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SUST3D FASHION

Sust3DFashion WP2/R1

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RESEARCH PHASE AND VET TRAINING SCHEME BEST PRACTICES

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Introduction

Sust3DFashion – "Textile and Fashion Manufacturing towards Industry 4.0" is a 24-month Cooperation Partnership in the field of Vocational Education and Training (VET), aimed at supporting the digital and green transformation of the textile and fashion manufacturing sector. The project addresses pressing European priorities related to sustainability, digitalisation, and skills development by promoting the integration of 3D design and printing technologies, circular economy principles, and environmentally responsible production models within VET systems.

In line with European policy frameworks—such as the *European Strategy for Sustainable Textiles* and the *EU Strategy for Sustainable and Circular Textiles (2022)*—the project contributes to the objective that, by 2030, textiles placed on the EU market should be durable, recyclable, largely made from recycled fibres, free from hazardous substances, and produced in an environmentally sustainable manner. Against the backdrop of the significant environmental impact of textile consumption in Europe, Sust3DFashion supports these policy goals by equipping VET learners, educators, and industry professionals with innovative, digitally driven competences that combine technological innovation with sustainability-oriented practices.

Within this context, Work Package 2 (WP2) plays a central role in advancing Project Objective 1 (PO1): Enabling VET providers to create innovative digital education and assessment tools that allow monitoring the learning progress of VET learners in online environments. WP2 focuses on identifying, analysing, and validating digital educational practices and tools that respond to evolving skills needs in the textile and fashion sector while facilitating the transition towards Industry 4.0.

Scope and Objectives of WP2

WP2 is structured around four interrelated objectives:

1. WP2O1: To identify innovative digital educational tools that have demonstrated measurable learning outcomes in the VET sector.
2. WP2O2: To design a tailored e-learning training scheme for VET educators.
3. WP2O3: To develop online assessment tools to measure skills acquisition through digital learning experiences.
4. WP2O4: To test and validate the knowledge and competences acquired through the training scheme.

Together, these objectives strengthen the capacity of VET providers and educators to design, implement, and assess high-quality digital learning experiences. In particular, WP2O1 underpins the creation of a structured map of innovative digital tools and educational methodologies applicable to VET, which serves as the analytical foundation for the development of the Sust3DFashion e-learning training scheme.

Focus and Scope of the WP2 Desk Research

The WP2 Desk Research constitutes a core component of the research methodology and directly supports the achievement of WP2O1. Its primary scope is the systematic mapping and analysis of best practices related to innovative digital educational and assessment tools across all participating countries. The desk research focuses on tools and methodologies that have proven effective in VET contexts, particularly those supporting digital content creation, online assessment, learner engagement, skills monitoring, and the integration of digital technologies relevant to the textile and fashion sector.
Each project partner conducted desk research at national level using a common methodology agreed by the Consortium, ensuring coherence and comparability of findings. The national results were consolidated into country-specific best practice documents and subsequently synthesised into this transnational research report, allowing for comparative analysis and identification of transferable practices across different VET systems and labour market contexts.

Scope and Content of This Report

This Consortium Research Report aims to collect, document, and analyse innovative digital tools and practices, assessing their suitability for different VET learner groups and learning needs within the textile and fashion manufacturing sector. The report provides a structured overview of national best practices and highlights how digital tools can support skills development, sustainability, and innovation in VET.

The findings presented in this report directly inform the design of the SUST3DFASHION e-learning training scheme and the associated online assessment tools (WP2O2 and WP2O3). By offering VET educators evidence-based insights, practical examples, and validated digital solutions, the report supports the creation of innovative digital educational content and contributes to the effective upskilling of VET learners in line with current and future labour market demands.

Germany - Overview of Identified Best Practices

The four identified best practices from Germany showcase a strong and diverse ecosystem that connects digital innovation, sustainability, and advanced skills development within the fashion and textile sector. Together, they cover multiple stages of the value chain—from creative design and experimentation to industrial-level digital production—providing VET learners with comprehensive opportunities to develop relevant, future-oriented competences aligned with Industry 4.0 and circular economy principles.

The Danit Peleg initiative offers VET learners direct exposure to pioneering applications of 3D printing in fashion design through a structured digital video course. Learners benefit from in-depth theoretical and practical knowledge covering the full 3D-printed fashion process, including materials, technologies, and sustainability impacts. The course format allows learners to engage with innovative content at their own pace while gaining insights from a globally recognised designer, supporting the development of advanced creative and technical skills.

Hack That Fashion provides VET learners with free and accessible digital resources focused on sustainable and digital fashion practices. Through open-access toolkits, workshops, and collaborative hackathons, learners gain step-by-step guidance on applying sustainability principles, design thinking, and digital tools in real-world contexts. This approach supports inclusive learning, encourages experimentation, and enables learners with varying skill levels to actively engage in sustainable innovation within the fashion and textile sector.

The workshops and lectures delivered by Anbelyn (Anne Schiller) offer VET learners the opportunity to explore the integration of 3D simulation tools and artificial intelligence in fashion education. Learners benefit from a balanced approach combining theoretical understanding with practical applications, enabling them to develop competences in digital prototyping, design optimisation, and creative problem-solving. Exposure to emerging technologies also enhances learners' awareness of evolving career paths in the digital fashion industry.
Finally, Hohenstein provides VET learners with access to advanced, research-driven training in digital fashion development. Through hands-on workshops and in-depth exploration of professional software tools, learners develop high-level technical competences related to digital textile production, simulation, and material optimization. This supports learners in strengthening their employability in specialized and innovation-driven roles within the textile and fashion manufacturing sector.

Germany - Description of Best Practices

Tool	**Name: Danit Peleg**
	Description: Danit Peleg was one of the first designers in the world to use 3D printing with recyclable plastic filaments. She used desktop printers to create an entire collection, and later on proceeded to collaborate with organisations like Nouns DAO and even the Paralympic Rio 2016 Opening. Today, she utilises many different design and printing techniques, and has her own "3D-printed fashion for beginners" online course. She teaches the following modules: Introduction, History of 3D Printing, 3D techniques used today in fashion (like laser, machines...), process of 3D printed fashion, desktop 3D printers technicalities, types of filaments, impact of 3D printing in the fashion industry, Open sources.
	Labor Market Sector: Fashion design
	Educational need: General knowledge about 3D printing for fashion
Digital Skills Requirement	Skill level: Intermediate-advanced design and pattern skills.
	Relevance of the digital skill: Highly relevant for designers, since 3D printing requires a considerable amount of previous work and practice. The course currently has no free access, so it's hard to tell how much previous knowledge concerning specific software or hardware is needed. Presumably, beginners will be able to complete the course in a satisfying way.
Educational Material Production	Tool Application in Educational Materials: Digital video course
	Benefits for VET Learners: Thorough content, innovative expertise. Student discounts.
Reference (paper, web link, etc.)	https://danitpeleg.teachable.com/
Language	ENGLISH

