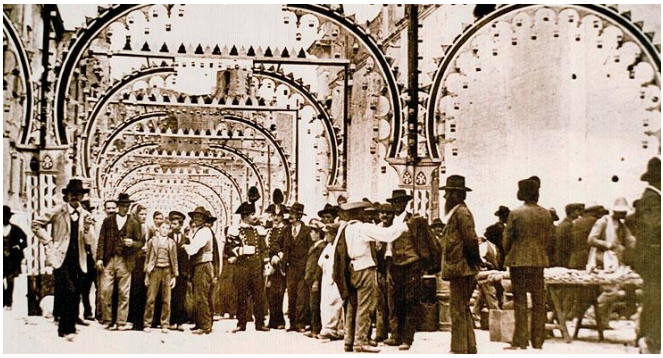
In the early sixteenth century between Rome and Florence it is stated the model of the princely procession, as triumphal entry in the city (pictures 48-49).

Picture 49 Dominique Barrière, decoration in piazza Navona for Easter of 1650

In Florence is famous the decoration of Leone X of the 1515 with decorations of Andrea del Sarto, Jacopo Sansovino, Piero di Cosimo, Antonio da Sangallo and Pontormo. The first great monarch of the modern age, Charles V sovereign of the Holy Roman Empire, in many journeys propagates and imposes this model in every nation. Over stable or false supports in large open spaces are assembled pyramids, obelisks, steps, columns, statues, signs, friezes, paintings, monochrome paintings, fake marbles, to compose a gigantic urban scene.

The first “luminarie”

In the Baroque age, even large-sized ephemeral apparatuses began to associate the illuminations: festive decorations such as arches and poles were often the ideal place to place the light point, in order to illuminate and prolong the party, obtained by using candles in colored glasses and wicks in an oil container. Until the eighteenth century the luminous decorations that were built were made with wooden scaffolding leaning against the facades of the buildings, which supported innumerable colored glasses, containing oil or other fats and a wick for lighting. Later for the lighting they used terracotta oil lamps, inserted in paper cylinders with different colors. In the nineteenth century the scaffolding in addition to attaching itself to the facades of the buildings, became self-supporting structures fed first with oil glasses (picture 50) and then with acetylene gas.



Picture 50 Nineteenth-century oil “luminaria”

With the introduction of gas for feeding, the lights are made with metal structures: a folded iron tube had several spouts from which gas flowed out, giving rise to small flames (protected by special glass beakers) which are all seen together they composed luminous figures. With the spread of electricity, iron was replaced by wood (insulating with respect to metal) on which light bulbs were then fixed. All the production took place in the traditional way, the figures to be realized were designed entirely on the ground and the wood was cut in such a way as to reproduce exactly the figure drawn. All the works were broken down into small modules so as to be easily transported and subsequently assembled on site (picture 51).

Picture 51 Square decoration with a harmonic dome, 30s

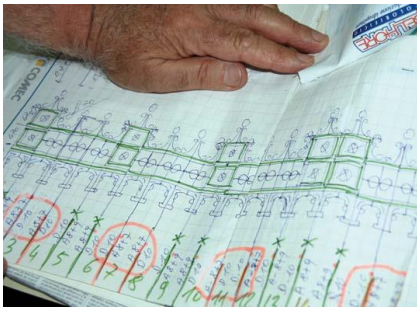
Technical ability, imagination and tradition have ensured that this art has spread throughout the territory, creating generations of itinerant artisans who created similar lighting structures.

From the glass with oil, to the spout with gas, from the carbide lamp, to the electric current, from the colored incandescent bulbs to the neon lamp and the light of the LEDs, technology has taken enormous strides but the passion has always remained the same. Innovation and tradition have transformed the illuminations into true architectures of light, which are suitable not only for religious celebrations, but also for many celebratory events of all kinds.

How a "luminaria" is realized and the job

The artists of the "luminaria" are above all designers, carpenters, artisans and electricians. They make everything by themselves: they invent the shapes, they build the wooden frames, they position the bulbs of different intensity and power and finally they assemble and dismantle the "luminaria". The creation of a "luminaria" starts with the sketching of the design of its development on a sheet of paper and then enlarges it. As in the past, the artists of the lights tests the effect of the initial drawing precisely in public open spaces where they are able to visualize the perspective effect, to modify the defects, so as to perfect the idea of the initial sketch. Normally these artists, to save time and money, do not make scale models like set designers, so they must have a great sense of perspective and a marked ability to imagine and foresee the finished work, with all the combinations that can be performed, only with

the aid of the drawing. During these numerous tests, colored markers are used which will later serve as a guide to those who are in charge of arranging the multi-colored bulbs to obtain different lighting effects (picture 52).



Picture 52 Sketch on paper of the development of a "luminaria"

From the final sketch we pass, therefore, to the construction in scale of the "luminaria" with reproduction in wood usually of fir because it lends itself better to jobs of this type considering its characteristics of robustness, of relative lightness and of ease of cutting and carving, indispensable qualities to be able to carry out a work similar to a huge embroidered lace which must however retain its compactness and solidity. In addition, the entire design is divided into various pieces (elements and frames) that can be easily assembled and disassembled and that, considering the size of the square, can be removed or added quickly by modifying the design with multiple combinations. After having built these large wooden frames characterized by volutes, plumes, bows, railings, pendants, swirls and circles, we pass to a further test putting together all the elements that

represent the initial drawing on the floor to see the effect and if everything is well positioned and proportionate. A third processing phase is that of painting the different frames with white paint, because white reflects light better. The last phase is represented by the coloring and assembly of the bulbs: they are generally colored by the artisans themselves who, using a compressor, spray them with suitable paint and bake them in dedicated ovens making them go out so that the bulbs acquire transparency and shine and give off a bright light. Subsequently these bulbs, called mignon and micromignon, are inserted in the lamp holders already fixed on wooden frames. Although potentially there is an almost unlimited number of color combinations, we usually prefer to choose and insert a few, harmoniously combined, so as to give the luminous decoration a perfect elegance, reinforcing the expression and simplifying its reading.

Types handed down until today.

In the great variety of shapes and figures that can be achieved, there are some traditional types that have been handed down to the present day such as the "gallery", the "espalier" and the "harmonic dome" (picture 53).

Picture 53 Espalier and harmonic dome, Festa di Sant'Oronzo Lecce (Italy) 2018

The gallery consists of a series of luminous arches in succession with the addition of curtains that almost reproduce the nave of a church and can be of various styles: baroque, oriental, geometric or Byzantine. The espalier is used to cover the perimeter of large open spaces such as city squares creating an illusory building in the open air. The harmonic dome is instead a often circular and domed structure that is normally used for the performance of band groups and orchestras.

Currently, traditional typologies have been joined by a series of other inventive structures of the various companies operating in the sector. Each company has its own cataloging and often use different names to indicate the same type of lighting.

Pictures sitography:

- pictures 48-49

https://www.artesplorando.it/2016/05/apparati-addobbi-e-ornamenti-tutto-quello-che-serve-per-una-festa.html

- pictures 50-51

https://www.fratelliparisi.com/catalogo.asp?ID_Categorie=24

- pictures 52

https://www.quisalento.it/salento-da-scoprire/item/i-salentini-signori-delle-luci

- pictures 53

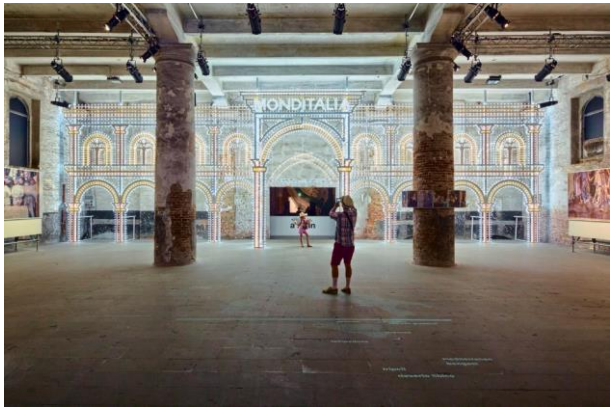
http://www.salentolive24.com/2018/08/26/santoronzo-ultimo-giorno-di-festa-nel-segno-di-arbore/amp=1

Conclusion:

New applications for the “luminaria”

In addition to traditional use as luminous decorations set up for the patronal feasts along the main streets and historic squares of the cities, more and more often the illuminations find space in other sectors, while maintaining their original purpose as a decorative element: international exhibitions, cultural events, memorials, design furnishings, etc.

In 2014 at the 14th Venice Architecture Biennale, the dutch architect Rem Koolhaas, as curator of the edition, commissioned the construction of a



Picture 54 Luminous portal "Luminarie" at the entrance of the exhibition "Monditalia", Venice Biennale, 2014

majestic luminous portal called "Luminarie" positioned at the entrance of the "Monditalia" exhibition (picture 54). The structure of 7 meters high by 20 in length is built in a traditional way with lamps and Swarovski crystals and draws inspiration from the Venetian arches of Renaissance palaces and from the sets of Federico Fellini's films. Since 1998, on the occasion of the Christmas period, the cultural event "Luci d'artista" has been held in Turin, during which the streets, squares and monuments of the city are dressed in lights: they are works conceived by contemporary artists, which are they qualify for the high scenographic value or for strongly symbolic and conceptual values (picture 55).

Picture 55 Flying carpet by Daniel BUREN in piazza Palazzo di Città Torino (Italy)

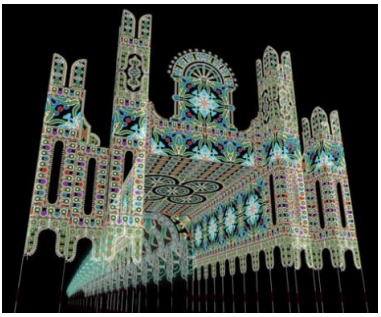
The event aroused so much interest that since 2006 it also takes place in the city of Salerno and from 2016 in the city of Pescara, with similar methods. Similarly but for different reasons, from December 1995 in Kobe in Japan, illuminations were set up for the commemoration of the Hanshin-Awaji earthquake that devastated the city on 17 January of the same year. Kobe Luminarie is a project recognized by the national government as an important contribution to the reconstruction of the city.

In 2018 the design company "Seletti" which stands out for its always original approach, presents at the Salone del Mobile in Milan the "Luminaire" line composed of three mirrors and a wooden headboard designed by Marcantonio Raimondi Malerba with the intention of putting together furniture and lighting in an unconventional way (picture 56).

Picture 56 Mirrors and headboard by Seletti, Salone del Mobile Milano (Italy) 2018

New methodologies and usable technologies.

Today light architectures are generally designed by a staff of designers who use computerized programs to design new pieces (picture 57). The archives of the construction units are also stored in electronic systems and no longer only on paper.



Picture 57 Virtual model elaborated by design software of a light gallery

Companies have always been attentive to the cataloging of designs and sketches, being attentive to the needs of the country but also presenting some new features. If before they were small family companies that realized these illuminations with ephemeral apparatuses, now the company organization must be managerial and realized by expert and prepared hands. Planning, pre-assembly and testing, dismantling, transport, and then assembly and testing in the field, and finally dismantling and transportation of the architecture must be envisaged. Not inconsiderable is the storage of each piece in capacious, organized and equipped warehouses. Even the realization of the frames that compose the illuminations has known a remarkable innovation thanks to the use of new machinery, such as the numerically-controlled pantographs, which allow to cut directly the desired shapes of the illuminations starting from wooden panels even of considerable size (picture 58).

Picture 58 Pantograph wooden lights

A CNC pantograph (computer numerical control), is a machine moved by a computer that controls its movements through a work program called CAD / CAM. The computer can be integrated into the machine's control box or even external, the internal motors are moved by internal circuits through parameters. These circuits allow the displacement of the mechanical components which, assembled upstream, allow the vertical motor, called the electro-spindle, equipped with a tool, to carry out workings on specific materials according to the work to be carried out, simple operations such as incisions, cuts of shapes , and more complex workings such as bas-reliefs or sculptures. The most commonly used CNC machines are those with three axes interpolated and marked with the name: X, Y and Z. Where the X is the right / left movement, the Y axis is the forward and backward movement, while the Z axis is the one that carries the electrospindle up and down.

To obtain a machining from a computerized pantograph, the following steps are followed:

- the piece to be cut is drawn with any CAD (Computer-Aided Design) design software and saved in a format that can be interpreted by the CAM (Computer-Aided Manufacturing) software that manages the pantograph and provides the processing instructions;
- the use of the CAM requires making choices based on the CNC machine, the machining tools and the processing steps.

Once these choices have been made, the CAM software generates the G-code for processing, which is the language that can be interpreted by the machine to move the axes, that is a series of sequentially ordered instructions that define the path that the cutting tool mounted on the machine follows along the workbench;

- the machine is equipped with the tools and the raw material to be processed;
- the tool path (G-code) is loaded into the interface software between the computer and the pantograph;
- the working starts and the pantograph autonomously realizes the desired piece.

Pictures sitography:

- pictures 54 (https://oma.eu/projects/monditalia)
- pictures 55 (https://www.artribune.com/arti-visive/arte-contemporanea/2017/10/20-anni-di-luci-dartista-a-torino-dal-centro-alla-periferia-le-14-opere-da-non-perdere/)
- pictures 56 (https://www.seletti.it/events/seletti-at-salone-del-mobile-2018/?v=cd32106bcb6d)
- pictures 57 (https://www.marianolight.it/about/luminarie-pugliesi-design-produzione/)
- pictures 58 (https://www.pantografiamma.it/pantografo-cnc-wide)

11. MARQUETRY

Website:

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Short description of its main activity:

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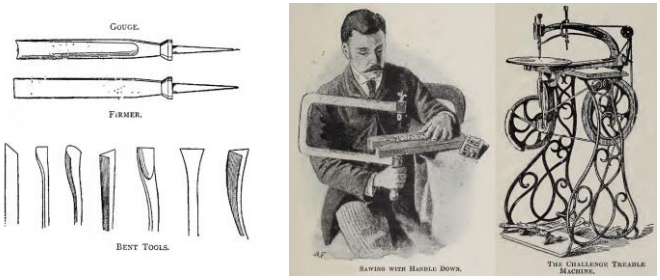
Detailed description of old woodworking techniques, machine and tools used in Europe:

Among the different woodworking techniques, the marquetry is an artistic technique, of ancient origin and still practiced, used for the creation of ornamental motifs and designs on various kinds of objects and wooden furniture such as tables, sideboards, mirrors, cabinets and bedside tables. This technique allows for more different chromatic effects on the wooden surface to decorate, than the natural coloring of the wood essence chosen for the realization of the object. The decorative design is obtained from the composition of tiles with a few millimeters thickness, variously shaped, so as to perfectly match each other and with the recess made in the wooden base where they are embed. The choice of different wood essences from which to cut the tiles, as a result of the various chromatic characteristics of the essences, allows to obtain the polychromy of marquetry workings. The technique involves a preliminary phase in which the decorative motif to be obtained is drawn on tracing paper, in which the individual

tiles that make up the final design are already distinct. Each tile is made individually by returning the relevant profile from glossy paper to the selected wood essence strip. Then it is cut with a jigsaw, making sure that during cutting the blade is always perpendicular to the strip; otherwise the edges of the piece would be inaccurate and would not match the adjacent ones. When all the tiles are made, they are put on the top of the wooden support, the outlines are traced and the grooves for the tiles are made using chisels, gouges and knives (pictures 59-60).

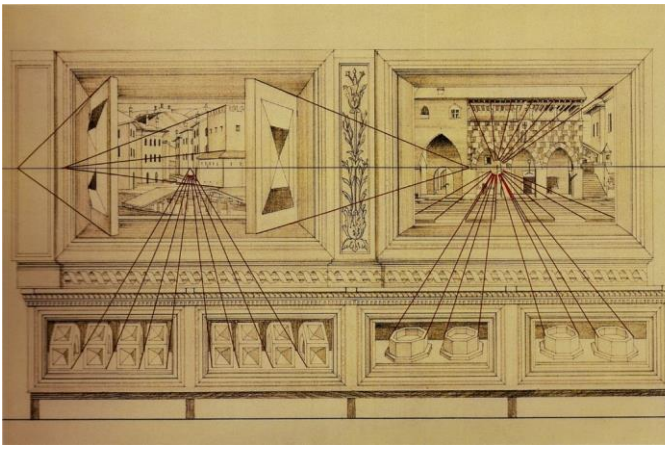


Pictures 59-60 Traditional tools and old machines used for marquetry technique

Over time the technique has known variations in the method of execution, often linked to the geographical area in which they developed. Rather than making the tiles individually, these were obtained by slicing a block of wood, previously shaped according to the predefined drawing, into thin sheets: so many identical tiles were obtained to be composed according to the desired drawing and directly glued on the

wooden support to be decorated. Similarly, by superimposing veneers of different essences and cutting them all at once with a blade, were obtained positive and negative figures, exactly coinciding, of different chromatic characteristics, which could be composed to create the desired decorative texture. In both cases, greater precision was obtained in the reproduction of the tiles and a significant reduction in the execution times, especially if the grooves for the tiles were not made because these were directly fixed to the wooden base. If initially the marquetry drawings were related to floral, geometric and small object compositions, starting from the fifteenth century the technique was refined with the adoption of the rules of perspective that allowed the spatial representation of architectures, city views and landscapes (pictures 61-62).

