CRAFT IT 4 SD

Craft Revitalization Action
for Future-proofing the Transition
to Innovative Technologies
for Sustainable Development

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D4.2 Initial Report of the Pilots

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List of Acronyms

Abbreviation / acronym	*Description*
GA	Grant Agreement
CCSI	Cultural and Creative Sector and Industry
CDP	Customer Data Platform
CEAP	Circular Economy Action Plan
CLC	Colocation Centre (EIT Culture & Creativity)
CRM	Customer Relation Management
DMP	Data Management Platform
EC	European Commission
ESPR	Eco-design for Sustainable Products Regulation
EU	European Union
KPI	Key Performance Indicator
LCA	Life Cycle Assessment
OER	Open Education Resources
SBM	Sustainable Business Model
SME	Small and Medium size Enterprise
TBL	Tripple Bottom Line (People, Planet, Profit)
WP	Work Package

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Executive summary

D4.2, the Initial Report of the Pilots provide reports on the CRAFT-IT4SD 1st iteration activities in the four pilot ecosystems, in Moldavia, Catalunya, Central Region Denmark and Northern Finland. The four pilots are at the core of CRAFT-IT4SD's aims to revitalise European crafts heritage through new technologies, bringing crafts values into the circular economy and facilitate micro-businesses and SMEs in their journey towards enhanced sustainability and circularity and market access through new business models. The pilot activities are designed in an iterative manner, and work with different foci and target groups over three iterations of each six months. In between the six months piloting, time is reserved for intrapilot collaboration and cross-pilot learning activities initiated and supported by WP6. This report covers the 1st pilot iteration activities and provides a preliminary assessment of expected impact, the report also touches upon the intra-pilot collaboration and the cross-pilot learning activities created for WP6, which will be aggregated in detail with Task 6.3 on The Learning Ecosystems of CRAFT-IT4SD.

Pilot activities as well as learning practices have been reported in a Pilot Reporting Template (annexed), this template will also be in use for the Interim Report of the Pilots (D4.3.) and for the Final Report of the Pilots (D4.4.), which will contribute frameworks and principles for working with and collaborating in CCSI ecosystems with heritage crafts and new technologies, new business models for sustainability and overall for how CCSI may drive a triple transition in local ecosystems. D4.4. will give guidelines for pilot replication in new CCSI ecosystems.

1.Introduction

This deliverable 4.2 is the Initial Report on pilot activities (inter- and intrapilot) of CRAFT-IT4SD's 1st phase piloting as laid out in D4.1. Playbook 01 CCSI for sustainability – Operational handbook for pilots and pilot ecosystems, which provides guidelines for the four CRAFT-IT4SD pilot and their activities. These activities have been planned starting from Oct. 2024 and will run over 3 phases or iterations of each 6 month.

The Initial Report on the 1st pilot phase will consequently be followed by an Interim Report for the 2nd pilot iteration (D4.3.), whereas the 3rd and final pilot iteration will be reported together with the overall and transferable results from the CRAFT-IT4SD pilots and pilot ecosystem operations in D4.4: The final and ready for replication, results of pilots, explaining principles for working with and

collaborating in CCSI ecosystems with heritage crafts and new technologies, new business models for sustainability and overall for how CCSI may drive a triple transition in local ecosystems.

1.1.Short overview over the CRAFT-IT4SD 1st piloting phase

CRAFT-IT4SD's four pilots are at the core of the project's aims to revitalise European crafts heritage through new technologies, bringing crafts values into the circular economy and facilitate micro-businesses and SMEs in their journey towards enhanced sustainability and circularity and market access through new business models. This objective is driven by CRAFT-IT4SD's focus on the sufficiency economy and circular value chains of refuse, reduce, reuse, and repair, to lower both overproduction and -comsumption in the textile and garment industries. The intangible heritage values of local crafts knowledges and resources carry such circularity and no-waste values, which can be leveraged and brought back into the sector through new knowledge and local best practice in cross-sector collaboration, e.g., with new technologies to further value chain transparency, but also to engage customer groups in local products and their inherent cultural values. One such technology being tested across the CRAFT-IT4SD pilots is NFC (Near Field Communication) technologies as NFC-tags may carry both storytelling such as games and share verifiable data og product identification.

The four CRAFT-IT4SD pilot ecosystems have their strong roots in local crafts and industrial heritage and show technology readiness in providing company as well as customer digital onboarding to the circular economy. Each pilot ecosystem offers effective multi-helix organisations, committed to circularity and with local knowledge of challenges and opportunities following this commitment. The 1st iteration of pilot activities has shown a strong activation of the local ecosystems – numerous and systematic series of workshops, lab based experimentation, and creative productions have taken place, laying a solid cross-sectoral ground for CRAFT-IT4SD's innovation actions across crafts, heritage, and technologies in the next project period.