Tool	**Name: Hack that fashion**
	Description: Hack that fashion is a Berlin-based initiative co-funded by the Creative Europe Programme of the EU. It focuses on boosting innovation and creation in the fashion

	industry to make it more sustainable, and is led by Envolvente Entrepreneurship (Greece), business and innovation experts, Institutio Europeo de Diseño, and Tartu Centre for Creative Industries (Estonia), among others. They launched a support programme for the sustainable and digital transition of European fashion brands for which they did/have: 1. A digital workshop in march entitled "Tools for sustainable fashion, consisting of presenting 16 different tools (Circularity Streams, Serve It, Piece by Piece, Journal, SDGS Strategy Map, Circulatory windows, circular entrepreneurship, tell the world, ethical icebreaker, it's down to priorities, choose wisely, prototyping, follow the path, say your story, pilot project calendar, sustainable journey) for sustainable fashion and applying 4 steps for design thinking (understand, define, make, release), and doing intuitive exercises for fashion enterprises. More detail about each tool can be found on the toolkits: 2. Two free toolkits available for download at their website: Sustainability Toolkit & Digitalization Tooklit (linked below) 3. National Hackathons in Estonia, Spain and Greece, where teams generated sustainable fashion projects, focusing on the question. How to make slow fashion more accessible to people without wealth? Each Hackathon had different results, also detailed on their website. Even though the project focuses more generally on sustainable fashion, it has included 3D-printing tools towards achieving that goal.
	Labor Market Sector: Fashion / textile
	Educational need: General knowledge about sustainable fashion and techniques used in it
Digital Skills Requirement	Skill level: Beginner navigation skills. Some experience with design terminology
	Relevance of the digital skill: Highly relevant for designers and companies that wish to implement sustainability and digitalization in an effective manner. Very well-rounded implementation of sustainability, as it reaches intersections with equity and accessibility for all.
Educational Material Production	Tool Application in Educational Materials:
	Benefits for VET Learners: Free access, easy to understand,

	step by-step guides
Reference (paper, web link, etc.)	https://hackthatfashion.eu/ https://envolveglobal.org/hackthatfashion-tools-and-best-practices-for-the-sustainable-fashion-industry/ https://textile-platform.eu/ecosystex https://envolveglobal.org/wp-content/uploads/2023/11/HTF-Sustainability-Toolkit-V2_Small.pdf https://envolveglobal.org/wp-content/uploads/2023/11/HTF-Digitalization-Toolkit-V2-_small.pdf
Language	ENGLISH

Tool	Name: **Anbelyn (Anne Schiller)**
	Description: Anne Schiller is a german designer that currently teaches various modules at the Sigmaringen Fashion School, as well as in her own website. Many of the workshops she leads are focused on the use of "Clo3D", an open source development environment that enables users to experiment with 3D models. Options enables by Clo3D include: pattern and texture design, edition, fitting, drawing, software integration and supplementary material. This series of lectures explores the convergence of fashion and technology. The first lecture focuses on 3D simulation in fashion design, utilizing CLO3D software. It delves into the concept, its disruptive impact, and the resulting benefits and drawbacks. The lecture also examines the environmental implications of 3D simulation and the exciting career opportunities it presents for both fashion businesses and independent designers. The second lecture dives into the transformative potential of Artificial Intelligence (AI) in the fashion industry. It explores how AI is reshaping the fashion landscape and its broader economic influence. The lecture then provides a practical overview of AI applications in fashion design, marketing, and 3D modeling, while acknowledging the challenges of integration. Finally, it examines how AI can empower freelance designers and students by boosting efficiency and creativity. The lecture concludes with a look towards the future of fashion careers in an AI-driven industry. Some practical applications, even though not listed in detail are presumably prototyping (inexpensive and very accurate prototypes that allow for reduced waste - printing only what's

	necessary) and small-batch/on-demand production (no unnecessary production-related waste or energy expenses, no leftover waste...)
	Labor Market Sector: Fashion / textile
	Educational need: General knowledge about how to apply 3D printing and techniques to many crucial steps in the design and crafting processes involved in fashion.
Digital Skills Requirement	Skill level: Previous acquaintance with concepts like AI and NFT will be helpful
	Relevance of the digital skill: Highly relevant for designers and companies that wish to implement digitalization in techniques to their design and production processes
Educational Material Production	Tool Application in Educational Materials:
	Benefits for VET Learners: Funding options, extensive content
Reference (paper, web link, etc.)	https://anbelyn.de/en/workshops/
Language	ENGLISH

Tool	**Name: Hohenstein**
	Description: Hohenstein is a German, family-owned company specialised in textile research. They currently offer a course about Digital Fashion Development, including practical workshops, where they teach about digital textile production and use software and tools like 3D simulations (CLO, Style3D, VStitcher). They also offer online workshops, where they teach in-depth use of: Avatars, cuts, materials, processing, layering, fitting, rendering, and creative project production. Similar to other tools' advantages, this allows for reduced waste, optimization in manufacturing processes and the utilisation of various materials that can be sustainable, recycled and recyclable.
	Labor Market Sector: Textile
	Educational need: Specific digital fashion development
Digital Skills Requirement	Skill level: Prior knowledge of at least of the systems above mentioned

	Relevance of the digital skill: Highly relevant for designers and companies that wish to focus on digital textile production
Educational Material Production	Tool Application in Educational Materials:
	Benefits for VET Learners: This tool presents two significant advantages: 1. It allows for a way deeper navigation of technical skills for people who are not beginners; this means there are opportunities for people with previous experience who want to learn further, and 2. It is very scientific-leaning, which also presents opportunities for people interested in more specialized digital and development industries as a potential overlap with textile and fashion knowledge.
Reference (paper, web link, etc.)	https://www.hohenstein.de/de/termine/intensivtraining-digital-fashion-development
Language	ENGLISH

Turkyie - Overview of Identified Best Practices

The best practices identified in Türkiye demonstrate a strong commitment to integrating **digital** transformation, sustainability, and Industry 4.0 principles into vocational education and training within the textile and fashion sector. Together, these initiatives provide VET learners with access to innovative learning environments that combine creative design, advanced digital tools, and sustainability-oriented practices, responding directly to current and emerging labour market needs.