Picture 61 Perspective marquetry



Picture 62 Preparatory drawing

Spread in times when serial production did not yet exist, today the marquetry decorations are often made entirely by hand by skilled artisans who work the veneered wood with extreme precision. In parallel with the introduction of machinery that replaced traditional work tools, the production of furniture with marquetry decorations, today has also developed in an industrial way.

Pictures sitography:

- pictures 59

CHARLES G. LELAND, F.R.L.S., M.A, "A manual of wood carving", published by Charles Scribner's sons, New York, 1909 (pp. 4,5)

- pictures 60

DENNING D., "Fretwork and Marquetry: A practical manual of instructions in the art of fret-cutting and marquetry work", published by Upcott Gill, 170 Strand, London WC, 1895 (pp. 28,55)

- pictures 61

"Panel inlaid with polyhedron, books, work tools and mazzocchio, emblem of the masters of perspective. Fra Giovanni da Verona, 1502, Coro dell'Abbazia di Monte Oliveto Maggiore, Siena" in TRUZZI G., "La costruzione di una tarsia prospettica in epoca rinascimentale" http://www.museodellatarsia.it/upload/rolo_tarsia_ecm8/documentiallegati/Testosullacostruzionedelletarsieprospettiche_13660_388.pdf

- pictures 62

"Scheme of perspective convergences in the dossal of the Consorziali sacristy. Cristoforo e Bernardino Canozi, 1487-1490. Parma, Duomo" in TRUZZI G., "La costruzione di una tarsia prospettica in epoca rinascimentale" http://www.museodellatarsia.it/upload/rolo_tarsia_ecm8/documentiallegati/Testosullacostruzionedelletarsieprospettiche_13660_388.pdf

Conclusion:

New applications for the "intarsio"

(www.facebook.com/TexityTile)

The TEXiTY project involves a review and updating of the traditional wood inlay processing technique, through the use of current available technologies. The numerical control machinery such as pantographs and CNC milling machines allow, in fact, the maximum precision cutting and

engraving of wooden surfaces at variable processing depths.
The name derives from the union of two words: the word texture, connected to the working of surfaces, and the word city. In fact TEXiTY uses the current instruments for the realization of decorative tiles in olive wood (picture 63) on which the drawing of the map of some representative cities of the Apulian territory is shown. For each city was defined a perimeter of the ancient part that could describe the historical center, including characteristic elements such as the cathedral, the castle, the various religious buildings and noble palaces that characterize the Apulian cities.

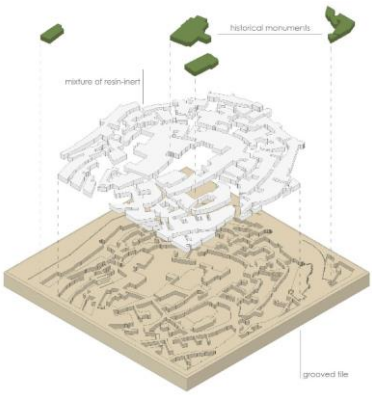
Picture 63 Olive wood tiles

The contours of the city plans are obtained by CNC numerical control milling or the laser-cut machine of the visible face of the tile for a depth equal to half its thickness.

The incisions are filled to their full depth by a mixture, variously pigmented, of resin and fine-grained aggregates deriving from the wood processing waste itself, until it has the perfect coplanarity with the visible face of the tile (picture 64).

This procedure therefore avoids the production of processing waste and makes the creation of the tile an eco-compatible process.

The TEXiTY tile processing phases are substantially the same as the classic wood marquetry method except for the replacement of the tools used.



Picture 64 Olive wood tiles

In fact, a careful preliminary design phase of the drawing to be reproduced remains fundamental: in the past the drawing was transferred directly to the wooden top using carbon paper starting from preparatory drafts, while at present this phase can be managed through CAD software (Computer Aided Design) for the definition of the path that the machinery cutting tool must follow. Similarly, traditional inlay tools such as gouges, chisels and knives are replaced by cutting machine controlled through CAM software (Computer Aided Manufacturing).

Considering the peculiarity of its texture, the tile can be used as a design object for interiors furnishings or, in a composition of several tiles, for the covering of wall surfaces (pictures 65-66).

Picture 65 Boiserie composed with TEXiTY tiles

Picture 66 Detail boiserie composed with TEXiTY tiles

12. RRR THE WOODEN SHIPS
RESTORATION, REINVENTION AND REUSING THE WOODEN SHIPS

Website:

Below are the links to the web pages of some interesting historical museums of the navy, with particular attention to Italy and the Mediterranean area.

ITALY

- www.navidipisa.it
- www.promotorimuseimare.org
- www.galatamuseodelmare.it
- www.mucamonfalcone.it
- www.marina.difesa.it/cosa-facciamo/per-la-cultura/musei/museostoricove

EUROPE

- www.mbdb.hr
- www.albaola.com
- www.traditionalboats.gr

Short description of its main activity:

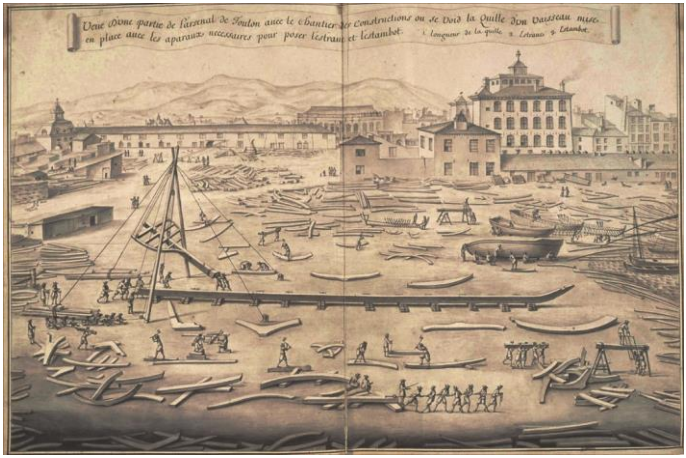
The **Shipwright** is a trade as ancient as it is noble, dating back to the times when boats were built mainly of wood, using the ax. An extremely flexible and versatile tool that became so important that gave its name to this profession. The Shipwright modelled the wooden log with the ax to adapt it to what would later become its definitive form. The ax was used in naval carpentry both on the curved parts (frames,

floorboards, fore and aft wheels) and on straight parts (ship shafts) and with this tool it was possible to work such as sculls, joints, squaring, levelling, shaping variable profile of large size woods. Obviously with the evolution of shipbuilding, construction technologies and materials the ax was abandoned only remaining in the descriptions of some old naval carpentry manuals.

Despite this the definition has remained, even if the ax has fallen into disuse for some time now, in fact the Shipwright craft is also recognized by the Navigation Code (art. 117) together with naval engineers and shipbuilders, Article. 280 governs the requirements in these terms:

> "The aspiring Shipwright must have worked for at least thirty-six months, as an ax teacher, on a construction site or in a shipbuilding factory. This training is demonstrated by the declaration made before the merchant maritime authority by those under whose direction it was carried out. He must have successfully passed an examination according to the programs established by the Minister of Transport and Navigation ". The Code also establishes that the Shipwright can "build and repair ships and floats in wood of gross tonnage not exceeding 150 tons".

Although wood has been largely replaced by other materials, such as fiberglass and steel, there are still construction sites that use wood as the main material for the construction of new ships or for the restoration and maintenance of historic ships. Some Italian cities have struggled to maintain their maritime tradition and have managed to keep the shipyards and their masters. The main ones are in the Italian regions Campania (Torre Annunziata; Sorrento), Puglia (Molfetta; Manfredonia), in Sicily (Acitrezza), in Lazio (Monte Argentario), in Tuscany (Viareggio; Livorno), in Liguria (La Spezia; Le Grazie) and in Veneto (Venice). In fact in these shipyards, in addition to the figure of the Shipwright and his aspirants, we find two work figures, the **Sawyer**, that selects and blanks the wood that will be used in the construction, and the **Caulker**, that with the tarred hemp tow goes to seal all the joints between the boards that make up the hull, so as to make it waterproof and thus preventing the ship from loading water and lunges. Three figures that even from this synthetic description we understand well that they are intrinsically linked to each other.



Picture 67 View of the Toulon Arsenal (France) where you see Sawyer, Shipwright and Caulker at work in the different areas. (Album Colbert (SH 140), planche 1)
SERVICE HISTORIQUE DE LA MARINE FRANÇAIS

Detailed description of old woodworking techniques, machine and tools used in Europe:

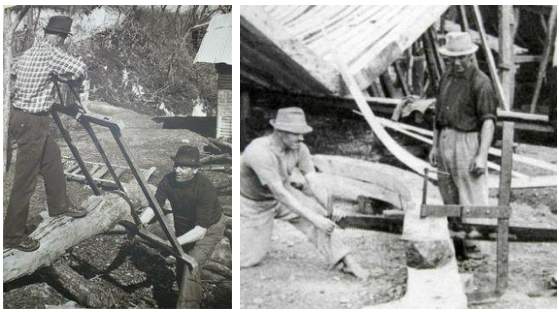
Definition of three key figures for the construction of wooden ships through the use of traditional techniques.

- The Sawyer

If we look at the modern timber sawmills and look at its transporter trolleys with large disc saws that quickly turn large trunks into regular axes and all of the same thickness ready for curing in a very short time, it will seem impossible to us that job it was handmade by men until just over fifty years ago. The Sawyer was precisely that artisan who was in charge of

the selection of the trunk (in some areas even the selection was made directly in the forests) and of its subsequent transformation into boards with shapes and curvatures suitable for being transformed into naval carpentry by shipwrights. He had to be a great connoisseur of the different types of wood not only to be able to select it but also to decide with which process to go after it to "saw", since each type of wood has different physical and material characteristics (fibers, resin, filaments, etc.). The selection of timber could take place at different times of the year in relation to different factors (type of timber, distance of the forest from the construction site, type of transport, etc.) while cutting operations took place mainly during the winter so that the cold made the wood drier and harder so that it could be sawn, in fact if the wood had been damp or worse still not seasoned it would have been impossible to saw it by hand. Once a trunk had been transported to the construction site, the first operation to do was to clean it from the bark and to square it using large treads. Once squared with a line and coloured chalk traced the cutting lines to follow.
The main working tool for the cutting operation was a saw about 1.50 meters long, mounted vertically on a wooden frame with handles at the top and bottom that were used to maneuver it. The more experienced Sawyer was in the upper part because in order to guide the cut so that in the end it was perfectly straight. A job not

only very tiring and hard because of the period of the year in which it was made but also of great precision, in fact from the quality of the cut depended the choice of the piece of carpentry to realize.



Picture 68 archive photos showing Sawyer working in the forests and shipyards. (Unknown authors)

- The Shipwright

The Shipwright was one of the prominent professions within a shipyard and an entire city, social position and mastery in the construction of ships were closely linked. The Shipwright had first to be an expert on the different types of construction timber, recognizing their essence and quality, guiding the operations of choosing, purchasing and supplying the material by sawyers or traders. The great knowledge of the different types of woods served not only in the purchase phase of the building material but also in the subsequent decision of how to use it. In fact, many times, for the different parts of a wooden ship, precise timbers were used, chosen because they had characteristics more suited to the task they had to perform. Obviously their

skill consisted also in drawing, tracing, shaping and building the different parts of a naval carpentry, operation done using an ax. The carpentry ax was used to make both the curved parts, such as frameworks, floorboards and fore and aft wheels, and the straight parts like the shafts for the sails, where starting from a trunk it was necessary to make the first octagonal section, then to sixteen sides and finally finish it with a round section. The ax allowed various processes, such as quickly roughing all types of timber or more detailed work such as sculls, joints, squaring, leveling and shaping with a variable profile, with results evidently tied to the skill of those who used it. In every region of the Mediterranean, as well as in the northern seas and even on the Black Sea, the Masters of Ax all followed the same training path by first learning the basic processes during their apprenticeship and then becoming experts, through the practice of repeating the models traditional and on-site experience, of fundamental elements such as the static and dynamic forces to which a ship is subjected and which regulate the cross-sections and joints of the building. It is obvious that each sea has different characteristics (depth, coasts, winds, etc.) that have determined very different types of ships. In fact, the main distinguishing feature of shipbuilding is the vast number of existing building types, related to the type of use, environmental conditions, local traditions and

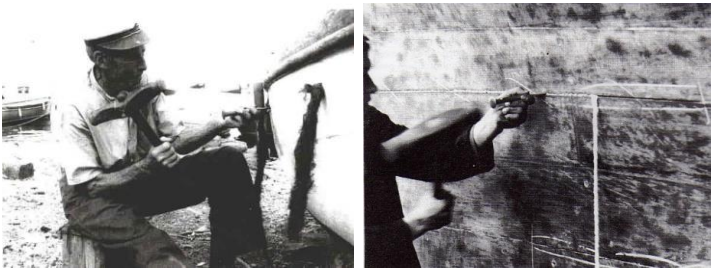
even aesthetic ones. For each type of hull, there is a specific rigging system, a specific sail with its specific mast. All these elements are linked to each other but not in a unique way, for example, a type of hull could withstand completely different navigations depending on the type of rigging and sail used, or the same rigging can work very well for different types of hull. This final deduction is fundamental to understand what the Shipwright could become today, where the need is no longer to build new ships but to maintain and renew existing ones.


Picture 69 archival photos that take up Shipwright at work in shipyards. (Unknown authors)

- The Caulker

The Caulker, is a fundamental figure for a new ship to take to the sea. In theory, a Caulker is a skilled worker who took care of caulking the hull of wooden ships. In practice, all he did was thread pitch between the joints of the shell that made up the hull, so as to make it impermeable to water. An operation in simple and repetitive theory but which actually required a lot of precision, in fact the operation of the caulking was originally done exclusively by the Master

Caulker and to become a master they needed 8 years of apprenticeship, while 5 were enough to become a Shipwright. The caulking of a wooden hull was done periodically as a maintenance operation. In fact, not only the new hulls were caulked before taking to the sea, but also the other ships were periodically brought to dry inside the arsenals to be subjected to a whole series of maintenance works. Continuous maintenance was a fundamental operation so that wooden ships could take to the sea without any problem, in fact for larger ships the Caulker as well as the Shipwright were embarked on board so that repairs were made without the ship was forced to return to the port. The caulking, as already mentioned above, is a technique of waterproofing the hull, which consists in creating a junction between the boards of the shell that can withstand the force of the sea and withstand over time. The caulking operation is done strictly by hand, using a wooden mallet called "*Maglio da Calafato*" and a flat-tipped obtuse chisel called "*Malabéstia*". This particular chisel that is beaten in a rhythmic manner with the mallet allows to insert and forcefully push the fibers between the joints or "*Comenti*" of the hull planking, so as to make it perfectly sealed and watertight. In the past the material used for this operation was hemp or oak impregnated with pitch while today we find cotinine or hemp fiber impregnated with synthetic resin or tar.



Picture 70 archival photos that include Master Caulker at work in the shipyards. (Unknown authors)

Glossary:

Glossary of technical terms (definitions taken from www.treccani.it).

- **Accept:** Cutting tool for woodworking (sometimes also used for squaring soft stones), similar to the ax, but smaller; it consists of a curvilinear cut iron with an eye into which the wooden handle is inserted.
- **Bow wheel:** Curved structural element that connects the keel with the fore bow.
- **Current:** Longitudinal element of wood that serves as a reinforcement for the shell of a ship's hull.
- **Fishing lines:** In the language of shipyards, a thin cable soaked in paint, which is well stretched, is used to draw lines on wooden trunks and generally on the elements of wooden hulls.

- **Frame floor:** In shipbuilding with wood, an essential element of any transverse bone of the bottom of a hull, generally consisting of the central part of the rib or trim connected to the keel
- **Framing:** The set of structural elements that make up the hull of a wooden ship (Keel; Madiere; Knee; Oarlock; etc.)
- **Interlocking:** The operation of fitting, that is, inserting any piece into another body so that it remains solidly planted. In carpentry and joinery, jointing together is the connection of two wooden elements without the use of nails, made so that the protruding parts of one fit into the special slots carved in the other.
- **Livellature:** Result of the leveling operation, which makes a surface flat eliminating ditches and protrusions.
- **Maglio da Calafato:** Special wooden hammer, shaped and perfectly symmetrical above and below the handle, with the possibility of hitting both on one side and the other. The Mallet has a longitudinal incision that was intended to cushion the blows and near the two extremities, where it strikes, we find an iron ring that avoids the breaking of the tool.
- **Malabéstia:** Dull-cut caulked chisel with which force is introduced between the wooden boat's features to make them watertight.