Pilot 1 in North-east Romania (led by TUIASI and co-led by REGINNOVA) focuses on cross-sectoral innovation between local heritage and crafts practices and new technologies, particularly Additive Manufacturing and 3D Printing for sustainably crafted capsule collections. During 1st pilot iteration, this pilot engaged deeply with local crafts communities and heritage practices, developed processes for designing with additive manufacturing and 3D printing to revitalize crafts values and create three innovative capsule collections of fashion styles (with actors across the ecosystem), which were showcased at national and international CCSI events.

Pilot 2, in Ostrobotnia, Finland (led by OAMK) focuses on traditional crafts, ecological values, new materials, and co-designing with new technologies. During 1st pilot iteration, this pilot experimented with fish skin as a traditional material, integrated fish skin in costumes for dance performances (videoed), and a game on DIY for fish skin. This game is integrated into NFC-tags and added to the

costumes as storytelling. While experimenting with the NFC-tags Pilot 2 also experimented with the Open Connector Platform.

Pilot 3, in Catalonia, Spain (led by MODACC, Catalan Fashion Cluster) specialises in EU Legal frameworks, sustainable product legislation, cultural heritage and crafts, and new technology integration. During 1st pilot iteration, this pilot mapped legal frameworks towards digital technologies (e.g., tools for digital traceability, lifecycle impact measurement, and Eco-design tools) to enable SMEs and micro-companies in responsible production to go beyond compliance and get a better market access. Further, the pilot programmed and ran a workshop series, introducing enabling tools to SMEs, micro-companies and artisans, and finally contributed a technology fair to support the cross-sectoral match making between technology suppliers and the SMEs and micro-companies in the fashion and textile industry.

Pilot 4, Region Central Denmark (led by Center for Applied Research in Textiles, Design and Circularity, VIA University College) specialises in combining crafts knowledge and practices, traditional materials and digital technologies for sustainability in garments design and consumer approaches. During 1st pilot iteration, this pilot programmed and ran a double strand of experimental workshops on future scenarios, AI, and NFC; one strand engaged students across disciplines, the other strand artisans, micro-companies, as well as SMEs (the latter specialised in work and outer wear). Following workshops, participants were offered to test ideas created during the workshops for customer engagement in VIA UC's Biometric Lab environment.

The four pilots are driving the CRAFT-IT4SD foundational design based methodology (D2.1.), iterating while progressing. Each pilot phase is based in design thinking as is the progression across the pilot phases, creating a systematic, yet flexible approach to deliver robust and well-tested innovative practices to be shared.

WP6 Learning Communities and WP7 Communication and Dissemination ensure in collaboration, that the results from the pilot activities are captured and shared in (online) learning communities through the website and existing communication channels such as LinkedIN, Instagram and Youtube, building capacity for a learning community beyond the project. Additionally, an online catalogue with a search function based on the pilot reporting template is being instigated to ensure that pilot activities are documented and showcased in a dynamic and accessible fashion, and to allow colleagues at other pilot sites to find inspiration and opportunities for collaboration.

1.2.Documentation of the pilot activities

The innovation and scaling potential of approaches, models, products, and solutions that emerge from the piloting activities are carefully documented while they are in process with the help of a pilot reporting-template (see Annex), providing process description and documentation, documentation of

actors involved and the reach of engagement with the pilot ecosystem, possible spin-out activities, feedback and evaluation conducted, and concluding remarks on the pilot iteration. This documentation provides insights into the individual pilot iteration, its engagement with the pilot ecosystem, and how the pilot developed design frameworks and practices towards the pilot's designated focus area. Inter-pilot activities in the next pilot phases will build on inspiration from successful individual piloting activities to be explored across pilots, and eventually when tested also to contribute to the guidelines for replicating CRAFT-IT4SD piloting in new ecosystems.

The report *on* the four pilots' 1st phase of experimentation is also a report *by* the four pilots, describing the programmed series of activities of each pilot, how these activities targeted the individual pilot's key objectives, added best practice value to the overall objectives of CRAFT-IT4SD, and how this 1st phase points into the next pilot phases, and ultimately into the CRAFT-IT4SD replication phase when transferable best practices will be brought to new ecosystems. The pilot activities also show uptake from work done in CRAFT-IT4SD WPs beyond WP4, particularly work done by WP5 New Business Models and Pathways on circularity measures and new business models and work done by WP3 Technologies, Infrastructures, and Platforms on digital product identification, tracebility and the applicability of new technologies. Finally, WP4 pilot activities connect closely and systematically with WP6 Skills and Learning Communities, building capacity with the CRAFT-IT4SD Learning Community, contributing workshop formats, learning objects and training material for the CRAFT-IT4SD skilling and training coursework.