The Textile and Fashion Design Department of Mimar Sinan Fine Arts University offers VET learners significant benefits through its Eco-Design Workshops, which integrate digital tools such as 3D modelling, digital textile simulation, and virtual fitting into fashion education. Learners benefit from a holistic educational approach that combines artistic creativity with technological and environmental awareness. Through hands-on workshops, sector practices, and participation in exhibitions and fairs, learners enhance their employability, develop sustainable design competences, and gain readiness for Industry 4.0 by mastering both traditional and digital fashion skills.

The Sustainable Design Practices programme at Istanbul Fashion Academy (IFA) provides VET learners with advanced digital competences through the use of professional tools such as CLO 3D and Browzwear. Learners benefit from practical experience in creating digital garment prototypes, allowing them to reduce material waste and production costs while improving efficiency. The programme also exposes learners to emerging fields such as virtual fashion collections and digital-only

garments, enhancing their employability in sustainable and technology-driven fashion markets and strengthening their capacity to respond to environmental challenges within the industry.

Hack4Fashion Türkiye offers VET learners a highly engaging, practice-oriented learning experience through collaborative hackathon formats. Participants benefit from hands-on involvement in developing innovative prototypes using technologies such as 3D printing, artificial intelligence, augmented reality, and blockchain. By working in interdisciplinary teams, learners strengthen their digital skills, creative problem-solving abilities, and sustainability-driven design thinking. The initiative also supports networking and collaboration with industry stakeholders, helping learners connect digital innovation with real-world fashion challenges.

Finally, the Digital Fashion Development Programme at Anadolu University provides VET learners with in-depth training in 3D fashion software and digital pattern-making tools aligned with Industry 4.0 standards. Learners gain hands-on experience with industry-standard tools such as CLO 3D and Optitex, enabling them to develop competences in virtual garment fitting, digital sampling, and sustainable design. The programme emphasizes circular economy principles, allowing learners to assess sustainability impacts before physical production and enhancing their ability to contribute to efficient, environmentally responsible fashion manufacturing processes.

Turkyie - Description of Best Practices

Tool	**Name: Textile and Fashion Design Department consists of; Weaving Design, Printing Design and Fashion Design Art Divisions. Mimar Sinan Fine Arts University.**
	Description: Mimar Sinan Fine Arts University is one of the leading educational institutions on arts and design in Türkiye and a pioneer in the organization of Eco-Design Workshops. It incorporates advanced digital tools into a fashion curriculum with a focus on sustainability. For this reason, the workshops are designed to provide students and professionals with practical skills and knowledge regarding eco-friendly fashion design, using modern technologies such as 3D modeling, digital textile simulation, and virtual fittings.
	Labor Market Sector: Textile and Fashion
	Educational need: Eco-Design Workshops are part of the

	educational needs in Mimar Sinan Fine Arts University, which have become so crucial in fostering sustainability and technology in the fashion context. They fill the important gaps that exist in traditional fashion education by bridging eco-friendly practices with digital design skills and real-life applications. Thus, these workshops not only prepare students and professionals to meet industry demand but also contribute greatly to the development of fashion education in general and to a sustainable future for fashion in particular.
Digital Skills Requirement	Skill level: Basic to Advanced
	Relevance of the digital skill: The programs have been formed with the approach of leading students to improve individual skills and characteristics of their own and to present original creative suggestions by using the relationship between color, material, structure, form, and function. Students are supposed to study in weaving, printing, and fashion design disciplines together as a whole education process during their four-year bachelor's degree program.
Educational Material Production	Application of the Tool in Educational Materials: The program consists of sector practice, educational excursions, workshops, exhibitions, and fairs participation. Additionally, it provides complementary courses that support these three main textile and fashion department branches with the aspects of artistic, cultural, occupational, and technical.
	Benefits for VET Learners: 1. Improved Employability and Higher Career Prospects 2. Mastery of Sustainable Design 3. Increased Creativity and Flexibility of Design 4. Efficiency with Economies 5. Readiness for Industry 4.0 and Digital Transformation 6. Problem-solving and Critical Thinking Skills
Reference (paper, web link, etc.)	https://msgsu.edu.tr/akademik/guzel-sanatlar-fakultesi/textile-and-fashion-design-department-infopack-for-erasmus-students/
Language	ENGLISH

~~Tool~~	**Name: Sustainable Design Practices**

	Description: Istanbul Fashion Academy (IFA) integrates cutting-edge tools like CLO 3D and Browzwear into its curriculum, enabling students to create digital garment prototypes that minimize fabric waste and reduce production costs. By combining technical 3D design skills with a focus on sustainability, IFA equips learners to innovate in fashion while addressing environmental challenges. Collaborating with global fashion tech companies, IFA allows students to work on virtual fashion collections and digital-only clothing, preparing them for emerging markets. This approach supports the development of a sustainable fashion ecosystem in Turkey, aligning with industry trends towards digital production and eco-friendly practices.
	Labor Market Sector: Fashion Design / Sustainable Fashion
	Educational need: Learners gain crucial skills in digital fashion design, specifically targeting waste reduction and enhancing efficiency in garment production.
Digital Skills Requirement	Skill level: Beginner/Intermediate/Advanced
	Relevance of the digital skill: Proficiency in **3D garment simulation** is vital as the fashion industry leans towards virtual design and sustainable practices. Intermediate knowledge of design software is recommended.
Educational Material Production	Tool Application in Educational Materials: The academy offers a series of hands-on workshops and online tutorials for **CLO 3D** users, with guidance on creating sustainable fashion collections digitally.
	Benefits for VET Learners: Students acquire advanced digital design skills, enabling them to reduce waste and costs in fashion production. They also benefit from industry-relevant knowledge that enhances employability in sustainable fashion sectors.
Additional notes	
Reference (paper, web link, etc.)	https://www.istanbulmodaakademisi.com/en/educations/digital-clo-3d-fashion-design-program
Language	ENGLISH