- **Mast:** In sailboats the masts, vertical or slightly inclined towards the stern, are made of wood (pine, fir, larch, etc.) with steel elements, and consist of a single piece, or several parts, called from the bottom towards the major mast ship, topmast, mating; firmly fitted to the base, they are also supported by cables (fixed or dormant maneuvers) arranged, with respect to the ship, transversely (shrouds and backstays) and longitudinally (stays).
- **Rib/Frame:** Structural element that constitutes the transversal framework of the keel, on which the outer shell of the hull is housed.
- **Rigging:** In the marina, the set of shrouds. By extension the set of fixed cables that support sailboats in sailing ships, more generally means the rope of ships.
- **Saw:** Tool intended for cutting lumber consisting of a steel blade, equipped with toothing, which is made to slide on the object to be cut with back and forth motion or continuously, with appropriate pressure.
- **Scull:** Interlocking to "Palella". Type of simple joint between wooden elements used, in carpentry elements, to reach lengths greater than that of the logs.
- **Squaring:** Work the wood reducing it to a square section. Operation that is carried out on a piece of trunk with the hatchet.
- **Stern wheel:** Curved structural element that connects the keel with the fore stern.

- **Trim:** Making an object less bulky to bring it to the desired dimensions, in particular giving the first shape to an element to rough it and prepare it for the finishing work.
- **Variable profile shapes:** An operation that consists in giving shape to the structural elements, obtaining different sections and profiles in the different points of the element.

Conclusion:

It is widely believed that many technological innovations related to materials, tools and construction techniques are bringing many traditional crafts to extinction, and the masters of building wooden boats such as **Sawyer**, **Shipwright** and **Caulker** are no exception. However, this does not mean that this immense wealth of knowledge must be lost. It is a widespread opinion among researchers, designers and shipowners that this "know-how" by establishing new meaningful relationships with technological innovations, business strategies and design can become a driving force for rebirth for all shipyards and for the entire construction sector naval.

The debate focuses on the figure of the artisan of the future, a "craftsman 2.0" who completely rethinks his role and who was very well defined by **Stefano Micelli** in his book "*Futuro Artigiano*" with these words:

"I prodotti non si vendono più semplicemente come oggetti: sono storie, tecnologia, cultura, arte. Per questo bisogna venire allo scoperto. Bisogna saper raccontare la propria storia e il proprio saper fare, spesso accompagnati da istituzioni credibili - università, musei, associazioni di categoria, centri di ricerca in grado di sostenere proposte ambiziose."

"Products are no longer simply sold as objects: they are stories, technology, culture, art. For this reason we must come out. One must know how to tell one's own history and know-how, often accompanied by credible institutions/universities, museums, trade associations, research centers capable of supporting ambitious proposals."

From this quote we can understand very well which can be the winning road for the Masters of Ax and their shipyards. First of all, transforming them into a force linked to the tailoring and exclusiveness of their work, telling it to the world in a fresh and unconventional way through storytelling. Furthermore, the fact that within the Mediterranean there is such a high concentration of small shipyards represents an unexpressed potential for the whole shipbuilding sector. As previously mentioned, the European

area has a vast amount of types of wooden ships but also a substantial uniformity of the basic processing tools and techniques (keel, plating; caulking; etc.). So if we were able to put all shipyards in an area into a system by making them concentrate no longer on the construction of new boats but on the repair and reconversion of existing wooden boats we would immediately have an encounter between supply and demand. In summary, what we want to suggest with this research is nothing but a "*innovation process*" with which to recombine and systemize a whole series of elements (artisan know-how, shipyards, NEETs, local economy, etc.) that we have at our disposal but at the moment they represent only unexpressed potential.

Below are the links to the web pages of some Italian shipyards, which in their tradition have made very interesting experiments using wood in an unconventional way.

ITALY

- www.bellininautica.it/collezione-riva-epoca
- www.anticocantieredellegnoaprea.it
- www.apreamare.it
- www.baglietto.com/heritage
- www.baglietto.com/160-anni-di-nautica-italiana

13. PORTUGUESE JOINERY "NEW TECHNIQUES"

Website:

- https://www.wewood.eu/news/2015/5/20/traditional-joinery-techniques
- https://www.tasteofportugal.eu/post/wewood

Short description of its main activity:

Wewood – Portuguese Joinery is a Portuguese brand specialized designing, manufacturing & exporting solid wood furniture characterized by enduring aesthetics and functionality, designed with expertise and handcrafted with love, extreme care and attention to detail.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Joinery is a part of woodworking that involves joining together pieces of wood to produce more complex items. We use traditional methods of making such as: mortise and tenon, dovetail, lap and halved joint. Long grain to long grain connections combined with wood glue that seeps deep within the timber creates an exceptionally strong connection.

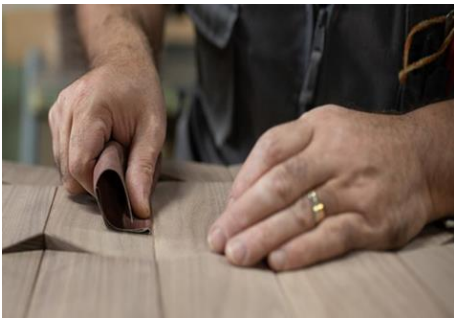
Picture 71 Factory Working
© Wewood Portuguese Joinery

The fact that they are in Portugal and in this specific area with a long Historically, joinery was the medieval development of frame and panel construction, as a means of coping with timber's movement owing to moisture changes. Framed panel construction was utilized in furniture making. The development of joinery gave rise to "joiners", a group of woodworkers distinct from the carpenters and arkwrights (arks were an intermediate stage between a carpenter's boarded chest and a framed chest). The original sense of joinery is only distantly related to the modern practice of woodworking joints, which are the work of carpenters. This new technique developed for several centuries, and joiners started making more complex furniture and paneled rooms.

Picture 72 Factory Working
© Wewood Portuguese Joinery

Joints can be designed to hold without the use of glue or fasteners; a pinned mortise and tenon is an example of this. Glue is highly effective for joining timber when both surfaces of the joint are edge grain. A properly glued joint may be as strong or stronger than a single piece of wood. However, glue is notably less effective on end-grain surfaces. Animal glue is soluble in water, producing joints that can be disassembled using steam to soften

the glue. Various mechanical fasteners may be used, the simplest being nails and screws. Glue and fasteners can be used together tradition in the manufacture of furniture is an advantage in terms of know-how and production.



Picture 73 Factory Working
© Wewood Portuguese Joinery

Their customers recognize the quality of the Wewood products and their design. It's always difficult to compete with proven Italian and Scandinavian brands and several decades of activity, but Wewood sees this as a challenge and a way of overcoming. Their customers recognize the quality of the Wewood products and their design. It's always difficult to compete with proven Italian and Scandinavian brands and several decades of activity, but Wewood sees this as a challenge and a way of overcoming. For Wewood, the inspiration for new designs always considers several factors: design, functionality, viability and the commercial side. Each designer gest inspired in a very individual way and foe by many sorts of things as a bridge, a city, an artist, a geometric shape, a pattern.

Sometimes they have an idea for a piece and we give a briefing to several designers, other times it is their own design department that decides to create a new piece and sometimes there are designers from outside who come up with pieces that they think make sense to their collection.

Picture 74 Factory Working
© Wewood Portuguese Joinery

Picture 75 Product Store
© Wewood

Wewood - Portuguese Joinery, has emerged as a platform that brings together several designers, initially only national designers, but currently they collaborate with several international designers (mainly European).

Picture 76 Product Store
© Wewood

Sitography:

- https://www.wewood.eu/news/2015/5/20/traditional-joinery-techniques
- https://www.tasteofportugal.eu/post/wewood

Conclusion:

Design and create furniture art, the tradition of working with the noble material of wood, and the artisans and joiners who create the pieces with their years of wisdom and experience and their love and dedication to the art that they perform. They present to their admirers with the most innovative designs and highest quality works of art which bring emotion in to their interior environments.

14. WOOD AND GILDED WOODCARVING IN PORTUGAL

Website:

- https://www.covetfoundation.com/events/the-wonders-of-wood-carving-art/
- https://en.wikipedia.org/wiki/Gilded_woodcarving_in_Portugal

Short description of its main activity:

Wood and Gilded woodcarving in Portugal is, along with tile, one of the country's most original and rich artistic expressions. It is usually used in the interior decoration of churches and cathedrals and of noble halls in palaces and large public buildings. An impressive collection of altarpieces are found in Portuguese churches. Originating in the Gothic era, Portuguese gilded woodcarving assumed a nationalist character during the 17th century and reached its height in the reign of King D. João V. In the 19th century it lost its originality and began to disappear with the end of the revival era.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Carving is one of the most ancient arts in Human History, it exists since the first men in prehistory, and it is considered the fundamental woodwork method. Carved designs appear in furniture design, in the building components of our homes and places of worship, in the

household items we use daily and as mesmerizing and beautiful decorative sculptures. Gilded woodcarving in Portugal started during the Gothic period following architectural models, taken mainly from sculpture and goldsmithery, using the decorative vocabulary of the style. Gothic arches, pinnacles, columns, etc., are associated with sculpture or painting. The typical form was a wooden structure, with the gold carving kept for the architectural part of the "machine" and the rest of the elements left either in plain wood or covered with colour. In spite of the small number of surviving altarpieces (the overwhelming majority was replaced during the Baroque period), it is known that they followed the international taste, such as the main altarpiece in the old Cathedral of Coimbra. All its techniques are connected to handcrafted woodworking and usually use a cutting tool in one hand, a chisel with both hands or a chisel with one hand and a mallet with the other. The wood carving techniques always create wooden figures or sculptural ornaments of wooden objects. Carving wood by hand involves innumerous methods and tools to turn the original raw piece into a finished work of art. The traditional carving tools that are used most often are: chisels, knifes, gouges, hammers, along with sanding, painting or other methods to carefully finish projects. Wood is a very light material that can take very fine detail and it's easier to sculpt than stone. Being an easy

material to find in nature and due to its versatility, it was always a favorite for artists. In the wood carving process, as in stone sculpting, the first step is to remove the excess of wood trying to obtain an outline of the final shape.


Picture 77 Church of Santa Clara (Porto PT) and traditional instrument working - ©Tripadvisor ©Dreanstime

The next steps involve more precise and detailed work. However, unlike stone sculpting, wood carving needs to chip according to the fibrous structure of the wood that is unique to each tree as it is affected by its growth.

Picture 78 Industry working
© Covet foundation

Gilded woodcarving is a less expensive and more flamboyant artform than other technically more demanding types of decoration, such as sculpture or painting, although tile is also inexpensive.

The amount of gold required is relatively small. It does not require the extensive training of a sculptor or painter. The forms are copied and adapted from decorative architecture and inspiration taken from books. During the seventeenth century a typically Portuguese vocabulary developed. After being transported to the empire, it adapted to local traditions and artistic capacities, as is visible in Brazil or in India - mainly in Goa.

Picture 79 Industry working
© Boca do Lobo

Sitography:

- https://www.dreamstime.com/photos-images/wood-carving.html
- https://www.covetfoundation.com/events/the-wonders-of-wood-carving-art/
- https://www.bocadolobo.com/blog/boca-do-lobo-news/joinery/

Conclusion:

Wood and Gilded woodcarving in Portugal , is a slow and hard activity that starts by using large cutting tools and ends with small blades. It is always a dedicated and detailed process that involves a lot of passion. The finest wood crafts come from the hands of the best master artisans that have not only the talent and skill but also the precious knowledge of one of the most interesting materials ever used in art. A talented master wood carver needs to be able to adapt several different techniques and skills that take years of trial and error, practice and dedication to learn. This ancient art is always learnt with the experienced master artisans that pass their precious knowledge to the young generations. In our opinion this technique could be applied to several other arts, like jewellery, filigree, and others. What marks the difference in the pieces of Boca do Lobo is the touch of modernity given to traditions almost forgotten in Portugal, such as the tile, filigree or the gilded carving, joining together.

Picture 80 Product exibition
© Boca do Lobo

The history of Boca do Lobo reborn repeatedly, marking each year a new inspiration, a new challenge, but with the same objective and passion. The restoration of the antique arts of manual work, honouring the art of hand painted tiles, marquetry, joinery, upholstery and metalwork. Iconic pieces such as Pixel Cabinet, Diamond Sideboard, Fortuna Dining Table and more, go beyond the furniture and its primary function, pushing the object to new levels, blurring the boundaries that would separate functionality with art. Most of the techniques and finishes used by Boca do Lobo, throughout the entire production processes are completely artistically and technical “inventions” of the designers.

Picture 81 Product exibition
© Boca do Lobo

15. DISCOVER BOCA DO LOBO'S LEGACY OF DESIGN AND CRAFTSMANSHIP

Website:

- https://www.bocadolobo.com/en/

Short description of its main activity:

Fine furniture calls for beautiful forms and one-of-kind silhouettes. Boca do Lobo was born from heritage and innovation; with the strong belief that the success and growth have been determined by the commitment to design, produce and carry luxury furniture and unique experiences. The design brand continues to preserve the cultural legacy while successfully move towards the future, and remain to be ahead of the of the design scene.

Picture 82 Industry working
© Boca do Lobo

Detailed description of old woodworking techniques, machine and tools used in Europe:

Boca do Lobo was born naturally, without any strain, without any obligation, was born as a need and desire at the same time. As a need to represent what no one until the beginning of 2005 had come to do: to duly represent Portugal's talents and crafts and as a desire to create a brand that would endure and flourish through the years into something quite different from the rest.

Picture 83 Industry working
© Boca do Lobo

BOCA DO LOBO furniture is an exclusive emotional experience, a sense of belonging and a state of mind. We strive to encourage sensational experiences by creating beautiful pieces which are passionately inspired and handcrafted in Portugal by a staff that loves what they do; experiences which pass on the feeling of exclusivity. Our designers possess an undeniable talent for composing pieces which stir emotion in their admirers. Their artisan's wisdom, accumulated from years of experience, is instilled with love and dedication in the art that they perform. No detail or element is overlooked as

we offer the best at the frontier between design and art. Each piece will bring you on a journey to sources of pleasure you may have forgotten, and take you to places you have never been before; a journey to BOCA DO LOBO world-a world of emotions.

Mr. Cosme is the most prominent name regarding the woodworking team, and like many Portuguese joiners, he started when he was a child in one of the many local carpentries. Mr. Cosme is also responsible for exploring different wood techniques such as wood carving or marquetry, he reveals "After learning the art of handling the tools you can do any kind of piece. When you look at the piece you know immediately what needs to be done". The history of Boca do Lobo reborn repeatedly, marking each year a new inspiration, a new challenge, but with the same objective and passion. The restoration of the antique ar ts of manual work, honouring the art of hand painted tiles, marquetry, joinery, upholstery and metalwork.

Picture 84 Industry working
© Boca do Lobo

Picture 85 Product exibition
© Boca do Lobo

Iconic pieces such as Pixel Cabinet, Diamond Sideboard, Fortuna Dining Table and more, go beyond the furniture and its primary function, pushing the object to new levels, blurring the boundaries that would separate functionality with art. Most of the techniques and finishes used by Boca do Lobo, throughout the entire production processes are completely artistically and technical "inventions" of the designers.

Picture 86 Product exibition
© Boca do Lobo

The richness and variety of our cultural heritage with centuries of history,

the Portuguese legacy couldn't be more fertile to our designer's inspiration. A unique universe which continues to fuel the creative minds behind the brand. Extraordinary design projects of top architects, refined interiors created by the best interior design firms, amazing work of groundbreaking artists, whose influence changed the world as we know, are a great source of inspiration that motivates us to do more and better.

Royal Dining Table

The contrasting personality of this table is a beautiful combination of Baroque and Contemporary lines, reflecting Boca do Lobo's philosophy of challenging the past through the future.

Picture 87 Product exibition
© Boca do Lobo

Sitography:

- https://bocadolobo.com/blog/boca-do-lobo-news/discover-boca-do-lobos-legacy-of-design-and-craftsmanship/
- https://www.bocadolobo.com/en/landing-page/legacy/
- https://www.bocadolobo.com/en/inspiration-and-ideas/unveiling-new-edition-boca-lobos-legacy-magazine/

Conclusion:

Design and create furniture art, the tradition of working with the noble material of wood, and the artisans and joiners who create the pieces with their years of wisdom and experience and their love and dedication to the art that they perform. They present to their admirers with the most innovative designs and highest quality works of art which bring emotion in to their interior environments.