The individual pilot reports are integrated in slightly edited versions into section 2 of this report, testifying to the richness of activities performed during the 1st phase of piloting and to how the foundational design process approach has in each pilot contributed high quality in both conceptualizing, experimenting, prototyping, and implementing best practices to be shared. The individual reports are authored during and after piloting, by the pilot teams, and though they each follow the pilot template they also differ in their approach to reporting. We have chosen to keep these differences to make space for the pilot teams themselves and their approaches and flavours when putting their work into report writing. In the final and ready for replication report on the pilots (D4.4.), results from the pilots will be aggregated into a framework and a set of principles for working with and collaborating in CCSI ecosystems, driving a green, digital, and social transition.

The pilot reporting template comes with 7 annexes for additional and more granular documentation than what is provided in the template itself. These annexes are

1. Documentation for Communication / Advertising of Piloting Activities (links)
2. List of Workshop, Webinar, Labs. etc. with links to programs and agendas
3. List of participants for each activity
4. List of Pilot Team Members

5. Presentations made during the activities (list of presentations, links to (select) presentations in pdf in Sharepoint)
6. Participants' Projects (Case-template + images, videos, presentations)
7. Feedback forms / results per activity (include sample results)
8. Documentation of contributions for the Learning Community (WP6)
9. Case-documentation of Learning Workshop (WP6)

The pilot reporting template is annexed in this report, while the granular annexed documentation for the four pilot reports is kept for analysis in the final report. The pilot reporting template will be used across all three pilot iterations, also to document the CRAFT-IT4SD iterative design thinking approach which is key to the project progress (D2.1.)

2.Individual Pilot Reports on 1st Phase Activities

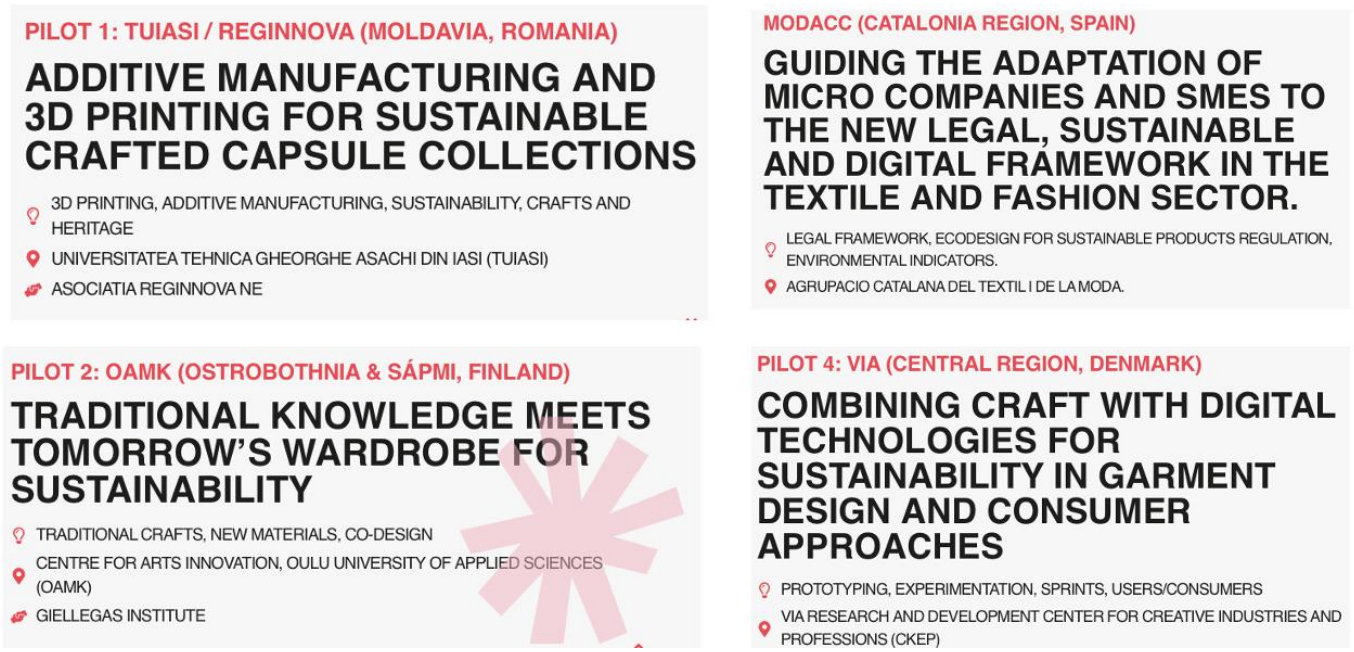

Figure 1 The 4 CRAFT-IT4SD Pilots with titles and key areas

2.1 Pilot 1: Moldavia, Romania (TUIASI/REGINNOVA)
Title: Additive Manufacturing and 3D Printing for Sustainable Crafted Capsule Collections

This section provides a short introduction to the pilot, its overall scope and iterative approach with a focus on the 1st pilot iteration and a description of activities conducted.