Name	**Hack4Fashion Türkiye**

Tool	Hack4Fashion Türkiye is an initiative inspired by international hackathons to drive digital transformation and sustainability within the fashion sector. Organized by prominent industry associations, universities, and tech partners, the event gathers young designers, developers, and entrepreneurs to work on collaborative projects. Participants explore how emerging technologies like 3D printing, augmented reality (AR), artificial intelligence (AI), and blockchain can revolutionize the fashion industry. The hackathons typically aim to solve real-world challenges, such as reducing textile waste, improving the recyclability of products, and making the supply chain more transparent. Teams work intensively to create innovative prototypes that offer practical and sustainable solutions. By promoting a culture of cross-disciplinary collaboration, Hack4Fashion Türkiye encourages participants to rethink fashion's future and foster growth in local industry sectors through cutting-edge digital tools and sustainability-driven innovations.
Labor Market Sector	Fashion Industry
Educational need	General Digital Skills and Sustainable Fashion Knowledge
Skill level	Some Experience with 3D printing and artificial intelligence (AI) applications.
Relevance of the digital skill	These skills are crucial for integrating cutting-edge technology into the fashion sector, promoting sustainability and innovation.
Educational Material Production	**Benefits for VET Learners:** Learners gain hands-on experience in developing prototypes, enhancing both digital proficiency and sustainable design thinking in the fashion industry.
Reference (paper, web link, etc.)	1. Türkiye'deki Hackathon Yarışmaları: Yenilik ve Yaratıcılık Maratonu 2. Annual Hackathons Organized in Türkiye 3. Refabric: First Turkish Fashion Brand to Take Part in LVMH Program – OtonomHaber | AutonoumNews 4. Greece And Türkiye Announce Hackathon 2024 To

	Foster 5. Innovation And Cooperation (greekcitytimes.com)
Language	English
Additional notes	Promotes collaboration between young designers, developers, and entrepreneurs, fostering innovation in local and global markets.

Tool	**Name: 3D Fashion Software and Digital Pattern Making Tools**
	Description: The Digital Fashion Development Program at Anadolu University is a cutting-edge VET program that integrates 3D fashion software and digital pattern-making tools into traditional textile education. This program focuses on using digital simulations and virtual sampling to reduce the environmental impact of fashion design, aligning with Industry 4.0 standards. Students learn skills like 3D modelling, virtual garment fitting, and sustainable design, which are crucial in modern fashion manufacturing. The curriculum emphasises the circular economy, teaching students to create environmentally friendly designs by minimising waste and optimising resources. Through hands-on training with industry-standard tools like CLO 3D and Optitex, students gain practical experience that prepares them for careers in digital fashion design, virtual sampling, and sustainable fashion practices. This program equips learners with the skills to meet current industry demands, making them valuable assets in the digital and sustainable transformation of fashion.
	Labor Market Sector: Textile and Fashion Manufacturing
	Educational need:The fashion industry requires modern skills to keep up with digital transformation and sustainability trends. Traditional textile skills alone are insufficient; there is a demand for professionals trained in 3D modelling, digital pattern making, and virtual sampling. This program addresses the industry's need for sustainable and efficient design practices, equipping students with the ability to reduce production costs, minimise waste, and adapt to digital workflows essential for the current labor

	market.
Digital Skills Requirement	Skill level: Intermediate to Advanced
	Relevance of the digital skill: Digital skills like 3D modelling, virtual fitting, and digital pattern making are essential as the fashion industry shifts towards digital and sustainable practices. These skills allow designers to create, modify, and share designs quickly, reducing material waste and costs. By mastering these digital tools, students can drive innovation, meet industry demands, and contribute to more sustainable fashion production, positioning themselves as valuable assets in the evolving fashion landscape.
Educational Material Production	Tool Application in Educational Materials: The tools are applied in practical lessons, allowing students to create digital fashion designs and patterns, simulate their creations, and assess sustainability impacts before physical production.
	Benefits for VET Learners: 1)Gain hands-on experience with industry-standard digital tools 2)Enhancing employability in the digital fashion sector 3)Develop skills that are directly applicable to current industry needs. 4)Emphasizing sustainability and efficiency.
Additional notes	The program also includes training on the circular economy fashion, providing learners with a holistic understanding of th industry's environmental responsibilities and the role of digit technology in meeting these challenges.
Reference (paper, web link, etc.)	Anadolu University website and program brochures.
Language	ENGLISH

France - Overview of Identified Best Practices

The three French best practices identified within the textile and fashion sector highlight a strong integration of digital design tools, sustainable production methods, and Industry 4.0 technologies in vocational education and training. Together, these practices provide VET learners with practical, industry-relevant competences that support environmentally responsible design, digital innovation, and enhanced employability in contemporary fashion and textile professions.

The Adobe Photoshop and Illustrator for Textile Design course offers VET learners essential digital design competences widely used across the textile and fashion industries. Learners benefit from mastering professional tools to create detailed patterns, textures, and colour combinations in a fully digital environment, allowing them to experiment creatively while minimising material waste. The focus on sustainability and eco-conscious design enables learners to develop production-ready textile concepts without relying on physical prototypes, strengthening both their technical skills and environmental awareness.

The 3D Fashion Software and Digital Pattern Making Tools training provides VET learners with advanced competences in digital fashion development, including 3D modelling, virtual garment fitting, and digital pattern making. Through hands-on training with industry-standard tools such as CLO 3D and Optitex, learners gain practical experience in simulating designs and assessing sustainability impacts before physical production. This approach enhances learners' readiness for digital workflows, improves efficiency in design processes, and supports the development of skills aligned with circular economy principles and current labour market demands.

The **3D Printing Technology in Fashion and Accessories** programme at KEDGE Design School offers VET learners direct exposure to additive manufacturing and digital fabrication techniques applied to fashion accessories. By working with CAD software such as Rhino and 3D printing technologies, learners develop end-to-end competences ranging from digital prototyping to physical production. The programme supports experimentation with eco-friendly materials and sustainable manufacturing methods, while also strengthening learners' ability to create customised and innovative fashion accessories, enhancing their competitiveness in emerging digital manufacturing and design fields.

France - Description of Best Practices

Name	Adobe Photoshop and Illustrator for Textile Design**. Sustainable Textile Design with Digital Tools at Aix-Marseille University (School of Fashion and Textiles)**
Description	In this course, students are taught how to use Adobe Photoshop and Illustrator to design textiles that focus on sustainability and eco-conscious practices. Adobe tools allow designers to create intricate patterns, play with color combinations, and adjust textures digitally before any physical production. This minimizes the use of physical resources in the experimentation phase, ensuring a more

	sustainable approach to textile production. Students learn to create textiles for fashion as well as interior design, experimenting with both natural and digital materials to create environmentally friendly collections.
Labor Market Sector	Textile Design, Sustainable Fashion
Educational need	As sustainability becomes a central focus in fashion, students must learn to leverage digital tools to minimize waste and improve the environmental footprint of their designs. This course provides essential training in digital design for textiles, particularly for those interested in eco-friendly production.
Skill level	Basic knowledge of Adobe Creative Suite software (Photoshop and Illustrator)
Relevance of the digital skill	High – Digital skills are crucial for modern textile designers, as they allow for more efficient and sustainable design processes that align with the fashion industry's shift towards sustainability.
Educational Material Production	**Tool Application in Educational Materials:** Students use Photoshop and Illustrator to create digital textile designs that can be turned into fabric prints or interior decor. Lessons emphasize minimizing waste by creating digital mockups and designs that are production-ready, reducing the need for physical prototypes.
	Benefits for VET Learners: The course equips learners with strong digital skills, enabling them to create and present their textile designs in a professional manner while promoting sustainability in the fashion industry.
Reference (paper, web link, etc.)	https://anbelyn.de/en/workshops/
Language	English

Italy - Overview of Identified Best Practices

The Italian best practices identified in the fashion and textile sector reflect a strong integration of digital design, advanced manufacturing technologies, craftsmanship, and sustainability-oriented innovation within vocational education and training. These initiatives offer VET learners access to industry-relevant tools and methodologies that support the transition towards digital fashion, customised production, and environmentally responsible design, in line with Industry 4.0 developments.