16. CARPENTRY UNIT Workshop OZARA d.o.o.

Website:

- www.ozara.si

Short description of its main activity:

Furniture, fittings, wooden products, custom furniture, staircases, kitchens, pallets, ... classic wood timber program

Detailed description of old woodworking techniques, machine and tools used in Europe:

The carpentry workshop of OZARA d.o.o., is mainly oriented towards the production of custom-made products (especially furniture for business and residential buildings, building furniture and urban equipment such as benches, fences, bulkheads, baskets, etc.), as well as all other parts of general carpentry, such as laying laminates and parquet floors, installation of partitioning wooden walls, laying of wall panels, etc.

Picture 88 Image product of workshop OZARA d.o.o.

There used to be a lot of manual processing of wood (hand mand shaping, hand sawing, hand grinding, gluing, work with hand screwdrivers - level – (not crossed), there were lots of nailing with forged nails, hand drills etc.

Today - a format saw is used for cutting, a band edge adhesive machine is used, CNC machine saw, hot presses are used for gluing, where adhesives are glued in for veneer bonding, now battery drills are used and also grinding machines. Previously, wood that was use, was more or less solid wood, today much more from the "iveral" – chipboard wood. Furniture production lasted for months (up to 6 months) in "old" days. Now, when we have all the machines (CNC, saws, etc), it can be done much faster (1 month). The turning remained in principle the same, only the chisels today are a little better, the treatment principle is the same. Used to be done only manual – today, work is done mainly mechanical - drive is electricity.

Picture 89 Image product of workshop OZARA d.o.o.

Constructions were previously made as wooden construction, today metallic.


Picture 90 Image product of workshop OZARA d.o.o.

Wood that was used before was mainly solid wood, today, chipboard wood is mainly used. When making roofings, technique used was also mainly manual, with axe, special axes, cutters. Today, you can cut the necessary objects with electric saw. Hand saws were used, but today, ther are basically not used at all. Furniture "feet" were turned, only led wooden slats existed, but today, we have "silent closing" slats, metal guides, soft closing, etc. The hinges today are mainly metal, piano hinges were used, and are still used sometimes. Mainly plain locks were used, today we use cylindrical locks. Also handles were all hand-worked from wood, carved or forged (what the blacksmiths did). Today, there is a lot of products on the market, which you can use in making of furniture.

Bonding and gluing today takes 10 minutes at temperatures (90 degrees Celsius) – back in the "old" days, same process lasted for one day.

Picture 91 Image product of workshop OZARA d.o.o.

Sitography:

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Conclusion:

The principles and techniques are basically very similar, the same even. Now, everything it's just more or less motorized with better tools to make wood products. To get circles in wood production, you had to sometimes "cook" the wood for it to soften and then it was bent. Today, presses are used, heaters that heat up the wood and wood is bend like that, which is faster and again, mainly motorized. Trend is, that the materials sometimes used, are coming back, the massif (solid wood) returns, the massive wood treatment, a massive wood tables with gloss, etc. Sometimes, everything needed to be lacquered, today the chipboard wood that is used, comes already lacquered. The protection

of wood was made with special oils (there was no lacquer, it was protected with old oil, motor oil even). Today, wood protection uses new products, for instance, SADOLIN wood protection products.

Machinery list in Ozara carpentry unit workshop:

- T Saw complet
- Carpentry machine
- Compressor 3800B
- Planter
- Saw TS 55
- Milling machine
- Sata gun
- Press
- Edge adhesive
- Saw, drilling machine
- Flat press
- Circular saw
- Etc.

17. LUCUS WOOD VIBE

Website:

- https://www.lucuswood.com/

Short description of its main activity:

Hand made wood products, wine stands, table wine stands, designer wood lights, designer wood frame mirrors, wardrobe stand, wood tables, designer nest home settings, different design woodart products.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Picture 92 I handmade products Lucus wood

Manual processing of wood belongs to the field of "traditional wood processing". Which is not quite true, since handmade items are still highly valued and achieve high values. Manual processing is also indispensable in modern wood production. When we think of manual processing of wood, one can think of heavy, time-consuming work with tools from ancient times.

In fact, the work with the wood is pleasant, the material gives a warm feeling, it is light, we do not need much energy to process. Many people spend their free time in manual processing of wood when they produce

various useful or even decorative items. Every product of wood is unique in a way, because the wood offers us unique textures, colours and shapes that cannot be found in most other materials. In such a work, people relax, relax, which is their main goal. In addition, wood is a

Picture 93 Image of handmade products Lucus wood

natural material, biodegradable, ecologically acceptable.

Of course, this applies only if, for machining, especially in surface protection, we use natural materials such as, for example, bee wax, linseed oil. Wood processing is, on the other hand, a complicated process because the wood is porous (perforated), non-homogeneous, hygroscopic (absorbs moisture), anisotropic (different in anatomical directions), so we have to know the properties of the material we are processing. Manual woodworking is also indispensable for the economic use of wood, not only for artistic purposes. As a result, carpenters also deal with woodworking in new educational programs.

Picture 94 handmade products Lucus wood

Even the most modern machines cannot often replace a carpenter with good manual skills, because wood is a "special" material that requires a lot of knowledge from a person, and above all a feeling. Despite the great development of woodworking technologies (eg CNC, laser, water jet, etc.), traditional wood processing methods are still present and needed in the production of furniture and other wood products. Especially in the production of brick, unique, artistic furniture and fine wood products. From the perspective of ecology, traditional hand-treatment is environmentally friendly because it uses low energy and environmentally-friendly coating. In economic terms, it is only suitable if the product reaches an appropriate selling price that covers longer manufacturing times.

Picture 95 Image of handmade products Lucus wood

Woodworking hand tools are divided into the following groups:

- for sawing;
- for planning;
- for chiselling and debt;
- for crushing and smoothing;
- for drilling and screwing;
- for towing.

Sitography:

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Conclusion:

Every single product in LUCUS WOOD VIBE is unique, made from natural wood. All products are first "made in nature" as they say. What has grown in an open field, has its own shape and life. Then, all products are handmade, used only with necessary tools and machines for designing the product. Additional use of steel is also used (for stands, and similar) to get the final product. (where needed).

Picture 96 handmade products Lucus wood

18. O2 WOOD

Website:

- https://o2wood.si/en/

Short description of its main activity:

Wooden artefacts in the basement workshop

Detailed description of old woodworking techniques, machine and tools used in Europe:

O2 wooden furniture for playing and dreaming is created under the skilful hands of Metka Zver. She creates the wooden artefacts in the basement workshop of her house by the edge of a forest on the hillside near Ljubljana, the capital of Slovenia. A few years ago, Metka moved there with her family. Embraced by the adjacent woods, she felt a wish to work with wood and create beautiful and useful objects from this warm, primal material.

Picture 97 O2 WOOD products
(photos by Tomo Novosel, Saša Kovačič)

After over a year of learning about wood and about different techniques of woodworking, she has decided to leave her career in marketing and dedicate her work entirely to creating wooden products.

Picture 98 O2 WOOD products
(photos by Tomo Novosel, Saša Kovačič)

Metka especially loves working with the lathe. She makes large and small wooden bowls, mortars, cake stands and plates. Diverse food serving boards are also made in her workshop. Food, for example, will be served on them at the Zemono palace in the Vipava Valley. The well-known Slovenian master chef Tomaž Kavčič has ordered these boards, which are attuned to the minimalist design style, for the presentation of his cuisine at the 2015 Expo in Milan. O2 product collection features telephone and tablet stands and tables which can be used as a laptop stands. Passionate readers will be able to find the miniature reading ring, designed to hold open the book, and the stylish house-shaped book-stand, on which you put down an open book.

Her practical wooden earring-holder in the shape of a typical Slovenian outdoor hayrack is a manifestation of her love for architecture, which can be sensed throughout her work. All of O2 products are made from wood of the trees, that grew naturally, without any pesticide treatment, in Slovenian courtyards and woods. Each product differs at least slightly from all others, thus none of them are completely flawless. It is precisely these tiny deficiencies that prove that the products are all genuinely hand-made. Products are made of massive Slovenian wood. Walnut mostly, but sometimes plum wood is used, apple-tree wood, pear wood etc. The finished products are treated with tung oil, which provides the wood with completely natural protection. Wood maintenance is important, so they advice is to rinse wooden product under warm water and use mild soap, if necessary.

Picture 99 O2 WOOD products
(photos by Tomo Novosel, Saša Kovačič)

Do not ever try to wash it in a dish-washer. Likewise, the wood will not appreciate it if you use potent cleaning products. If you wash it often, the wooden product will lose its shine. In case that happens, just put some oil on it. Linseed oil is prefered, but ordinary olive oil will do just fine.

Sitography:

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Conclusion:

Hand techniques are applied to make a modern looking, design products.

DIGITAL WOOD ARTISAN

research

METHODS OF SOCIAL INCLUSION

METHODS OF SOCIAL INCLUSION

index

METHODS OF SOCIAL INCLUSION

1. "VOCATIONAL TRAINING AND PROMOTION OF PUBLIC ASSISTANCE RECIPIENTS IN THE LABOUR MARKET"

Website:

- http://www.mlsi.gov.cy/mlsi/sws/sws13.nsf/dmltheproject_en/dmltheproject_en?OpenDocument

Short description of its main activity:

During 2005, the Social Welfare Services in Cyprus began the materialization of the Project "Vocational Training and promotion of Public Assistance Recipients in the Labour Market" under the Single Programming Document, Objective 3, "Human Resources". The Project is co-financed by the European Social Fund and the Government of Cyprus. It falls within the wider State policy for promotion of equal opportunities for all, in terms of access to the Labour market, with particular attention to persons at risk of social exclusion.

Picture 1 Institutional image project

The Social Welfare Services are the final beneficiaries of the project, which is going to provide vocational training to a number of unemployed recipients of public assistance. According to the Scheme of Subsidizing Employment Positions of Beneficiaries of Public Assistance in the Private Sector, the Social Welfare Services will support the integration or reintegration into the labour market of the recipients of public assistance, who will successfully complete the vocational training programme.

Detailed description of old woodworking techniques, machine and tools used in Europe:

The Project "Vocational Training and promotion of Public Assistance Recipients in the Labour Market" will contribute towards the end of the reliance of beneficiaries of public assistance. The result will be their social and professional integration.

The Actions of the Project aim to improve the target groups professional qualifications or enable them to acquire new ones in order to:

- Meet the real needs of the labour market;
- Combat digital illiteracy;
- Improve their communication skills;
- Provide them constant counseling advice;
- Improve their self-esteem and self-confidence.

Consequently they will have the opportunity to become competitive in the Cypruś labour market and thus assuring them equal employment opportunities. In order to meet the above-mentioned goals, specialized programmes will be arranged for the training of 400 beneficiaries of public assistance in the areas of communication skills, computers and vocational training.

The programmes will be designed to meet the needs of the 400 beneficiaries and at the same time the needs of the labour market. 260 out of 400 individuals who will successfully complete the training courses, will integrate into the labour market. In order to safeguard their employment, the employers will be offered subsidy up to 40% of their gross annual salary.

Any other information:

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Conclusion:

We can check if we can access the training material (communication skills and self-development programmes) to use as a good practise.

2. FIRST STEP

Vocational training for integration in the Cyprus labour market

Website:

- www.firststep.com.cy

Short description of its main activity:

Picture 2 institutional image project

This project addresses third country nationals (especially refugees and asylum seekers) offering them work orientation and vocational training programs aimed at facilitating their integration into the labour market in Cyprus.

Detailed description of old woodworking techniques, machine and tools used in Europe:

The main objective of the FIRST STEP project is to assess skills and qualifications, as well as to provide training programs and tailored advice, in order to create a robust understanding of the labour market and facilitate quick and effective access to employment for Third Country Nationals. The overall goal of the project is to help these groups develop basic social, work, and language skills, and provide vocational training to facilitate their integration into the

economic and social life in Cyprus. It also aims to offer tailored advice in order to create a robust understanding of the labour market, facilitate effective and quick access to employment, and achieve self-reliance.

The above goals will be achieved through the organization and implementation of vocational training programs. These programs offer a wide range of skills for the development of basic, communication, organization, and other work-related capabilities. Specifically, the training programs include:

- Employment Policies and Legislation;
- Soft Skills Development (communication, organization, teamwork);
- Professional Development Skills (job interviewing, CV building, identification of employment opportunities);
- Study on several professions (e.g. chef assistant, housekeeping, bakery, warehouse worker);
- English lessons

The training courses are specifically addressed to recognized and resettled refugees, international protection beneficiaries, asylum seekers, and third country nationals with either student, work, or spouse visa. After the period of professional orientation, the project will finish with a 1-year scholarship at the European University Cyprus, which will be awarded to the candidate with the highest score achieved during

the training phases. The project is co-funded by the Asylum, Migration and Integration fund and the Republic of Cyprus. It was first implemented in 2019 and is expected to last until 2020.

Any other information

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Conclusion:

The above project is an example whose objectives are very close to the aims of the DWA project – that is, both projects aim to encourage the integration of disadvantaged groups in the labour market and the promotion of their skills and competences in relation to the modern society. It is an innovative approach that challenges the exclusion of vulnerable individuals, who lack employment-related capabilities, a fact that prevent their normal integration in society. We may check if we can access the training material that are related to the DWA project (e.g. the training regarding the soft skills).

3. YEU Cyprus
Human Library events

Website:

- http://www.yeucyprus.org/

Short description of its main activity:

YEU Cyprus stands for Youth for Exchange and Understanding Cyprus and it is a non-political, non-governmental organization (NGO) based in Cyprus. It was established in 1995 with the aim to foster closer co-operation and better understanding among the young people of the world through the exchange of information, experiences and ideas. YEU Cyprus is one of the biggest youth organizations in Cyprus numbering more than 1000 members. It is considered to be one of the most active organizations of the island realizing several activities both on international and local level.

Picture 3 Institutional image project

Detailed description of old woodworking techniques, machine and tools used in Europe:

YEU Cyprus, among other activities for social inclusion organises Human Library events that is a way for people to reach out and connect with individuals in their community that they might not normally engage with (impact on learners and community). A Human Library is an event that aims to create dialogue and understanding between people. Individuals volunteer as human 'books' and participants in the event can 'read' the book- meaning they would have a one on one conversation with the volunteer and share in a dialogue about that individual's experience. 'Books' are volunteers from all walks of life who have experienced discrimination based on race, religion, sexual preference, class, gender identity, sex, age, lifestyle choices, disability and other aspects of their life. The Human Library provides the opportunity for the community to share and understand the experiences of others in their community. Usually, there are 8-15 human books and the number of the visitors depends on the event.

The Human Library or "Menneskebiblioteket" as it is called in Danish, was developed in Copenhagen in the spring of 2000 as a project for Roskilde Festival by Ronni Abergel and his brother Dany and colleagues Asma Mouna and

Christoffer Erichsen. The original event was open eight hours a day for four days straight and featured over fifty different titles. The broad selection of books provided readers with ample choice to challenge their stereotypes and so they did. More than a thousand readers took advantage leaving books, librarians, organisers and readers stunned at the impact of the Human Library.

Any other information:

HUMAN LIBRARY facilitation guide

- https://www.erasmusplus.ro/library/files/Ghiduri%20COnnector%202017/Human%20Library_Connector%202017.pdf

Conclusion:

This is an innovative approach to challenging stigma, stereotypes and prejudices through a non confrontational and friendly conversation. To give a voice to groups in the community that are excluded and to help bring about platforms that support a greater understanding of diversity and social cohesion. We could organise a similar activity during the training, where some of the participants will volunteer as the human books and will share their experience.

4. C.A.R. Centro de acogida a refugiados (Help Center for Refugees) in Mislata, Valencia

Website:

- http://extranjeros.mitramiss.gob.es/es/ProteccionAsilo/car/

Short description of its main activity:

Picture 4 Image C.A.R. project

Refugee Shelter Centers are part of the Centers network of Migrations, working under the General Subdirectorate of Integration of Immigrants, as public social service establishments specialized in temporary reception and primary care for people asylum seekers, refugees, or under the temporary protection regime and other subsidiary protection statutes in Spain. At the beginning, the center had as its main objectives the accommodation, the maintenance and urgent and primary psychosocial care but nowadays C.A.R. Mislata is a Specialized Services Center.

Detailed description of old woodworking techniques, machine and tools used in Europe:

- *Number of people taking part in the project*

C.A.R. Mislata can host up to a maximum of 120 people (families or single people) from more than 30 countries.

The current CAR Technical Team is formed by psychologist, social worker, employment manager, community mediator, integration technician and leisure time technician.

- *How did it originate?*

The Refugee Shelter Center, C.A.R Mislata, Valencia, emerges as response to the accession of Spain, on July 22, 1978, to the Convention of Geneva of 1951 and the New York Protocol of 1967.

Picture 5 Image C.A.R. headquarters

- *How long has it been established?*

Since it was created, back in 1991, it has hosted refugees from more than 90 countries.

