ERASMUS+ SHOEGAME

DEVELOPING KEY COMPETENCES IN VET FOR THE FOOTWEAR INDUSTRY THROUGH SERIOUS GAMES (REF: 2021-1-RO01-KA220-VET-000028078)

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SHOEGAME: LET THE GAME BEGIN !

During the past months, the consortium completed the exploratory phase and was then able to move forward on the development of the serious game and the training material for VET footwear studies. During a meeting in Porto the 19th and 20th of October, they addressed the most efficient method to analyse the training and education needs for pre-VET and VET, and assessed the opportunities of serious games in education as a mean to attract students to the European footwear sector, a sector that also uses the latest technologies and digital tools when manufacturing their creative high-quality products. In accordance to the latest trends and demands by young people, the game will be developed for cell phones, which will allow to use the game inside, but also outside school. In this way, the game will not be associated as a school obligation but as a real game.

The content of the game will address several topics relevant for a footwear company, such as product design and manufacturing processes, new technologies, sustainability and circularity or health and safety at work. All of which will help younger generations get to understand the main principles of manufacturing a shoe while they are playing.

Throughout this edition of our newsletter, you will discover more about each of the units developed by the consortium and offered in the game. We wish you a pleasant reading!

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WHAT TO FIND IN THE NEWSLETTER

UNIT 1 – PRODUCT DESIGN, DEVELOPED BY TUIASI

The Product Design module provides a basic understanding of the footwear development process, starting with consumer's needs and new market trends, continuing with 3D CAD modelling and 2D product engineering, and completing with the launch of fashion collections. Thus, young VET students, or those looking for a possible career in the future, will lean for example, the main features of the design process in a company. This module introduces the following topics:

Each individual will have the possibility to study the theoretical content of the lessons and he/she will be ready to perform practical and entertaining activities through serious gaming.

- **How to define the right target consumer**
- **Lifestyle, shopping behaviour and fashion trends**
- **Design and development process: product concepts, design models, steps of the design process**
- **New tendencies in footwear design: sustainable design strategies, eco-design, design for dissembling, design for recycling, design for waste minimisation**
- **Overview of the footwear development through 3D/2D CAD: modelling, virtual prototyping and pattern engineering, designing a tech pack**
- **How to set up and coordinate a footwear collection**

UNIT 2 - MANUFACTURING PROCESSES, DEVELOPED BY TUIASI

The manufacturing of a shoe implies a complex manufacturing process, which can determine the category and quality level of the model. Many decisions and choices need to be taken and have to consider the strategy, capacities and organisation of the company.

This unit is articulated in 4 chapters:

- **Company structure and organisation**
- **Overview of the footwear manufacturing process: cutting, pre-stitching, stitching, pre-assembly, assembly, finishing, packing**
- **How to manage a footwear manufacturing company**
- **Planning, monitoring, and controlling footwear production**

Thanks to this unit, you will be able to:

- **Know the different steps of production in a broader scope, being able to cope with the production of order reach an adequate flow, integrating the most used technology and skills.**
- **Understand the main features of planning the production, from the moment the order is given from the client, the need to articulate with available resources, and materials in due time, always preferring local suppliers, and making sure that deliverable are provided within the schedule.**
- **Understand all the production resources, such as human resources, machinery, materials, and supply chain from supplies to the expedition, in a broader scope.**

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UNIT 3 – NEW TECHNOLOGIES, DEVELOPED BY CTCP

The third unit will provide a first contact with Industry 4.0 (i.4.0) enabling technologies and their correspondent impact on quality and productivity, being therefore an alternative for the new industrial era.

The training contents will bring the understanding about the main concept of i4.0, the adopted technology and working methodologies, which together involve the company and its clients in a virtuous circle of fine-tuning production strategies seeking higher levels of quality, productivity, and sustainability.

From i4.0 global concept to smart-factories, the content will be presented as a travel through a smart footwear factory, interconnecting cyber-physical systems, the internet of things and the internet of services.

The contents will focus on:

- **Project design using modelling, virtualization and simulation**
- **Advanced prototyping supported by additive manufacturing, 3D modelling and AR/VR**
- **Cloud computing supporting real time data management and project design co-working**
- **Improved human-computer tools - humans working alongside robots and cooperating for a more reliable production**
- **Enterprise resource planning (ERP) and business intelligence**
- **Warehouses and stock completely traceable by wireless RFID modules**

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UNIT 4 – SUSTAINABILITY AND CIRCULARITY, DEVELOPED BY INESCOP

Sustainability requirements have emerged relatively recently. As environmental and climate catastrophes, become more common, consumers' requests for sustainable products to adjust to their sustainable lifestyles are rapidly increasing. Thus, the fashion industry needs to urgently react and provide more sustainable and durable products with innovative solutions.

The complexity of footwear production represents a challenge to the transition towards a circular footwear industry, because of the multiplicity of components and materials but also processes. There are more and more good companies' initiatives to respond to this need, and we expect the response from footwear companies to increase in the short term thanks to the support of research and European, national and regional funding support in this transition towards a circular and digital industry.

This unit will introduce students with the necessary insights on how to integrate the aspects related with the environmental sustainability and circular economy in the business strategy.

The content of the course is developed in 4 chapters:

- **Introduction to sustainability and circularity**
- **Footwear materials, properties, and environmental impacts**
- **Sustainable footwear manufacturing**
- **Footwear waste management**

UNIT 5 – MARKETING AND MERCHANDISING, DEVELOPED BY CRE.THI.DEV. (CTD)

Marketing and merchandising include marketing strategies, display design, and competitive pricing, including discounting. Merchandising is important for retailers looking to cultivate their brand, improve the experience of customers, compete with others in the sector, and ultimately, drive sales.

This course will enable students to get in touch with the latest techniques of marketing a brand, the resources and strategies to improve the image/communication of a company/brand, while articulating the results and costs.

The content introduces to concepts such as:

- **Definition of marketing techniques**
- **New trends in marketing**
- **Effective merchandising to increase sales**
- **Retail merchandising and best practices**

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KA2 - Cooperation for innovation and the exchange of good practices

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