The CLO3D CAD Software in the Digital Tailoring Course provides VET learners with comprehensive competences in digital garment creation and pattern development. Through hands-on training in 3D modelling, avatar-based fitting, and virtual prototyping, learners benefit from mastering the full digital workflow from design to production-ready patterns. The integration of laser cutting and rendering tools enhances learners' technical versatility, while the use of virtual simulations supports sustainable practices by reducing material waste and enabling remote collaboration.

Training in Rhinoceros McNeel CAD Software for Jewellery Design offers VET learners specialised skills in digital jewellery modelling and additive manufacturing. Learners gain practical experience in designing rings, pendants, and other accessories using precise 3D CAD tools and producing castable resin models for lost-wax casting. This end-to-end digital workflow empowers learners to establish small-scale, customised production processes, enhancing entrepreneurial opportunities and competitiveness in the evolving digital jewellery and fashion accessory market.

The Experimental Textile Design Course at Istituto Marangoni benefits VET learners by combining traditional textile knowledge with innovative digital design techniques. Learners develop competences in surface design, digital manipulation, sustainability, and trend forecasting while building a professional textile portfolio. The course supports creative exploration and critical awareness of ecological and economic aspects of fashion, enabling learners to translate conceptual ideas into forward-thinking, market-relevant textile collections.

The Textile Design Course using Adobe Illustrator and Photoshop offers VET learners strong foundational and intermediate skills in digital textile creation. Through practical training in vector drawing, pattern development, and digital rendering, learners gain the ability to design textiles for fashion, accessories, and interior applications. The course supports the development of a personal design style while equipping learners with widely used industry tools, strengthening their employability

across multiple creative and design-oriented sectors.

Italy - Description of Best Practices

Tool	Name: CLO3D CAD Software in Digital Tailoring Course
	Description: CLO3D is a comprehensive digital fashion design software that allows users to simulate the entire process of garment creation, from initial pattern drafting to final product visualisation. It offers 3D garment modelling, allowing users to create highly detailed virtual clothing that can be adjusted and fitted in real-time on customizable avatars generated through body scans. The software enables users to design garments from scratch, test various fabrics and textures, and simulate physical properties such as drape, stretch, and layering. CLO3D also integrates with laser cutting machines to produce patterns ready for fabrication, making it a highly versatile tool for modern fashion designers, pattern makers, and digital tailors. The software is used in both educational and professional settings to streamline the design-to-production process, reduce material waste, and facilitate remote collaboration.
	Labor Market Sector: Fashion Design, Digital Tailoring
	Educational need: Provides training in digital pattern design and garment creation, including avatar creation via 3D body scans and CAD pattern generation.
Digital Skills Requirement	Skill level: Basic to intermediate computer skills, familiarity with CAD software, and understanding of 3D modelling principles.
	Relevance of the digital skill: High - Digital tailoring is transforming the fashion industry by streamlining design processes and enabling sustainable, customised garment production. Proficiency in CLO3D is increasingly necessary for fashion designers, pattern makers, and professionals in the textile industry. Knowledge of 3D design and digital tools ensures competitiveness and innovation in the modern labour market.
Educational Material Production	Tool Application in Educational Materials: CLO3D is applied in online group lessons, teaching how to create digital garments and patterns. Exercises include T-shirt creation, skirt design, and customising an avatar using body scan data.

	Benefits for VET Learners: Learners acquire practical skills in digital garment creation, from basic designs to more advanced features like laser cutting and rendering in fashion shows. Learners also gain access to post-training support and materials.
Additional notes	The course is delivered via live video conferencing, and a 3 scanner is used to create personalised avatars.
Reference (paper, web link, etc.)	https://www.dama.academy/corsi-di-formazione/corso-modellista-cad-abbigliamento-milano-taglio-laser-tessuti/ https://www.dama.academy/
Language	ITALIAN

Name	**Rhinoceros McNeel CAD Software**
Description	Rhinoceros McNeel is a powerful 3D CAD software used for designing jewelry. This course teaches participants how to create 3D models of rings, bracelets, and other jewelry pieces starting from a 2D sketch. Using Rhinoceros, learners can create precise digital models and export them for production using 3D resin printers. The course covers the full workflow, from sketching designs to printing in castable resins for the lost-wax casting process, enabling participants to establish a small jewelry workshop and produce custom pieces without leaving their studio.
Labor Market Sector	Jewelry Design, 3D Printing, Digital Manufacturing
Educational need	Offers essential training for jewelry designers and artisans in using 3D CAD software to design and print jewelry. It addresses the need to adapt traditional jewelry-making techniques to modern digital tools.
Skill level	Beginner to Intermediate computer skills, knowledge of CAD software, and understanding of 3D modeling and printing technologies.
Relevance of the digital skill	High – The integration of 3D CAD and 3D printing is revolutionizing the jewelry industry, offering a more efficient and customizable approach to design and production. Digital

	skills are critical for adapting to industry advancements and staying competitive. Understanding how to model, print, and cast 3D designs is essential for modern jewelry makers.
Educational Material Production	**Tool Application in Educational Materials:** Rhinoceros is applied in live online sessions to teach learners how to design jewelry using NURBS surfaces, create solid models, and prepare files for 3D printing. The course focuses on various types of rings and pendants, from basic forms to more complex designs.
	Benefits for VET Learners: Learners acquire hands-on skills in 3D jewelry design and production, including the ability to create castable resin models. The course also provides industry-recognized certification and support in building a personal jewelry workshop using 3D printing.
Reference (paper, web link, etc.)	1. https://www.dama.academy/corsi-di-formazione/corso-design-de-gioiello-milano-stampante-3d-gioielli/ 2. https://www.dama.academy/
Language	Italian