- *Main challenges in running it?*

*it's beginning: C.A.R. Mislata lived some rushed times at the beginning due to the neighborhood's rejection of the center. Finally an agreement was reached when C.A.R. Mislata accepted to cede 500 square meters to an association in charge of activities for elderly people. On the other hand, the CAR came to be built between the "border" of two cities, Valencia and Mislata. Odd numbers belong to Valencia and the even numbers to Mislata city. Therefore, there were always "small doubts" in the use of Municipal Services, about whether it belong to us the services of Valencia or of Mislata, doubts that sometimes came even from the services centers themselves that were demanded.

*coexistence of more than 10 religions and more than 30 citizenships: in the C.A.R. center live together around 10 different religions from more then 30 countries, that mean also at least 30 different cultures with so many different traditions and customs. According to Felipe, the director of the C.A.R. in the last 25 years, such a multicultural environment is possible to live together peacefully, learning one from each other thanks to the respect that all the residents of the C.A.R demonstrate every day.

- *Impact on learners*

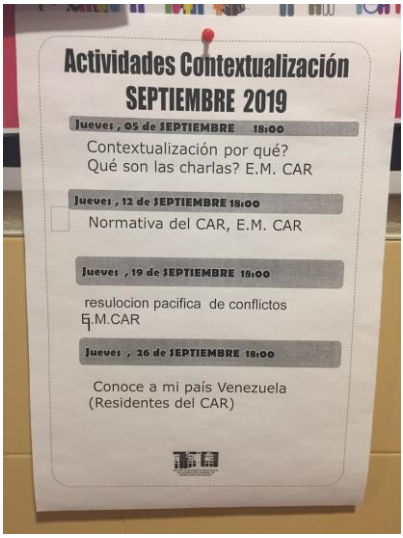
The beneficiaries of the C.A.R. are refugees people which receive a place to stay during 6 months up to 12 months. During that time it is mandatory to attend the Spanish course and another course on general rules and habits in Spain, in order to prepare them to a better integration. During that time they can also attend IT courses or learn how to prepare themselves for the job research.

- *Impact on local Community:*

since its opening C.A.R. Mislata has been creating wealth and contributing to the local economy and community.

- *Creating local economy:*

since its opening and until today, the suppliers of the CAR Mislata they belong mostly to Valencia or neighboring towns: the bakery, the grocery, the butcher shop, the frozen products, the pharmacist, ecc.



Picture 6 Image C.A.R. project

- *Generates jobs:*
  a. the staff of CAR workers and, especially workers for substitutions of staff are either from Valencia or Mislata; -the staff from the neighborhood school where all our students attend;
  b. the staff from the maintenance companies of: heating, cooling, furniture, paint, etc.;
  c. the staff of the companies dedicated to the training of residents: Occupational training in work niches for foreigners, Spanish learning, Computer learning, Contextualization Learning, Leisure, free time and housing.
- *The center has become a generator of a model of socio-community intervention and integration based on 3 main sectors of intervention: the school Santa Cruz, employment and community awareness:*
  1) The children of the CAR have attended and attend the "Santa Cruz" School of Mislata. For them is possible to start schhol in any month of the school period. They are children of different languages, level of education and age so teachers have encountered big difficulties when it came to "integrating" and getting the children to continue their studies normally. Teacher now receive a specialization of teaching in diversity and interculturality. The "Santa Cruz" School has been part of the "Schools without racism" Project since

2005. It has been recognized by the Generalitat Valenciana with the following awards: Award for Good Practices for Integration (BUPI) of the Generalitat Valenciana (years 2006, 2007 and 2008), 2009 Prize of the Valencian Community "Father Jofré" for the promotion of solidarity in the educational field.

2) Employment:

- The Mislata CAR held the first Hospitality Course in 1994 Spain for asylum seekers together with the Mislata City Council.
- With the incorporation of the professional figure of the Employment Manager in the CAR staff, the training range of CAR residents has been multiplied exponentially, facilitating labor insertion in almost all production sectors: agriculture, construction, hospitality, catering, butcher shop, cleaning services, home services, people care services.
- In 1998, the CAR signed an agreement with the Mislata City Council, within the “Mislata Inserta” program, for the integration of refugees on the labour market.
- In 1999 a group of CAR residents, trained in Ecological agriculture, became the pioneers in organic farming one decade before becoming popular.

3) Community awareness:

The Center has always carried out awareness and dissemination campaigns in the following fields:

- Educational: organized for all schools in Mislata on Human Rights, Children's Rights, Schools Without Racism, Who are the refugees, etc.
- Citizenship in general: Live Here Campaign, with the Mislata City Council, being innovative giving an integral vision of refugees from the culinary, cultural, customs and new citizenship point of view. The Center participated in Cinema Cycles on refugees and immigrants in Mislata and Valencia. The Center also organized Conversations between Friends, dealing with topics of current events such as forgotten conflicts, the situation of women and children. Another campaign is Your plate your memory, inviting all institutions and civic entities of Mislata to know the CAR and refugees through tasting of typical dishes of the world. The C.A.R. Center also hold artist exhibitions at the Mislata Culture Center, music concerts in the Palau of the Music of Valencia, in the City Council of Mislata and in the Bullring of Valencia.

Any other information:

/

Conclusion:

C.A.R. Mislata represents since 1991 the space where it converges cultures, traditions, languages, testimonies of life and feelings, of the horror of excaping, of persecution, of fear ... But it also represent resources to survive, of effort to integrate into the hosting society, with the hope of being able to return or simply acquire the status of a new citizenship.

As a successful story of social inclusion ESMOVIA considers this example is proper for the aim of the DWA project and is a perfect case study to be taken as example and implemented also in other countries.

SEMANA DEL 30 DE SEPTIEMBRE AL 6 DE OCTUBRE 2019

COMIDA

Picture 7 Image C.A.R. project

5. Fundación Roig Alfonso De La Comunidad Valenciana Special Employment Center

Website:

- https://www.fundacionroigalfonso.org

Short description of its main activity:

The Roig Alfonso Foundation of the Valencian Community, is a non-profit organizations with social aims that dedicates its work to the social-labor integration of people with intellectual disability.

Picture 8 Institutional image project

Detailed description of old woodworking techniques, machine and tools used in Europe:

- *How did it originate and since when has it been established?*

The history of the organization began more than 35 years ago, when they saw the need to create a place of coexistence where people with intellectual disabilities could have adequate attention to their needs. With this objective in 1983 the "Alfonso Roig Residence" was created,

offering a personalized service, attending a maximum of 6 or 7 residents. The project evolved and in 1995 the "Association of psychic deficient and friends (ADAPTA) was created. In this new stage, in the year 2001, the Special Employment Center "ADAPTA" was created. In 2004, the ADAPTA Association became a Foundation, with the name of "Roig Alfonso Foundation of the Valencian Community".

- *How does the Foundation achieve its aims?*

Mainly through the following projects:

1. Residential Center
   The Residential Care Center for Persons with Disabilities in Situation of Dependency is a center designed to be used as a common home for maximum 7 people with disabilities who have a recognized situation of dependence in any of its degrees and levels. These users require special needs assistance, which makes it difficult for them to integrate and live a normal routine in their family environment. The Roig Alfonso Foundation's Residential Care Center aims providing accommodation and support in order to create a normalized environment that can facilitate the best conditions of comfort and quality of life, an integral attention in all the areas of life, as well as promoting the social and professional integration for the people to whom it is destined. The Residential Center has 7 places to host from Monday to Friday

people with intellectual disabilities in situations of dependency.

2. Special Employment Center
   The S.E.C. of the Foundation was created in 2001 in order to promote the creation of a center of work that enables the social-labor insertion of people with disabilities. Is a protected company that has the support of SERVEF (labour office) and whose staff is integrated by people with intellectual disability, mental illness and physical disability in labor age. The Foundation works within the tile industry, being the main client PAMESA CERAMICA, a company working at international level and for which the S.E.E. carries out assembly, mesh and gluing of porcelain stoneware.

WORKING LINES:

- CARAVISTAS: assembly, gluing, set and quality control, place box on the pallet and label them.

Picture 9 Image of Special Employment Center activity

- BORDERS: assembly, gluing machine, drying machine, cut and separate and quality control, set, place box on the pallet and label them.

Picture10 Image of Special Employment Center activity

- FOLDERS: silicone, wax, setting the material, cleaning and closing the folder, place box on the pallet and label.

Picture 11 Image of Special Employment Center activity

- TRENCADIS MURALS: assembly, manual gluing, drying, marking the grid and numerating, cutting, cleaning and boxing.

Picture 12 Image of Special Employment Center activity

- TRENCADIS: assembly, manual gluing, drying, boxing.

Picture 13 Image of Special Employment Center activity

- CLAMPING WIRES: making the paste, put the paste into the grooves, putting the wires, flatten paste above the wires, drying on shelves 24 hours, boxing.

Picture 14 Image of Special Employment Center activity

- ASSEMBLY OF BOXES: box folding, place in the assigned area.

Picture 15 Image of Special Employment Center activity

INTERVENTION PROGRAMS

The Technical Team of Direct Attention is in charge of designing, implementing and evaluating the therapeutic intervention programs that will be carried out with the users of the Residential Center as with the workers with functional disability of the Special Center of Employment.

Through therapeutic intervention programs, the aim is to achieve the specific objectives established for each of the intervention areas, these being the following:

1. *Area of personal autonomy and activities of daily life*

Reeducate in the necessary aspects to achieve its autonomy and full integration: Self-care, home management, administration, kitchen, knowledge of resources for the home, personal and social autonomy, personal and social confrontation, treatment and medication management.

2. Area of social skills

Facilitate the exchange of ideas, thoughts, emotions and affections in a adequate and constructive way: self-control and personal development skills, communication skills, problem solving, stress management.

3. Area of Rehabilitation, Community Integration, Leisure and Free Time

- Encouraging sports activities and healthy habits.
- Increasing knowledge and capacity to use existing resources in the community.
- Promote the self-organization of leisure and free time for each user.
- manage camps during vacation periods.

4. *Occupational Area*

- Acquire the necessary skills and knowledge to be able to carry out activities in a work environment adapted to the needs of users.
- Promote the development of knowledge, skills and attitudes of a formative and work character aimed at favoring their physical, intellectual, social and emotional development through the realization of working activities.

5. *Family Relations Area*

- Promote the improvement of family relationships through psycho-education of the family and training of the users.
- family counseling at the therapeutic, psychological, educational and physiotherapeutic level.

The intervention programs are reviewed periodically by the Technical Team and an annual assessment report is made on the degree of achievement of the objectives established for each area of intervention, which is delivered to families. Depending on the area in which they intend to work and the activities that are going to develop, we can classify them into four levels:

- Individual: working directly with the person with a disability starting from the Plan of Individual Intervention (P.I.I.) established for each of the users of the center residential and Insertion Itineraries (I.I) established for workers with functional diversity of the Special Employment Center.

- Group: the users gather in groups and work together in activities such as training workshops, assemblies or leisure activities and free time.
- Family: the users work in parallel with the family on aspects that are considered relevant to promote the transversally nature of the objectives developed in the center, advising and supporting families in their implementation.
- Community: working together with the rest of the community services as well as in the specialized resources used by the center's users.

IMPACT ON THE LEARNERS:

- They are happier
- They become more autonomous (financially and personally) because it ensures paid employment for workers with disabilities (social and labor inclusion)
- They acquire working skills
- They improve their relations with their families
- They feel like being part of a community
- They learn how to take care of themselves

IMPACT ON THE COMMUNITY:

- The community accept them easier
- Earning a wage means that they have to ask less communitarian help
- Families receive help and learn how to deal different situations, improving their relations with their relatives with disabilities. They

receive educational, phycological and physiotherapy counseling.

Any other information:

Video presentation:

- https://youtu.be/8ThTSTMWwVQ

Conclusion:

The Fundation Roig Alfonso is a very good example of how disadvantaged people (in this case people with physical and mental disabilities, more or less serious) can have access to a structure that helps them to achieve day by day their autonomy, self-esteem, their social and labour inclusion, helping them to integrate in the society.

6. CEEME Centro Especial de Empleo de Montajes Electrónicos

Picture 16 Institutional image project

Website:

- http://ceeme.fermax.com/centro-especial-de-empleo-de-montajes-electronicos/

Short description of its main activity:

CEEME is a Special Employment Center specialized in Electronic Assemblies. As a member of the company Fermax, CEEME is located at the Fermax headquarters in Valencia. In 2000 Fermax created, within the Corporate Social Responsibility of the company, CEEME - a sustainable project in both economic and social fields where the main activity is to assembly electronic parts.

Mission. To enhance labor, social and personal integration of people with disabilities throughout offering job positions, helping the workers to become a full person.

Vision. Integrative company, a special center of sustainable employment that would like to set a trend in working with people with disabilities.

Picture 17 Image of C.E.E. activity

Detailed description of old woodworking techniques, machine and tools used in Europe:

- *Number of people taking part in the project*
  There are 25 people working in CEEME: 24 of them are people with functional diversity (mental illness, intellectual disability, physical disability and sensory disability).

  The degree of disability is determined by the disability certificate. There are from 77% to 33%. This is only a number, a procedure as is needed a 33% degree of disability minimum to work in a special employment center. But in reality the skills increase with motivation and experience and nobody thinks about the percentages.

- *How did it originate?*

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- *How long has it been established?*

The members of the FERMAX company decided in 2000 to create a social project within the Corporate Social Responsibility called CEEME. It behaves the same as a business management of an ordinary company. The difference and the special thing that makes it different is the accent put on the human person as the human part takes center stage. Business and human management go hand in hand and CEEEME sees in the human person its value.

The person is the most important value of the company and therefore there is a special attention in order to take care of it, train it and love it. An individualized personal and social adjustment program is carried out for each person in the company, with a personalized itinerary.

- *Main challenges in running it?*

CEEME is a company that works very much manually, so a lot of workforce is needed as they dedicate to electronic assembly and packaging. The challenge is to be always very efficient so that to compete with the other subcontractors. For sure the CEEME's clients continue working with them thanks to the ISO 9001 certification and also because working with Lean Manufacturing production systems. Fermax is the main client and shareholder, other clients are IBV (Instituto Biomecánico de Valencia) and Myphera.

- *Impact on learners*

Having a job puts everybody in a privileged position where the person can start deciding what she/he wants to do and how to do it. Feeling useful and that your company values you is fundamental. The impact on some workers has been throughout these 19 years:

a. Be able to build a family;
b. Buy a house;
c. Travel;
d. Find friends;
e. Be able to look for a job in an ordinary company;
f. Choose what kind of life they want to live with their parents or become independent;
g. Save money;
h. Choose how to spend their leisure time: go out to dinner, bowling, go-karts, ecc.;
i. Impact on local community.

For the director of the CEEME, Cristina Sebastian it is a great accomplishment to be able to celebrate 19 years and have a staff of 25 people. The local impact is that the Ceeme brand is being treated with respect, that the people who work in CEEME still want to work here. If they leave is usually because they have found something better. All the staff is really happy when this happens. The director is thrilled when she sees that both potential workers and companies are eager to discover the people behind the CEEME and want to work with them.

Any other information:

- *Selection process:*

When CEEME is in search of a candidate they analyze the CV of the candidates send their CV by email. Another way is to request staff from the foundations or associations that have their own "bolsas de trabajo". They are very helpful because they filter very well what kind of candidates CEEEME needs for each position. The candidate has to do a job interview in the company and a practical test at the working place. After an evaluation of the interview and practical test CEEME hires the people consider to be more suited to the company's needs.

- *Training:*

The workday also includes workshops and training courses? CEEME has a planned and unplanned training schedule. The planned one is done at the beginning of the year and is been created following the results of the evaluation of the "Polyvalence Matrix" that is done every six months in Ceeme. Once the organization has a clear idea of the training needs they design the courses that each person or work area needs. The training plan consists on topics such as electronics, personal growth, leadership, emotion management, financial education, nutrition, ecc.

Picture 18 Image of C.E.E. activity

- *Working time:*

The working timetable is from Monday to Friday from 7.30 AM until 3 PM.

- *Support staff:*

Are there staff specialists who can be of support to people with disabilities? Ceeme has external specialists who, together with the internal Support Unit, respond to the Ceeme Personal and Social Adjustment Program. The Support Unit is designed to favor the labor and social integration of people working in Ceeme. Through individualized itineraries, the unit designs and offers actions so that staff has the tools and resources to face working life and life in a better way. The support unit is internal and is formed by a technician (social integrator) and two managers that are also responsible for the lines of work.

In CEEME there are also:

Picture 19 Image of C.E.E. activity

- A psychologist who has a weekly appointment with the workers;
- A physiotherapist, every month and a half the staff has a session with her;
- A Coach professional and Mindfulness teacher;
- A psychologist who uses table games to speak about emotions;
- A trainer who helds courses on topics such as leadership, corporate identity.

The company is planning to implement in the near future the Equality Plan.

Conclusion:

This is a perfect example of social inclusion of a target group with less opportunities – people with different types of disabilities that through out the job in CEEME recover independency, dignity and happiness. Is a success example that works and its success is confirmed by the 19 years of results and positive life stories. ESMOVIA considers that is an example that has to be know at a larger scale and hopefully will be reproduced also in other cities and countries.

7. UNESCO Inclusive Schools and Community Support Program

Website:

- https://unesdoc.unesco.org/ark:/48223/pf0000117625

Short description of its main activity:

To ensure that disabled children have access to education in regular schools. “Every child has a fundamental right to education. Every child has unique characteristics, interests, abilities and learning needs. Education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs. Those with special educational needs must have access to regular schools which should accommodate them within a child-centred pedagogy capable of meeting these needs.” The Salamanca Statement, paragraph 2.

Picture 20 Institutional image project

Detailed description of old woodworking techniques, machine and tools used in Europe:

Inclusion is seeked after with: Policy development l Teacher training l Educational support services l Parent education l Early childhood education l Awareness raising l Education of the deaf l Adult education l Transition to active life. Resources outside the formal school system are searched to help disadvantaged learners; like family members and communities. Case / At a primary school in Durban, South Africa, teachers use grandmothers as a resource to develop the reading abilities of the children. Grandmothers have been trained to listen to children read and to encourage them to interact with texts. Twice a week, grandmothers come to the school and work with groups of children in the playground or under a tree. This also frees up the teachers to work with children who may be experiencing difficulties in learning and who may need individual attention from the teacher.

- Number of people is not stated; but must be thousends; the project took place in Angola, Benin, Burkina Faso, Cape Verde, China, Guinea, Guinea-Bissau, Ivory Coast, Jordan, Lao People's Democratic Republic, Malawi, Mali, Morocco, Mozambique, Palestinian Autonomous Territories, Sao Tome and Principe, United Republic of Tanzania and Zambia.

- It originated 1995: The UNESCO project 'Inclusive Schools and Community Support Programmes' was conceived as a follow-up to the World Conference on Special Needs Education held in Salamanca, Spain, in 1994. The Salamanca Statement specifically mandated UNESCO. The "Inclusive Schools and Community Support Programmes" project took as a starting point the principle endorsed at Salamanca that it is better for the child and socially and economically more efficient to integrate - to include - children with disabilities and learning difficulties in mainstream school and regular education programmes than to segregate them in specialized institutions or, worse, not educate them at all. In 1990, at the time of the World Conference on Education for All (Jomtien, Thailand), the United Nations estimated that of 600 million persons with disabilities in the world, 150 million were children under 15, less than two per cent of whom received any education or training.
- Has been established 1995 – 2002
- Main challenges in running it for the families with disabled children: problems of transport; the very high cost of special equipment and supplies for certain children; and the absence of employment opportunities in general and for the persons with disabilities in particular. Special education teachers have a heavy teaching load and they need help in learning

how to recognize the special needs of children with disabilities and how best to integrate them in the school and regular classroom learning.

- Impact on learners: with help from their own communities, disadvantaged children have access to education. Separate institutions providing special education are generally expensive and reach a very small number of children, usually only in urban areas. If not supported by their own communities, children from other areas are often required to leave their communities and homes in order to attend a specialized school.
- Impact on local community: Each country experience is unique but one conclusion is common to all: changes in schools are about changes in attitudes.

Any other information:

Education for All - movement.

- http://www.unesco.org/new/en/archives/education/themes/leading-the-international-agenda/education-for-all/

Conclusion:

- Who are the additional resources of DWA for the learners? Local communities/personal connections?

  Networking and mapping the learners own network is essential to find supporting resources.

8. California State University

Website:

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Short description of its main activity:

Differentiated instruction or mixed-ability teaching, is a process-oriented approach most suitable to classrooms in which students have a wide range of ability levels.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Picture 21 Institutional image project

Because of its special education association, differentiated instruction (DI) is a topic of concern for many educators working with culturally and linguistically diverse (CLD) learners, whereby bilingual, multicultural, and culturally responsive teaching (CRT) is considered more appropriate for responding to cultural and linguistic diversity. Furthermore, although the literature base on DI recognizes cultural and linguistic diversity, it offers little in terms of ways to address these differences. The focus of this contribution is to assist the educational community in recognizing pedagogical differences, while finding common

ground, in identifying complementary teaching practices for all students, including culturally diverse students and English language learners (ELLs).

CRT and DI provide frameworks with which to discuss a reconciliation of both theory-to-practice approaches with the hope that a common framework will better serve educators and preservice teachers working with diverse students in complex multidimensional classrooms. This research took place at two CLD elementary schools serving ELLs in North San Diego County, California. Schools were chosen because both are reaching high levels of academic achievement and are closing achievement gaps, dispelling the myth that high levels of poverty and/or CLD student populations lead to lower student achievement. The research design employed was a qualitative case study. Over 5 years, observations, recorded conversations among teachers, administrators, students, and parents, and supporting documents collected from both schools were initially coded by reading through responses and documents. Research shows that the best teaching practices are those that consider all learners in a classroom setting and pay close attention to differences inherent to academic, cultural, linguistic, and socioeconomic diversity. Through a closer examination of two different, seemingly

distinct, theoretical models that have rarely been linked or reconciled, educators may be able to determine what is appropriate for particular groups of students in particular classrooms in particular locales.

In implementing school reform efforts to improve student achievement, reconciliation of best teaching practices and the creation of hybrid pedagogies are critical in addressing a future of an increasingly diverse country and global community. Challenges inherent in serving many students with different needs have been the preoccupation of educators since the identification of academic achievement gaps in research studies and by school districts. Special support to students from specific backgrounds leads in general to a heavier workload of teachers, if not compensated by additional resources. In case of not having skilled teachers in charge of education activities, the special needs of learners can be misdiagnosed or misidentified and therefore the differentiation is incomplete and doesn't meet the learners needs. All teachers need to learn how to distinguish between learning differences/problems and cultural/linguistic diversity to avoid confusing these issues when meeting the needs of all learners. Skilled educators may be able to determine what is appropriate for particular groups of students in particular classrooms in particular locales. Reaching prominent

educational results and closing achievement gap is dispelling the myth that learners from poorer living areas are condemned to lower student achievements.

Any other information:

- Heacox, D. (2001). Differentiating instruction in the regular classroom. Minneapolis, MN: Freespirit.
- Winebrener, S. (1992). Teaching gifted kids in the regular classroom. Minneapolis, MN: Free Spirit.

Conclusion:

Access to content is the central goal of differentiated instructioning. Differentiated content or special learner-focused e-learning material can help to reach different trainees' needs.

9. Social Innovation Fund (SIF) with its LIGHT project partners

INNOVATIVE METHODS AND PRACTICES TO FACILITATE SOCIAL INCLUSION:
Visual Workshop "Equal opportunities and non-discrimination"

Website:

- http://www.socialmobility.eu/outcomes/CD1/en.html

Short description of its main activity:

The aim of the visual workshop "Equal opportunities and non-discrimination" is to help senior citizens, unemployed persons (women) and migrants to develop their civic competencies on equal opportunities and non-discrimination in order to adapt to diverse and changing society and labour market and to protect their human rights. During the project's lifetime the Consortium developed the following major outcomes: the "Guidelines for Tutors of Social Mobility Model", the "e-Workbook for tutors on Group Social Mentoring", the Video set "Role Model as a tool to foster social inclusion" (in EN, CZ, DE, ES, LT), the training materials for Visual Workshop "Equal opportunities and non-

Picture 22 Institutional image project

discrimination"(in EN, CZ, DE, ES, LT).

Detailed description of old woodworking techniques, machine and tools used in Europe:

- The method is a result of Grundtvig project INNOVATIVE METHODS AND PRACTICES TO FACILITATE SOCIAL INCLUSION, 503575-LLP-1-2009-1-LT-GRUNDTVIG-GMP.

Number of people taking part in the project is 135: 50 unemployed women, 44 senior citizens and 41 migrants. How did it originate: To achieve Lisbon Strategy objectives on social inclusion all EU partner countries are using top-down approach by implementing national programmes of social protection and social inclusion. Annual European Commission reports show that level of social exclusion/poverty in partner countries is still very high and feminization of poverty is high lighted. That is why it's very important to strengthen the bottom-up approach to increase capacity and willing of socially excluded people to be fully integrated into society. The new learning pathways for increasing social mobility to overcome social exclusion are introduced by Social Mobility Model (SMM).

- How long has it been established?

2009-2011

- Main challenges in running it?

There is no evaluation available. I can imagine that reaching these groups in the beginning is not easy and videos can be difficult to produce by seniors.

- Impact on learners:

The impact on socially disadvantaged learners was significant. Group social mentoring as alternative learning approach to re/integrate socially disadvantaged persons into society and labour market was applied on 70 end-learners within the project: 30 unemployed, 20 senior citizens and 20 migrants. National workshops "Equal opportunities and non-discrimination" (in total 13) were attended by 144 end-learners (58 unemployed, 44 senior citizens and 42 migrants). Those workshops have influenced improvement of the competences in gender equality and equal opportunities helping to adapt to diverse and changing society and to protect their human rights.

- Impact on local community:

The long-term impact was seen also through rising awareness of the society regarding the social inclusion measures and successful approaches.

Any other information:

- http://www.socialmobility.eu/outcomes/LIGHT_Final%20Report_public.pdf

Guidelines for tutors of Social Mobility Model publication:

- http://www.socialmobility.eu/outcomes/CD2/

Conclusion:

- Women need - to achieve social mobility
- Seniors need
- Migrants need

Increasing social mobility in the European woodworking scene among the developing network of craftsmen/women may help them to move from social exclusion to inclusion. The Guidelines for tutors of Social Mobility Model publication can be used by trainers during the DWA project.

10. Matera - Basilicata 2019 Foundation

Website:

- www.matera-basilicata2019.it/it/

Short description of its main activity:

The Matera-Basilicata 2019 Foundation is established in September 2014 with the aim of:

- Attracting and enhancing creativity through new talents;
- Implement a new model of cultural citizenship based on co-creation, co-production and sharing of artistic practices;
- To promote social inclusion through art and culture;
- Promoting social innovation through art and culture.

Detailed description of old woodworking techniques, machine and tools used in Europe:

As part of the cultural program promoted by the Foundation for Matera 2019 European Capital of Culture, the "Lumen" and "SociaLight" projects were developed with the aim of actively involving citizens in the actions that transform, change and characterize urban communities through a powerful tool like that of light. The first project with an artistic purpose has investigated new functions and different uses of traditional illuminations; the second one was aimed at involving citizens who, learning methodologies

and techniques during thematic workshops, contributed to the realization of the light installations that illuminated their city. To realize the great luminous architectures envisaged by the Lumen project (5 meters by 3 meters), laboratories were organized in which students from two high schools in Matera and citizens took part, involved in wood treatment operations for illuminations such as sanding, grouting and painting (Pic.16).

Picture 23 The boys involved in the Lumen project
https://www.archistart.net/news/lumen-social-light-for-matera2019-participatory-processes-that-shed-some-light/

These workshop activities took place in some places that gave their willingness to accept these activities, as well as at the Open Design School, a work space specifically designed to host citizen apprentices during the processing phases.

Moreover, the citizens were supported by some local artisans, who were entrusted with the task of creating the wooden supporting structures. With Social light, the project to enhance the light resource then takes on a social dimension. Citizens are called to "shed light", building a small light element with their own hands (Pic.17), to be able to take with them, hang on the balcony or door of their home, and one to donate to the city for illuminate the paths that connect the points where the large Lumen installations were located.

Picture 24 Citizens working on the Social Lights project

https://www.matera-basilicata2019.it/it/programma/temi/futuro-remoto/1412-lumen-social-light.html

Any other information:

/

Conclusion:

The experience of the Lumen and Social Lights projects can be useful to the Digital Wood Artisan project because:

- Created for the decoration of outdoor spaces on the occasion of patronal feasts, the "luminarie" are finding more and more space in different sectors, and in their realization there is increasingly a design and construction component in which software is used for the design and machinery for cutting and woodworking;
- The laboratories open to citizens have shown that, with the supervision of tutors, even those who have no skills can approach the creation of wooden design objects, such as the "luminarie", and learn work methods, knowledge of the machinery to be used and mastery in the use of traditional tools of the trade;
- The methodology adopted within the Open Design School has allowed us to set up an interdisciplinary learning and experimentation space, without rigid hierarchies in which everyone learns from everyone, in a climate of mutual enrichment.

11. SHISKI Concept Space Association

Website:

- www.shiskiconceptspace.it

Short description of its main activity:

SHISKI Concept Space is a cultural center born from the idea of promoting and making the world of design and craftsmanship more accessible. Creating opportunities for meetings and collaboration between the various players in the sector, as well as allowing unexpressed ideas to take shape and those already completed to have greater visibility, is the mission of the concept space.

Detailed description of old woodworking techniques, machine and tools used in Europe:

SHISKI Concept Space was born in 2018 from the initiative of three under 35 Apulian architects who create an association that promotes the culture of design and craftsmanship linked to the local area. Students, young designers, artisans, self-producers, and creatives, of any age group, are the emerging subjects with whom Shiski wants to create a network of contacts and connections, to promote initiatives that involve the local community in a process of social inclusion which provides the exchange of ideas and expertise in the design sector. For this purpose, in February 2019 Shiski experimented a

three days pilot workshop to build wooden furnishings that are now part of the exhibition space. After a cognitive and sharing phase of the previous experiences and competences of each of the participants, these were introduced to the good practices to be followed for the realization of furniture in self-construction. They were shown to them the materials to be used and their characteristics, as well as the correct safe use of equipment and machinery for joinery (circular saw, cutting machine, saw bench, screwer, drill, hammers, etc.) necessary for the realization of the furnishings. The participants were involved in the design of the pieces of furniture, giving everyone their own creative and technical contribution.

Picture 25 Self-construction workshop held in February 2019

Based on the experience and abilities of each participant, different tasks were assigned to each one for the realization of all the component parts of the furnishings. However, each participant experimented all the processing phases with his own hands, accompanied for each phase by a tutor who provided instructions

for the appropriate use of equipment and machinery. At the end of each day of the workshop, a time was foreseen for sharing and verifying the activities carried out, to identify critical issues that arose and to adopt the most appropriate solutions. The workshop allowed each participant to acquire new theoretical knowledge and basic practical skills useful in expanding the professional skills of each of them, which can be applied in other experiences and sectors. At its headquarter, Shiski has also set up a laboratory equipped with innovative machinery such as a CNC pantograph and a 3D printer to carry out work in wood and other materials as well as for the prototyping of small and medium design objects. These tools are made available to students, young designers and in general to the local community where the association operates.

Picture 26 Shiski exhibition space and laboratory

Considering the positive result of this experience, Shiski is planning to hold other workshops dedicated to the dissemination of good practices and practical techniques for processing wooden materials, as well as stone and ceramics. During these workshops will be adopted all the improvement proposals, related to the organization, suggested by the participants in the pilot workshop to make the process of involvement and inclusion of the local community in the project more effective.

Any other information:

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Conclusion:

Shiski's experience can be useful for the Digital Wood Artisan project for two reasons:

- With the TEXiTY project it has been experimented how the traditional techniques of working on wooden materials can still be used even by subjects who do not have great competence, but who, being trained on the use of innovative equipment and technologies, can acquire a mastery basic technique;
- The working method followed for the workshop which included moments of confrontation in which the participants gave their contribution of previous knowledge and creativity, allowed the mutual exchange of knowledge and the transmission of manual skills among the participants.

12. MADE IN CARCERE

Website:

Below asome links to the web pages that tell the story and work of this association:

- www.madeincarcere.it/en/
- www.madeincarcere.it/it/blog2 (Italian only)
- www.storemadeincarcere.it/chi-siamo/ (Italian only)
- www.facebook.com/madeincarcere/?ref=page_internal

Short description of its main activity:

The best description of themselves and their project is given by those of MADE IN CARCERE on their facebook page, which we report below.

"Our starting point is to collect what the others discard, giving the Inmates another chance and a second life for the fabrics. A new Sustainable Development Model, that is "to stand" on the Market and in the Company, in a responsible manner, providing added value for the Community. The ambition is to make the fabric bag a symbol and a testimony of the possibility of creating sustainable development, saving the consumption of plastic to the advantage of recycling waste materials or future waste."

(cfr. facebook page MADE IN CARCERE)

MADE IN CARCERE®
New Philosophy and Life Style

Picture 27 promotional photo of the MIC project

Detailed description of old woodworking techniques, machine and tools used in Europe:

MADE IN CARCERE is a brand born in a lab, inside Borgo S. Nicola women's prison in Lecce, that quickly expanded to other facilities like the women's prison in Trani. In an all-female environment, many eco-friendly products are thought, sought, transformed and produced.