Tool	**Name: Experimental Textile Design Course**
	Description: The Experimental Textile Design course at Istituto Marangoni is a program aimed at exploring innovative approaches to textile creation. The course covers both traditional and digital techniques for designing textiles, focusing on surface prints, textures, and sustainable practices. Participants work through various stages of textile design, from initial inspiration and research to the final presentation of their creative ideas in a professional portfolio. Key topics include textile history, digital manipulation, sustainability in textiles, and trend forecasting. Participants also learn about the impact of ecology and innovation on the fashion economy while developing a collection of forward-thinking textile designs. Individual guidance from textile experts helps refine personal design concepts into a cohesive collection.
	Labor Market Sector: Fashion and Textile Design, Sustainable Fashion
	Educational need: Equips learners with knowledge of both traditional and innovative techniques in textile design,

	preparing them for careers in fashion design, surface design, and textile production. The course addresses the growing need for sustainable practices in the fashion industry.
Digital Skills Requirement	Skill level: Beginner to Intermediate - Basic knowledge of graphic design software (e.g., Adobe Illustrator, Photoshop) for textile design and digital manipulation techniques.
	Relevance of the digital skill: High – Digital design skills are essential for modern textile design, especially when creating innovative and sustainable textile solutions. Proficiency in digital tools enables designers to experiment with prints and textures while reducing environmental impact.
Educational Material Production	Tool Application in Educational Materials: The course integrates digital design tools with traditional artistic methods to help learners create and present textile designs. It emphasises sustainability and innovation, guiding students through the process of transforming creative concepts into professional portfolios.
	Benefits for VET Learners: Learners gain a strong foundation in both traditional and digital textile design techniques, focusing on sustainability and forward-thinking approaches. The course helps students create a professional design portfolio, offering valuable preparation for careers in the fashion and textile industries.
Reference (paper, web link, etc.)	https://www.istitutomarangoni.com/it/corsi-moda/fashion-design/experimental-textile-design https://www.istitutomarangoni.com/it
Language	ENGLISH

Tool	**Name: Textile Design Course**
	Description: The Textile Design course focuses on teaching participants how to creatively design digital textiles using professional software such as Adobe Illustrator and Photoshop. The course covers the entire design process, from understanding trends and sources of inspiration to creating digital textile patterns for clothing, accessories, and interior decoration. Participants learn to manipulate colours, compositions, and textures to create unique and personalised designs. With the support of a professional

	illustrator, students will develop their own style and experiment with different materials, perspectives, and proportions. The course provides practical, hands-on lessons in vector drawing and digital rendering techniques, suitable for beginners and intermediate-level learners.
	Labor Market Sector: Fashion Design, Interior Design, Textile Industry
	Educational need: Addresses the need for individuals in the fashion, textile, or interior design sectors to enhance their skills in digital textile design, using modern tools to translate creative ideas into marketable products.
Digital Skills Requirement	Skill level: Basic knowledge of Adobe Illustrator and Photoshop recommended, but the course starts with foundational skills in digital textile design.
	Relevance of the digital skill: High – Digital design tools such as Illustrator and Photoshop are essential in modern textile design, allowing designers to experiment with patterns, colours, and textures in ways that streamline production and enhance creativity. Knowledge of these tools is critical for professional designers working in fashion, textiles, and home décor.
Educational Material Production	Tool Application in Educational Materials: Adobe Illustrator and Photoshop are used to create and manipulate digital textile patterns and prepare them for production. The course teaches practical applications for creating unique designs on fabrics and leathers, preparing students to produce both fashion and interior design items.
	Benefits for VET Learners: Learners gain skills in vector drawing, digital rendering, and pattern creation, enabling them to develop professional-level designs for textiles and other materials. The course provides an excellent foundation for careers in textile and fashion design, as well as interior decoration.
Additional notes	A graphics tablet is optional but recommended for more preci control during the design process. The course is accessible beginners with no prior drawing skills required.
Reference (paper, web link, etc.)	https://www.modartech.com/store/prodotto/textile-design/ https://www.modartech.com/
Language	ENGLISH

Greece- Overview of identified Best Practices

The best practices identified in Greece demonstrate a strong emphasis on accessible digital fashion technologies, precision pattern making, and Industry 4.0–ready design workflows within vocational education and training. Collectively, these tools and solutions provide VET learners with a comprehensive pathway from creative design to production-ready outputs, supporting employability, innovation, and sustainable practices in the textile and fashion sector.

The Telestia Creator Pattern Cutting CAD Software offers VET learners the ability to develop accurate, professional garment patterns entirely from scratch using an intuitive and affordable digital environment. Learners benefit from mastering digital pattern construction, block development, and style modification without the need for expensive equipment such as plotters. The software's ease of use, multilingual support, and compatibility with other CAD systems allow learners to build personal pattern libraries and transition smoothly from traditional pattern cutting to digital workflows.

The Telestia Creator Fashion Design CAD Software enhances VET learners' creative and technical capabilities by enabling them to design, modify, and present complete fashion collections digitally. Learners benefit from features such as virtual fitting (moulage), technical drawing tools, and customizable design libraries, which support clear communication between designers and pattern technologists. The system allows learners to move quickly from concept to technical specification, strengthening their understanding of the full design-to-production process.

The Telestia Creator CAD Style Libraries further support VET learners by providing ready-to-use garment components, body figures, storyboard themes, and complete garment examples. These resources help learners enhance visual presentation, accelerate the design process, and improve the professional quality of their collections. Access to structured design elements supports creativity while reducing time spent on repetitive tasks, allowing learners to focus on innovation and collection development.

The Telestia Creator Plus MTM (Made-to-Measure) Solution provides VET learners with exposure to advanced digital customisation and virtual fitting technologies. By integrating body scanner data and automated pattern generation, learners gain experience in personalised garment creation aligned with modern retail and bespoke production models. This solution strengthens learners' understanding of

mass customisation, virtual draping, and data-driven design, preparing them for emerging business models in fashion manufacturing.

In addition to Telestia solutions, widely adopted industry tools such as Adobe Illustrator, CLO3D, and Optitex further enhance VET learners' digital skillsets. Adobe Illustrator supports high-quality vector-based design and graphic creation, enabling learners to produce scalable, production-ready visuals. CLO3D allows learners to create realistic 3D garment simulations and virtual fittings, improving their understanding of garment construction and fit while reducing the need for physical prototypes. Optitex provides an integrated 2D/3D CAD environment that prepares learners for industry-standard digital design, pattern making, and virtual sampling workflows

Greece - Description of Best Practices

Tool	**Telestia Creator: Pattern Cutting CAD software**
	Description: This unique system combines a set of easy to learn CAD tools and functions, with sound pattern cutting knowledge. Learners will be able to create their own blocks and styles, build-up their own style library, modify and adjust existing blocks and create fully professional collections. The software comes with built-in help and ready examples feature. The Telestia Creator Pattern Cutting CAD software is based on the Telestia pattern cutting methodology that provides accurate patterns with perfect fit, tried over thousands of users worldwide for more than 30 years. Learners can print the final patterns in life size on any standard printer. A plotter is not needed. This easy and affordable CAD system is ideal for pattern technologists, freelancers and clothing companies who would like to create their own apparel collections accurately in the most effortless way.