Picture 28 photo of the MIC laboratory in Lecce (Italy) (source Made in Carcere)

Products are packaged by the prison inmates of Lecce and Trani, women on the margins of society, who thanks to this project learned a job and built their path of reintegration into the real world. The objects are of a textile nature and arise from the recovery of fabrics and other materials donated by European manufacturing companies partners of MADE IN CARCERE.

Picture 29 photo of a worker at work
(source Made in Carcere)

Many objects have been made and sold, over 300,000 Shopper Bags, 500,000 bracelets and many other products left free to travel around the world (Milan, New York, Stuttgart, London, Sofia) to spread an important message, ingenuity

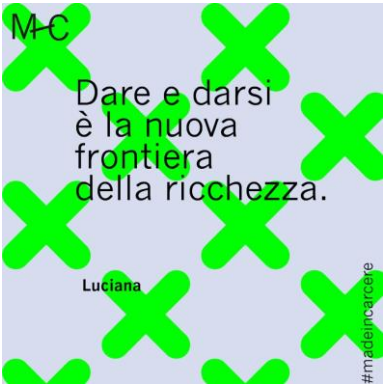
Picture 30 promotional photo of the MIC project
(source Made in Carcere)

and creativity can be the tool to give a second life not only to materials but also to people.

Inmates with this project get a second chance to create a new life for themselves through work once they will be back in society.

Allowing these women who live in detention and on the margins of society to rebuild awareness and dignity through work is the main objective of the MADE IN CARCERE project. Building a new model of social and circular economy that supports itself in a system of free competition is a very ambitious goal that this reality is managing to achieve, showing that excellence can also be generated in places of degradation and marginalization such as prisons.

MADE IN PRISON is a social brand owned by the non-profit organization Officina Creativa, a reality born in Puglia, IT in 2008 with the aim of making differences between people an added value by



Picture 31 promotional photo of the MIC project
(source Made in Carcere)

transmitting to people who live situations of hardship and social disadvantage, feelings of trust and enthusiasm. All of this was born from the dream and will of Luciana delle Donne, manager with great experience in change management and technological and organizational innovation, who in 2006 devoted herself to this social enterprise.

In 2016 Luciana delle Donne obtained an important recognition from ASHOKA, a very important international community of social entrepreneurs, as one of the first four changemakers in Italy with her Social Enterprise model.

Picture 32 promotional photo of the MIC project (source Made in Carcere)

Picture 33 promotional photo of one of the MIC bags
(source Made in Carcere)

MADE IN CARCERE products are fashion accessories such as bracelets and bags of various sizes and types, but also home accessories. These products have in common the raw material, namely fabrics and other recycled materials that are donated by many partner companies.

In addition to textiles, the project has also been launched in the food sector with "SCAPPA-TELLE" artisan biscuits produced by inmates with a packaging that ironically refers to prison, the place where they are produced.

Picture 34 promotional photo of SCAPPATELLE biscuits
(source Made in Carcere)

Any other information:

MADE IN CARCERE is a brand of O-C Officina Creativa, a non-profit social cooperative that considers differences between people an added value. Through projects such as "MADE IN PRISON" it recovers ancient crafts and local traditions by stimulating and supporting the creation of new professions. These new professions become the means to create synergies and a new economy thanks to the contribution of talented women and men present in the area, but also and above all thanks to the contribution of disadvantaged people (Prisoners; Disabled; Elderly; Unemployed; etc.). thus manage to reintegrate into society in a positive way. Teamwork originates creativity, relationships and connections between social worlds that usually struggle to communicate. In this way O-C Officina Creativa favors the creation of new forms of social cohesion obtaining a winning and specific development model.

- O-C Officina Creativa
  address: via 95° Rgt. Fanteria, 64 Lecce (Italy)
  web: www.o-c.it
  mail: info@officinacreativa.it
- MADE IN CARCERE
  address: via A. Balmes 24 Lecce (Italy)
  web: www.madeincarcere.it
  mail: info@madeincarcere.it

Conclusion:

MADE IN CARCERE project and in general the way of operating of O-C Officina Creativa, provides a functioning and tested model of socio-economic development that focuses entirely on "glocal". A model that operates simultaneously on the global dimension, importing and elaborating advanced socio-economic models, and on the local one, recovering ancient crafts and traditions closely linked to the territories and people to involve.

This project represents an excellent model of future development for the DWA project, because it provides many ideas on social and economic sustainability. In addition, the "MADE IN CARCERE" model offers good guarantees of replicability and scalability in very different territories for tradition and economies, as in the specific case of the DWA project and in general as in most of the European territory.

The various traditional woodworking techniques therefore represent a heritage from which to develop new solidarity and site-specific business models.

13. The Ubuntu Leaders Academy

Website:

- https://www.academialideresubuntu.org/

Short description of its main activity:

The Ubuntu Leaders Academy is a non-formal education project geared towards empowering young people with high leadership potential, from vulnerable contexts or who want to work there. It aims to accompany, facilitate, enrich and consolidate the development of each participant as a leader serving the community, promoting the relevant human skills and techniques.

Detailed description of old woodworking techniques, machine and tools used in Europe:

This project invites the participant on an inner journey that challenges the way they see themselves and relate to others, becoming able, as Gandhi said, to fight for the change they want to see in the world. It aims to form leaders who are capable of caring, listening, trusting and promoting reconciliation by building bridges and promoting human dignity.

Picture 35 promotional photo of the ULA project

The Ubuntu Leaders Academy is a project that values each person's contribution, embraces the richness of diversity, recognizes and respects the value of each new perspective. Recognizing a shared desire to build a better world, it strengthens hope and motivation to intervene in society and transform reality. The objectives of the UBUNTU LEADERS ACADEMY are:

- Empower young people as agents of change at the service of their respective communities, promoting the integrated development of skills, focusing on servant leadership competencies;
- Empowering educators who, by demonstrating their experience and aptitude as trainers, recognizing the transformative potential of the Ubuntu method, help disseminate it by promoting a culture of bridge building where servant leaders play an increasingly important role;
- Promote dialogue between and within communities to promote peace and justice, contributing to the development of more inclusive and resilient societies;
- Develop an ethics of care, focused on empathy, attention and responsibility, considering three dimensions: I, I-other, I-world.

Picture 36 photo of the ULA project training

The Ubuntu Leaders Academy is designed for young people aged 13 to 35 with a high potential for leadership, coming from vulnerable contexts or willing to work in them. The Training of Trainers is intended for all those who are already experienced in training, intending to set up Ubuntu Leaders Academies in their territories The training program proposed by the Ubuntu Leaders Academy is flexible, adaptable and constantly under evaluation, in permanent attention and focus on the participants and valuing lifelong learning. In this sense, although it has pre-defined session plans, the development of each session is shaped by the particularities of the group of participants and the concrete challenges of each sociocultural context. As a non-formal education project, it uses a non-hierarchical approach between facilitators and participants allowing each the responsibility and autonomy in the construction of their own formative process which depends, in large part,

on the openness and willingness of each participant to give and to receive. The facilitator's team is the face and the guarantee of fidelity to the principles of the project, always developing an attitude of respect, of listening, and as Paulo Freire said, "those who teach learn while teaching, and those who learn teach while learning." The facilitator is also tasked with facilitating learning processes and promoting good environment and cohesion of the group undergoing training. The Ubuntu Leaders Academy is a project that aims to facilitate transformation, foster encounters and (re) connect each person to their essence, training leaders for community service.

Picture 37 photo of the ULA project convention

LEARNING THROUGH REFERENCE MODELS

"Nothing is as contagious as the example"
Rochefoucauld

The Ubuntu Academy of Leaders also attaches great relevance to learning by reference models. We believe the power an example of life can have, and the inspiration that a story told in the first person can provide. In the full knowledge that no one is perfect and, as Nelson Mandela used to say, saints are those who do not give

up trying, reference models allow us to bridge the gap between theory and practice, between the idealized and the possible. This project intends to give visibility and importance to all those who, not being perfect, know how to persevere in the midst of adversity, materializing Ubuntu principles through their choices. Life testimonies can be very inspiring to the participants allowing the participants to believe that it is possible to hope in a better world. Learning through reference models occurs in three different ways:

1. Ubuntu Leaders–Films, documentaries or testimonies project world renowned leaders whose life and example embody the principles of Ubuntu philosophy, a concrete example of Servant Leadership in their respective contexts, namely: Nelson Mandela; Martin Luther King; Malala; Madre Teresa de Calcutá; Desmond Tutu; Mahatma Gandhi.
2. Community Leaders - The presence of community leaders who, by sharing their life stories, demonstrate how it is possible to be a vehicle for change even in difficult and demanding contexts. The testimony of these guests is usually one of the most impacting moments of the training sessions. In a world where individualism, hatred, war and injustice are so evident and so propagated by the media, it is essential to give voice to those

who are everyday "heroes", showing other realities which usually remain hidden.

3. Participants - Through personal storytelling and reflection dynamics, each participant is aware that their own path can be an important source of inspiration for others. The life story of each one, their struggles and victories, become a vehicle of learning and reference, providing an opportunity for growth, a showcase of the pillars that underpin the Ubuntu Method.

Picture 38 photo of the ULA project training

Any other information:

/

Conclusion:

We can learn and transport this way of working for our project. We believe in the richness of cooperation, with an emphasis on building a network of partnerships between organizations that are aligned with the principles of the Ubuntu Leaders Academy.

They will be able to collaborate, finding joint solutions and responding to the needs / resources necessary to make the local implementation of the project viable.

14. Fundação Altice Centers

Website:

- https://fundacao.telecom.pt/Site/Pagina.aspx?PageId=2070

Short description of its main activity:

The Altice Foundation Centers has as main objective, the social inclusion and the increase of the autonomy of the citizens with special needs through technological solutions of accessibility to the communications adapted to each type of disability or incapacity and the respective qualification for a better quality of life.

Detailed description of old woodworking techniques, machine and tools used in Europe:

The Altice Portugal Foundation is a private, non-profit and public utility institution whose objective is to fulfill Altice Portugal's commitment to social responsibility. The Altice Foundation Centers are created as a rule within the framework of rehabilitation and skills development programs carried out by local support structures such as hospitals, IPSS and primary, secondary and university schools. They are centers open to the

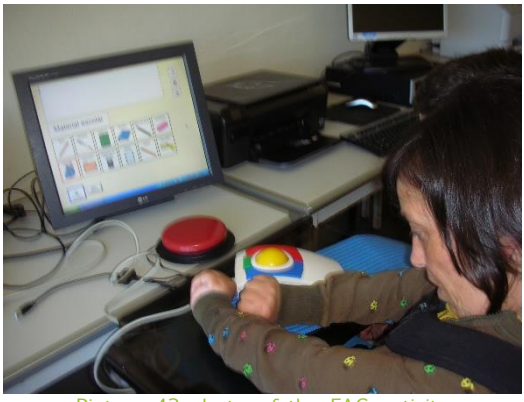
Picture 39 photo of the FAC activity

community within the framework of partnerships established between the Altice Foundation and IPSS (Private Social Solidarity Institutions) and Public Administration bodies, namely Ministries of Education and Health, equipped with appropriate support technologies for each type of disability. In these spaces, adequate accessibility technological solutions are available to people with neuromotor deficiency, in particular with cerebral palsy. Within the scope of this cooperation partnership, training was provided to health technicians (speech therapists and occupational therapists) who, within the framework of their activity, work in the rehabilitation and development of personal skills programs with the users of the associations. These Centers are also created for the evaluation and training of digital skills, aimed at people with intellectual disabilities. The associations involved develop programs for the

Picture 40 photo of the FAC activity

Picture 41 photo of the FAC activity

rehabilitation and development of literary skills, contributing to the school and professional inclusion of these citizens. The solutions donated in this project offer also augmented technologies with access to the computer and the Internet for rehabilitation programs that promote social inclusion and provide training to professionals who work with these young people and who perform diverse functions (such as speech therapists, special education teachers). Aware that the training is a fundamental aspect in the efficiency of the services provided, the Altice Foundation promotes and assures training courses to technicians of the partner institutions, in person and at a distance, in order to guarantee the most appropriate use of the technological solutions available. Currently, there are all over the country, 254 Altice Foundation Centers.



Picture 42 photo of the FAC activity

Any other information:

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Conclusion:

This social project could be a good example and useful for the Digital Wood Artisan project, mainly for the reason:

1. That the use of innovative equipment and technologies, could create a inclusive society.
2. Putting technology at the service of social responsibility and social, school and professional inclusion, must be a priority in order to create a synergy of resources, but also of knowledge, and our areas of action are digital accessibility, education, health and well-being.

15. GET FORWARD

Website:

- http://www.fjuventude.pt/pt/1445/get-forward.aspx

Short description of its main activity:

GET FORWARD is a social innovation project that promotes social inclusion of at-risk youth through training, developed by the Youth Foundation, in partnership with Santa Casa de Misericórdia de Lisboa as a Social Investor.

Detailed description of old woodworking techniques, machine and tools used in Europe:

The project will involve a total of 120 young people, in situations of greater social fragility such as unemployment, dropping out of school, delicate family situations or institutionalized young people from the northern region of Portugal. Aimed at young people aged 18-25, the project is aimed at young people in situations of

Picture 43 promotional photo of the GET FORWARD project

greater social fragility such as unemployment, dropping out of school, delicate family situations or institutionalized young people. In view of the current context of the international economic and financial crisis and the most varied situations of social fragility, this project seeks to stimulate the personal development, social integration and employability of young people through initiatives such as training at personal skills, social mentoring through mentors and promotion of first-time experience in the labor market. With a high social impact, GET FORWARD is not only committed to promoting new public policies to promote technical skills adjusted to the needs of working skills, but also seeks to promote the modification of risky behaviors such as drug abuse and trafficking, crime, violence and gangs, with clear positive effects on society. The project stimulates young people's personal development, social integration and employability through initiatives such as personal skills training, mentoring social support and promoting first-hand experience in the labor market. There will be two editions per year of six months each, and the project will be implemented in six municipalities in the Northern region. The project begin in 2017 and is running nowadays with other activities, but based in the same principles.

Training Actions composed of the following phases: Youth Selection; Training; Internship; Social Mentoring and Labor Market Integration. Final Conference: date to be defined.

Picture 44 promotional photo of the GET FORWARD project

Any other information:

/

Conclusion:

We could learn and transport the objectives to our project in order to try to stimulate personal development, social integration and employability of young people in Digital wood work, through initiatives such as personal skills training, social support and the promotion of first-hand experience in the labor market.

16. BODOČNOST
podjetje za rehabilitacijo in zaposlovanje invalidov Maribor d.o.o.

Website:

- www.bodocnost.com

Short description of its main activity:

Company for rehabilitation and employment of disabled people.

Detailed description of old woodworking techniques, machine and tools used in Europe:

CARPENTRY UNIT includes small-scale production of solid wood furniture, especially for foreign customers, and custom-made furniture, especially for fitting out different rooms. They produce elements for the equipment of apartments and weekends, catering establishments and hotels, rural tourism and offices.

Picture 45 photo of the BODOČNOST products

They can equip your private spaces with a friendly and useful one. The furniture is made of high quality materials with superb processing. If desired, the elements are supplied in protective coatings with BIO coatings, or in raw condition for subsequent surface treatment. The carpentry program covers the production of solid furniture according to the order and wishes of their customers. Furniture is made of various types of wood (spruce, maple, autumn, oak) various surface treatments are man-friendly to stay in the room (waxed, lacquered, stained) and furnishings of various rooms. The joinery program involves the production of complete interior design of the apartment (kitchens at the desired dimensions, bedrooms, living rooms and children's rooms, etc.), as well as farm land tourism and hotels, all interior and exterior doors at the facilities.


Picture 46 photo of the BODOČNOST products

The program includes:

- Dining room
- Living rooms
- Club rooms
- Bedrooms
- Pubs
- Hotel rooms
- Club rooms
- Office program


Picture 47 photo of the BODOčNOST products

Any other information:

- https://studentski.net/gradivo/vis_lsm_les_tro_sno_skripta_01

Conclusion:

Hand techniques are applied to make a modern looking, design products.

17. OZARA d.o.o.

Website:

- www.ozara.si

Short description of its main activity:

Social inclusion programme, Employment and vocational rehabilitation.

Detailed description of old woodworking techniques, machine and tools used in Europe:

OZARA d.o.o. is one of the providers of the Social Inclusion Programme (holder of national concession from Ministry) normally selected after public tender issued by the Ministry of Labour, Family and Social Affairs. On the basis of a successful tender we were selected for providing the Social Inclusion Programme during the years from 2006 until 2010 and again from 2011 until 2014, from 2015 until 2019, and again from 2020 until 2024. The same rules of operating apply for rehabilitation programme. The Social

Picture 48 photo of the OZARA products

Inclusion Programme, being carried out by units in Maribor, Murska Sobota, and Slovenj Gradec is a social programme dedicated to supporting persons with disabilities, as well as developing and maintaining their work abilities.

- *Impact on learners and local community*

This programme has a very important impact on the life-qualities of unemployable people. If they are included within the programme, they have an opportunity to change all aspects of their lives. As part of the work activation, they are able to develop a positive self-image and gain self-respect, strengthen their work habits, and regain the feeling of being useful within their societies. For most of the people who become part of this programme, the greatest benefit is their own inclusion within a social environment in which they are able to develop and improve their social skills, widen their social network and strengthen the feeling of being part of a group, build new friendships, learn how to cooperate and communicate, accept and appreciate diversity, develop tolerance, fulfil their potentials that could never be fulfilled or expressed by staying and being isolated at home. Having in mind the fact, that the programme is supported by a regulatory entity, it can be said that such a support is recognized as an important for different communities (local, regional, national) and that the topic of inclusion as well as maintenance of the inclusion into situations of

working life is an important topic national wise. While cooperating with local community (presenting the activities within different local events such as fairs, holiday markets and other opportunities for public representation of the programme), all of these activities are also targeted at diminishing the stigma about mental and other health issues that still exist in the society.

Picture 49 photo of the OZARA products

- *Who can become part of the Social Inclusion Programme?*

Persons who have been officially designated as being unemployable according to article 35 of the Vocational Rehabilitation and Employment of Persons with Disability Act, issued by the Employment Service of Slovenia; Persons with disabilities having status within the framework of category I as granted by the provision of the Pension and Disability Insurance Institute without any rights to an invalidity pension, according to the law defining pension and invalidity insurance; Persons with mental and physical disabilities who have no other opportunity for inclusion by social security services.

- *Goals of the programme:*
  a. Labour and social integration and the prevention of social exclusion;
  b. Development of individual's work potentials and long-term possibility of re-examining the assessment of employability;
  c. Preserving, maintaining and developing work skills, habits and skills;
  d. Acquiring and maintaining working condition, working endurance and load capacity;
  e. Gaining attention, concentration and precision at work;
  f. Maintaining, developing and disseminating the social (support) network;
  g. Developing greater competence in crisis and conflict situations;
  h. Empowering an individual in all areas of life;
  i. Development and raising social competence, communicativeness and control of stressful, stress factors;
  j. the development of personality adaptability, personal growth;
  k. Development / strengthening of autonomy, self-initiative and greater activity in changing their own life situation;
  l. Promotion of a healthy lifestyle among users, focusing on healthy eating, movement and strengthening of psychosocial well-being.

Within the framework of the social inclusion program, participants can engage in various work, social and lifelong activities, in accordance with wishes, interests and preserved abilities.

Picture 50 photo of the OZARA products

- *Some of the options available to users:*
  a. Various work activities within the service and production activities of the company, or in cooperation with business partners;
  b. Engaging in creative workshops, teaching manual skills and learning different creative techniques;
  c. Integration into self-help groups;
  d. Training social skills and skills;
  e. Implementation of individual assistance, crisis intervention and support services for users and their relatives;
  f. Mediation in institutions, elements of advocacy;
  g. Promoting a healthy lifestyle (lectures, gymnastics, sports days, cooking courses);
  h. Socializing (excursions, picnics, New Year's party);
  i. Improving computer and functional literacy, learning foreign languages.

- *Description of approaches and methods of participation / social inclusion:*

Participative approach normally including different stages (in creative workshops i.e. acquaintance with material for crafting, tools needed for crafting, mentoring and peer support). Our professional team includes a variety of approaches to help the participant gain the sense of teamwork, peer support and thus creating in between sessions, that include options for gaining these soft skills. Teamwork can be something especially difficult for people with mental illness (patience, empathy and trust are some of the needed abilities that you must have when working with other people for a common goal).

- *Example of sample exercise for reinforcement of teamwork:*

A well-known picture or cartoon of your choice cut in pieces in order to form pieces of puzzle (and another copy entire), sheets of paper, scissors, pencils and crayons.

Description: A piece of the "puzzle" is given to each participant and instruction to draw an exact copy of their piece of the puzzle on paper which is five times bigger than its original size. They are posed with the problem of not knowing why or how their own work affects the larger picture. When all have completed their enlargements, the mentor takes out the original picture (in one piece) and ask them to assemble

their pieces into a giant copy of the original. For finalizing this problem-solving activity try to open a debate on good teamwork practices and on the meaning of a divided 'departmental' work where each person contributes to an overall group result.

Picture 51 photo of the OZARA products

- *Professional staff assessments and observation:*

The professional team undertakes a general assessment at the end of each month and for each participant included in the programme (the organisation follows the EQUASS assurance quality standard and has internally developed tools for supporting the inclusion factor by all means). Individual assessment includes the following elements of observation (no. of hours/days of presence in the programme, behaviour in group, inclusion activities provided, attention and work concentration, respecting rules and instructions, motivation/interest for work) – the rationale of such assessment lies in the fact, that participants are entitled to a payment that is not a regular payment (due to reason of unemployability) and this is connected to level of inclusion each month. On the other hand, each participant is offered any option for

individual approach where he/she can express all concerns, ideas and other important issues with one of our mentors (such evaluation procedures are included in the internal documentation of the organisation).

Any other information:

/

Conclusion:

Picture 52 photo of the OZARA products

Participative approaches and moreover peer support elements are important when working with people at risk of social exclusion in general.

The process of mutual provision of knowledge, experience, emotional, social, practical help and emotional empowerment works best among people who bear the same status, Peer support as one of the means of social support works well because we operate in the field of relationship(s) that are based on equality, not in a superior or expert position. Combining this with professional support from mentors and other staff (occupational therapists; psychologists; etc.) it is contributed to an all-round approach that respects individuals and teams.

18. ŠENT Slovenian Association for Mental Health

Website:

- https://www.sent.si/

Short description of its main activity:

Organization established to aid individuals with mental health issues.

Detailed description of old woodworking techniques, machine and tools used in Europe:

Picture 53 promotional photo of the ŠENT project

ŠENT (Slovenian Association for Mental Health) is a non-profit, non-governmental humanitarian organization established to aid individuals with mental health issues, those in temporary mental distress, as well as their relatives and anyone else interested in mental health. ŠENT was established in 1993. The Association is active in the fields of social welfare, health, education,

employment and others. It holds the status of a humanitarian organization granted by the Ministry of Labour, Family and Social Affairs on the basis of its humanitarian activities.

Our programmes and activities include:

- psychosocial rehabilitation of people with mental health problems;
- improvement of their social situation;
- creating opportunities for independent and quality living.

The program is implemented every working day after 6h. In addition to the work itself in a specific workplace, the user can be involved in workshops for psychosocial rehabilitation and community integration.

The work activities we offer in the program:

- work in a ceramic workshop;
- making gift packing;
- assembly of paper products;
- production cooperative work.

Program Objectives:

- promoting social inclusion;
- gaining new social experiences and thereby improving communication skills;
- acquiring and maintaining work skills, skills and experience;
- learning to participate in a working group, organizing work, taking responsibility, etc.

Inclusion in the program is voluntary. If it turns out that the person's health has improved so

much that it justifies a reassessment of work ability, it can be repeated. If an improvement in the status is shown, he can register again with the Employment Service as a jobseeker.

Sitography:

- https://vimeo.com/62560592

Conclusion:

Beside the field of work, this NGO is cooperating in many international projects that strengthen the capacity of personnel and offering new approaches in working with people with disabilities (entrepreneurial skills, capacity building and empowerment, social economy).

METHODS OF SOCIAL INCLUSION

DIGITAL
WOOD
ARTISAN

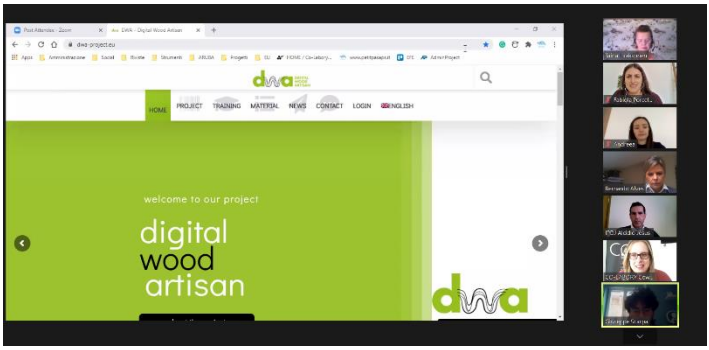
TRAINING GUIDE

TRAINING GUIDE

1. Traditional and Digital Woodworking Techniques for Inclusion

ONLINE TRAINING

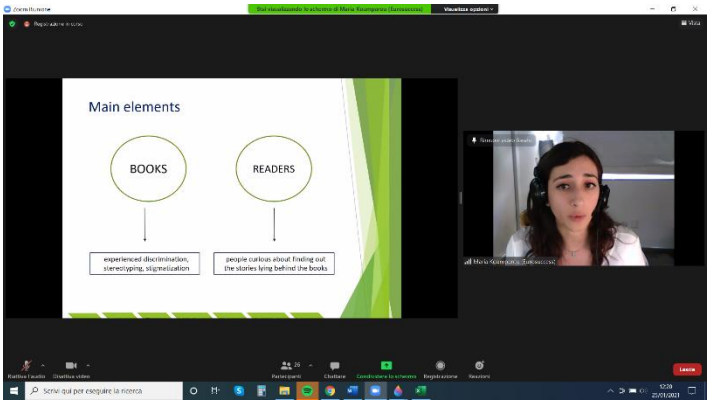
The "Traditional and Digital Woodworking Techniques for Inclusion" training course was one of the key results of the work carried out by the partners in the last few years.



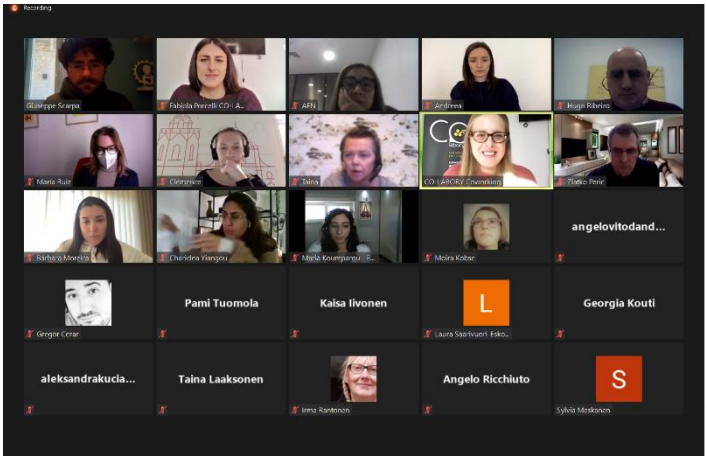
The research, which led to the Manual production, was the starting point for the training material development, which was used during the training's online sessions, and now is available on the e-learning platform of the project in various open-source formats.

The course engaged participants for about 40 hours, including moments of debate, discussions, and virtual visits of the partners' countries and organizations.

It was an interactive course that gave participants the opportunity to acquire new knowledge and skills on new technologies applied to the design and wood world and imparted new knowledge on different forms of social inclusion present at the European level that can be replicated in other contexts.



This formative moment was very important because it gave all the participants who are involved daily in this sector the opportunity to exchange information and discuss internationally.



The online mode also offered the opportunity to those who were simply curious about the subject, to learn about the great European heritage in the tradition of wood and how new technologies support it and make it develop in a smart way.

The course was held in English and was aimed at trainers, educators, VET organizations, local authorities, companies, employment centers, policymakers, professionals, and researchers, all those who intend to approach woodworking.

Below you can find the agenda of the training program, which may be useful in finding the information you want from the website.

Co-funded by the
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DIGITAL
WOOD
ARTISAN

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Project number 2018-1-IT01-KA202-006744

15-19 February 2021

Day 1
15.02.2021

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Time	Activity	Partner in charge of the activity
9:00 - 9:30	Welcome, Presentation of the project and training programme	CO-LABORY - Laura Amoruso
9:30 - 10:00	Presentation of the project partners	
10:00 - 10:10	Cultural awarenes: video presentation of Porto	AFN - Alcidio Jesus/ Claudia Amaral
10:10 - 10:25	Ice breaking game	ESMOVIA
10:25 - 11:55	CNC for wood design	CO-LABORY - Giuseppe Scarpa
11:55 - 12:15	Q&A	
12:15 - 12:30	Break	
12:30 - 13:00	Conclusions	CO-LABORY
13:00 - 14:00	Lunch	
14:00 - 15:00	Virtual visits: CNC workshop at Shiski concept	CO-LABORY
15:00 - 15:20	Q&A	
15:20 - 15:40	Break	
15:40 - 16:40	Virtual visits: Tampereen Runopuu	MODUS
16:40 - 17:00	Q&A	
17:00 - 17:20	Break	
17:20 - 17:40	Evaluation of the day	AFN
17:40 - 18:00	Conclusions and Organization for next day	

Co-funded by the Erasmus+ Programme of the European Union

DIGITAL WOOD ARTISAN

Day 2
16.02.2021

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Time	Activity	Partner in charge of the activity
9:00 - 9: 15	Ice breaking games	ESMOVIA
9:15 - 10:45	Laser technique	MODUS - Taina Laaksonen
10:45 – 11:05	Q&A	
11:05 – 11:25	Break	
11:25 - 12:55	Shiski concept space	CO-LABORY - Roberta Ieva
12:55 - 13:15	Q&A	
13:15 - 13:35	Break	
13:35 - 14:00	Evaluation	AFN
14:00 - 15:00	Lunch	
15:00 - 16:00	Virtual visits: 3DStep Oy	MODUS
16:00 - 16:10	Q&A	
16:10 - 16:30	Break	
16:30 - 17:30	Virtual visits: CINDOR – Centro de Formação Profissional da Indústria de Ourivesaria e Relojoaria	AFN
17:30 - 17:40	Q&A	
17:40 - 18:00	Conclusions and Evaluations	

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DIGITAL WOOD ARTISAN

Day 3
17.02.2021

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Time	Activity	Partner in charge of the activity
9:00 - 9: 15	Ice breaking games	ESMOVIA
9:15 - 10:45	Social inclusion programme and its implementation in OZARA d.o.o.	OZARA d.o.o. - Moira Kobše
10:45 – 11:05	Q&A	
11:05 – 11:25	Break	
11:25 - 12:55	Woodworking from organisational perspective & practice and curriculum based training example	OZARA d.o.o. - Zlatko Perič
12:55 - 13:15	Q&A	
13:15-13:35	Break	
13:35 - 14:00	Evaluation	AFN
14:00 - 15:00	Lunch	
15:00 - 16:00	Virtual visits: OZARA carpentry unit	OZARA d.o.o.
16:00 - 16:10	Q&A	
16:10 - 16:30	Break	
16:30 - 17:30	Virtual visits: National design awards	ESMOVIA
17:30 - 17:40	Q&A	
17:40 - 18:00	Conclusions and Evaluations	

Co-funded by the Erasmus+ Programme of the European Union

DIGITAL WOOD ARTISAN

Day 4
18.02.2021

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Time	Activity	Partner in charge of the activity
9:00 - 9: 15	Ice breaking games	ESMOVIA
9:15 - 10:45	CAR (Refugees Center of Mislata)	ESMOVIA - Visitación Martínez / Andreea Craciun
10:45 – 11:05	Q&A	
11:05 – 11:25	Break	
11:25 - 12:55	The Human Library	EUROSUCCESS - Maria Koumparou
12:55 - 13:15	Q&A	
13:15-13:35	Break	
13:35 - 14:00	Evaluation	AFN
14:00 - 15:00	Lunch	
15:00 - 16:00	Virtual visits: Fenicia Mobiliario	ESMOVIA
16:00 - 16:10	Q&A	
16:10 - 16:30	Break	
16:30 - 17:30	Virtual visits: Lovenlight, Reto	EUROSUCCESS
17:30 - 17:40	Q&A	
17:40 - 18:00	Conclusions and Evaluations	

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DIGITAL WOOD ARTISAN

Day 5
19.02.2021

Short term joint staff training event online AGENDA

Digital Wood Artisan (DWA)

Time	Activity	Partner in charge of the activity
9:00 - 9: 15	Ice breaking games	ESMOVIA
9:15 - 10:45	Ubuntu Leaders Academy	AFN - Alcidio Jesus / Claudia Amaral
10:45 – 11:05	Q&A	
11:05 – 11:25	Break	
11:25 - 12:25	Virtual visits to companies: Boca do Lobo	AFN
12:25 - 12:40	Q&A	
12:40 - 13:00	Break	
13:00 - 14:00	HelpRefugeesWork	EUROSUCCESS
14:00 - 15:00	Lunch	
15:00 - 16:00	Discussion and feedback on the training attended	
16:00 - 16:15	Break	
16:15 - 17:15	Conclusions and Discussion on how to implement the training in the partner countries	CO-LABORY
17:15 - 17:30	Break	
17:30 - 18:00	Final Evaluation and virtual certificates handover	AFN and ESMOVIA

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