	
	Labor Market Sector: Textile
Digital Skills Requirement	Skill level: Basic pattern cutting knowledge
	Relevance of the digital skill:
Educational Material Production	**Telestia Creator Pattern Cutting features**: A fully featured CAD programme. Advanced tools to create and modify patterns. Easy drafting using the AB Pattern Construction template. Simplified tools and functions to draw, modify and adjust patterns. Easy to use working area, with zoom, measuring and drafting tools. Arrange and organise your patterns in layers. Work on multiple designs simultaneously. Create your own pattern library. Import EPS files and many images (jpg, gif, png, bmp, pcx, and more). Imports files from most competitor CAD software. Print full-size patterns on any printer. Scan ready patterns for adaptation. Variable width seam allowance. Build-in help and ready examples.

	Multi-language: English, German, French, Italian, Spanish, Greek
	Benefits for VET Learners: They can create their own patterns from scratch
Reference (paper, web link, etc.)	https://www.etelestia.com/en/cad-pattern-cutting-software.aspx
Language	ENGLISH

Tool	**Telestia Creator: Fashion Design CAD software**
	Description: The state-of-the-art CAD fashion design system enables designers to create sophisticated collections and present their work in the most professional manner. This system provides intuitive tools that expand creative capabilities, allowing to design pieces beyond imagination. Featuring built-in help and demonstration guidelines, this unique CAD fashion design system offers a vast array of options to bring design ideas to life. Designers can use models of various proportions as background guides for their original creations. The system allows to save, store, and create their own collection libraries. Learners can modify existing designs and create entirely new collections. Customize your styles with unique color combinations or utilize the seasonal color libraries provided. The Virtual Fitting (moulage) feature enables learners to create models with any size measurements, serving as a base for their designs. It facilitates the creation of precise technical drawings and provides clear guidelines for the pattern development process.

	For the first time, fashion designers and pattern technologists can communicate clearly through the CAD system as they work. Unlike other CAD systems that are bogged down with complex technical functions, e Telestia CAD Fashion Design software allows learners to start creating immediately without the struggle of learning a complicated system.
	Labor Market Sector: Textile
Digital Skills Requirement	Skill level: Requires basic Fashion Design knowledge
	Relevance of the digital skill:
Educational Material Production	**Telestia Creator Fashion Design features**: A fully featured CAD programme. Advanced tools to create and modify designs. Easy drawing using the AB Fashion Design template. Simplified tools and functions to draw, modify and adjust designs. Easy to use working area, with zoom, measuring and design tools. Arrange and organise your designs in layers. Work on multiple designs simultaneously. Create your own style library. Import EPS files and many images (jpg, gif, png, bmp, pcx, and more). Imports files from most competitor CAD software. Print. Scan designs and images. Creative design Virtual Fitting (moulage) Technical Drawing Fit fabric design Build-in help and ready examples. Multi-language: English, German, French, Italian, Spanish, Greek.
	Benefits for VET Learners: They can create their own patterns from scratch
Reference (paper, web link, etc.)	https://www.etelestia.com/en/cad-fashion-design-software.aspx

Language	ENGLISH

Tool	**Telestia Creator: CAD software style libraries**
	Description: This package is an add-on module to the Fashion Design CAD software and it has been developed to provide learners with additional tools in designing and presenting their collections. The fashion design libraries contain a range of pre-prepared garment parts, figures, storyboard themes etc. that they can use to enhance their collections.
	Labor Market Sector: Textile
Digital Skills Requirement	Skill level:
	Relevance of the digital skill:
Educational Material Production	**Divided into Telestia Creator files and JPG images the fashion design library contains:** • Parts of the garment: (36) belts, collars, cuffs, necklines, pockets • Styles with technical drawing: (40) blouses, skirts, trousers, dresses, jackets • Body figures: (23) movement, poses, men, women and children. • Block images: (30) to illustrate pattern block and garment design relevance. • Complete garment examples: (11) • Storyboard tools: (63) themes include animals, backgrounds, landscapes, nature and various other.
	Benefits for VET Learners: Fashion design libraries is part of the Fashion Design CAD system and is ideal for fashion designers, freelancers and clothing companies who would like to upgrade and enhance further their clothing collections
Reference (paper, web link, etc.)	https://www.etelestia.com/en/cad-design-library-software.aspx
Language	ENGLISH

Tool	**Telestia Creator: Telestia Creator Plus MTM solution for Designers**

	Description: Telestia Creator Plus, has unique new features for MTM that are realised with the collaboration of [TC]2 This is a Virtual Fitting, a Virtual Draping session, where learners can see themselves, or their model, as TC Mannequin, wearing thier styled creation with the perfect final pattern, ready for production in minimal time. All these are achievable snap-fast, following simple steps and using intuitive functions that free imagination in its creative journey. For the first time bespoke and MTM in retail, can become a reality for production. It is now easy to offer personalized collections. Collections that will be based on the combined technology of TC2/Labs and Telestia Creator design &pattern creation. The customer selects the style ,and the design, pattern and garment can be created to the personal measurements.
	Labor Market Sector: Textile
Digital Skills Requirement	Skill level:
	Relevance of the digital skill:
Educational Material Production	NOW T Creator Plus is upgraded to satisfy retailers and consumers, as well and work as follows: • Import your Body Scanner Data from the [TC]2 Labs body scanner, and create your own personal TC Mannequin, • Draft your design directly on your TC mannequin, style it, add colour, fabric, style details, trims and accessories. • Generate your personal Automatic Basic pattern Block with a click, perfectly made-to-measure and fitting, on your TC Mannequin. • Apply the design changes you want on the Block with the Automatic Pattern Styler and create your personal Design Technical Block.
	Benefits for VET Learners:
Language	ENGLISH

Tool	**Name: Adobe Illustrator**
	Description: Adobe Illustrator is a powerful vector graphics software developed by Adobe Inc. It is widely used by graphic designers, illustrators, and artists to create scalable artwork, illustrations, logos, icons, and complex graphics.
	Labor Market Sector: Adobe Illustrator is used in many sections across a great variety of industries. Creative jobs that involve designs and high-quality graphics that will be used on screen, in-print, or on products, take great advantage of the Adobe Illustrator use.
	Educational need: Explore the history and development of Adobe Illustrator and how its features have evolved to support designers in their creative processes.
Digital Skills Requirement	Skill level: Basic to Advanced, depending on the design.
	Relevance of the digital skill: Adobe Illustrator significantly improves workflow and design efficiency for professionals working in digital environments and its features have evolved to support designers in their creative processes.
Educational Material Production	Tool Application in Educational Materials: Unlike raster-based programs, Illustrator uses mathematical equations to create clean, precise lines and shapes that can be resized without losing quality. This makes it ideal for designing graphics that need to be used in various sizes and formats, from small web icons to large billboards.
	Benefits for VET Learners: Adobe Illustrator enables VET Learners to work with a wide array of tools and features, and to create flexibility and control, making it a cornerstone tool in the field of digital graphic design and art.
Reference (paper, web link, etc.)	https://www.adobe.com/gr_en/products/illustrator/campaign/pricing.html?gclid=CjwKCAjwnK60BhA9EiwAmpHZw_fXDvaBMgjJHz4geMk-E8sGFHN23agJfTTGJDMTfOzrDHlHgmkeyRoC5KMQAvD_BwE&mv=search&mv=search&mv2=paidsearch&sdid=GMCWY69B&ef_id=CjwKCAjwnK60BhA9EiwAmpHZw_fXDvaBMgjJHz4geMk-E8sGFHN23agJfTTGJDMTfOzrDHlHgmkeyRoC5KMQAvD_BwE:G:s&s_kwcid=AL!3085!3!341191471161!e!!g!!illustrator%20cloud!1675832083!67741774049&gad_source=1

Language	ENGLISH

Tool	**Name: CLO3D**
	Description: Clo3D is a 3D garment visualization tool that allows designers to create, edit, and review 3D garments. It provides realistic garment simulation, enabling users to visualize the fit and design of clothing in a virtual environment.
	Labor Market Sector: Textile and Fashion Manufacturing
	Educational need: To teach students and professionals how to use advanced digital tools for garment design and visualization.
Digital Skills Requirement	Skill level: Intermediate to Advanced. Proficiency in 3D modeling and simulation software.
	Relevance of the digital skill: High - Essential for modern garment design and manufacturing processes, allowing for more efficient and innovative design workflows.
Educational Material Production	Tool Application in Educational Materials: Used for creating 3D garment designs, virtual fittings, and simulation of fabric properties to understand the impact of design choices in a virtual setting.
	Benefits for VET Learners: Improves understanding of garment construction, enhances creativity, and provides hands-on experience with industry-standard software.
Additional notes	*Clo3D helps bridge the gap between traditional garment design and digital innovation, preparing learners for future industry trends.*
Reference (paper, web link, etc.)	Clo3D - The official website provides comprehensive information on the software, including features, plans, resources, and user stories. It is a valuable resource for anyone interested in learning about or utilizing Clo3D for 3D garment visualization and design.
Language	ENGLISH

Name	**Optitex**

Description	Optitex provides 2D and 3D CAD/CAM solutions for the apparel industry. It offers comprehensive tools for fashion design, pattern making, and virtual garment visualization
Labor Market Sector	Textile and Fashion Manufacturing
Educational need	To train learners in advanced digital design and pattern making technologies used in the fashion industry.
Skill level	Intermediate to Advanced. Proficiency in CAD software and understanding of garment construction.
Relevance of the digital skill	High - Critical for modern apparel design and manufacturing, enhancing efficiency and innovation.
Educational Material Production	**Tool Application in Educational Materials**: Used for fashion design, pattern creation, and 3D garment simulation to teach students about the digital design process and garment visualization. **Benefits for VET Learners**: Provides a comprehensive toolset that integrates both 2D and 3D design, preparing learners for industry standards and improving their design capabilities.
Reference (paper, web link, etc.)	Optitex is a leading provider of integrated 2D and 3D CAD/CAM software solutions for the fashion and apparel industry. Their tools are designed to streamline the design, development, and production processes, enabling users to create digital patterns, visualize 3D virtual samples, and make quick adjustments with high accuracy. The software offers features like accurate fabric simulation, photo-realistic rendering, virtual tension maps, and customizable avatars. Optitex's solutions are widely used by brands, manufacturers, and retailers to enhance collaboration, improve efficiency, and reduce time to market.
Language	English
Additional notes	Optitex is widely adopted by fashion schools and companies, offering students practical skills that are directly applicable in the industry.

Conclusion of the Best Practices Analysis

The analysis of best practices collected across the participating countries highlights the growing maturity and diversity of innovative digital tools and educational

methodologies within the textile and fashion VET ecosystem. Despite differences in national contexts, all identified practices demonstrate a strong commitment to digital transformation, sustainability, and Industry 4.0 readiness, confirming the relevance of these priorities across Europe.

The best practices reveal a wide spectrum of digital solutions, ranging from introductory and accessible tools for creative design and digital content creation to advanced, industry-level software supporting 3D modelling, virtual fitting, digital pattern making, and additive manufacturing. This diversity ensures that VET learners at different skill levels—beginner, intermediate, and advanced—can progressively develop competences aligned with labour market needs. At the same time, the practices demonstrate how digital tools can be effectively embedded into VET curricula through online courses, workshops, hackathons, simulations, and blended learning approaches.

A common strength across the best practices is their ability to support sustainable and circular production models. By enabling virtual prototyping, digital sampling, and simulation, the identified tools significantly reduce material waste, optimise resources, and promote environmentally responsible design and manufacturing processes. These approaches directly contribute to European sustainability objectives while enhancing learners' awareness of the environmental impact of textile and fashion production.
Furthermore, the best practices provide clear benefits for VET learners, including hands-on experience with industry-standard technologies, improved employability, enhanced creative and technical skills, and greater adaptability to digital workflows. Many initiatives also foster collaboration, interdisciplinary learning, and links with industry stakeholders, supporting smoother transitions from education to employment and encouraging innovation and entrepreneurship.

Overall, the best practices analysed within WP2 provide a strong evidence base for the development of the SUST3DFASHION e-learning training scheme and online assessment tools. They demonstrate that innovative digital education in the textile and fashion sector is most effective when it combines technological expertise, sustainability principles, and learner-centred methodologies. As such, these findings form a solid foundation for supporting VET providers and educators in designing high-quality digital learning experiences that respond to current and future challenges in the textile and fashion manufacturing.