The Pilot in North-east Romania is coordinated by TUIASI and co-led by REGINNOVA- a non-profit association actively developing a structured environment for innovation and development in Romanian's North-East Region's textile and clothing field.

Key focus areas: 3D printing, additive manufacturing, sustainability, crafts and heritage

Pilot Objectives

- Develop skills and project-based training activities that test and demonstrate innovation in crafts through 3D printing technologies.
- Creating and developing capsule collections, combining traditional manufacturing with 3D printing. Presentation of collections (fairs and fashion shows).
- Develop regional technology transfer capacity for 3D Printing & Crafting to be implemented in regional enterprises.
- Promotion, marketing, branding, advertising
- Community engagement

The Pilot in Romania honors the Moldavian creative ecosystem through three successive iterations. A key objective of all three iterations is to reveal the significant potential for sustainable fashion within the Romanian cultural heritage, particularly through local artisans who produce traditional items such as the “Ia” blouse, folk masks, and other handcrafted goods. This bridge between traditional handcrafts and emerging technologies reflects the richness of Romania’s folk legacy, while digital tools ensure their relevance in contemporary contexts. Moreover, the Pilot highlights the potential of Romanian craftsmanship in a global context, fostering collaboration and creativity while addressing contemporary sustainability challenges. Integrating technology with traditional practices redefines the future of fashion, making it more inclusive, interactive, and environmentally conscious.

1st phase

The 1st pilot iteration focused on designing three fashion collections, which were presented at the regional level during DIMA Fashion Night 2024 *(Moldavian Folk Motives,* November 2024), at the national level during Romanian Creative Week 2025 *(Easter Egg,* May 2025), and at the international level at UNESCO Paris Headquarters *(Cucuteni Echoes,* March 2025).

The 1st iteration of the Romanian pilot involved various participants from the Moldavian ecosystem at different stages, including artisans and craftspeople, students, fashion designers, engineers, SMEs, and high-end fashion brands. This initial iteration explored the incorporation of traditional materials, such as wool, hemp, cotton, and silk, to create contemporary clothing designs that pay tribute to the rich heritage of the Romanian crafts and authentic motives, identified in various objects (such as traditional costumes for the Fashion Night-collection, ancient pottery for the Cucuteni-collection, or Easter eggs for the RCW collection).

These collections were enhanced by integrating various components produced through *additive technologies,* showcasing a seamless *blend of tradition and innovation.* By focusing on these elements, the Romanian pilot sought to demonstrate the vast potential of 3D printing in the realm of traditionally crafted fashion items. It highlighted the viability and inherent value of additive manufacturing technologies within the fashion and design industries, particularly in promoting sustainability.

The main idea behind this initiative is to *revitalise traditional craftsmanship* but also to pave the way for innovative practices that honour cultural heritage while addressing modern sustainability challenges. Through collaborative efforts and creative exploration, the pilot set up a methodology for the future of fashion that is both sensitive to tradition and local heritage and responsive to contemporary environmental needs.

2nd phase

The 2nd pilot iteration, which started in March 2025, builds upon and enhances the insights gained during the 1st pilot phase, in exploring the dynamic intersection of traditional craftsmanship and emerging technology. One of the objectives of this iteration is *to integrate NFC tags into garments,* enabling users to access curated digital content. This functionality transforms each piece into a live masterpiece, offering authentic storytelling that reveals the garment's origin, symbolism, and the interlink between traditional artisan processes and emerging technologies.

The 2nd iteration further promotes *cross-disciplinary collaboration* by inviting participants from the 1st pilot phase—designers, technologists, and creatives—to co-create with artisans. The incorporation of *additive manufacturing* techniques, such as 3D printing, digital embossing, and embroidery, introduces new creative possibilities, demonstrating how modern tools can complement traditional craftsmanship. Additionally, this iteration emphasises *interactive storytelling,* allowing users to engage with digital narratives that deepen their understanding and appreciation of the pieces. This approach enhances user experience, adds emotional value, and supports more informed and meaningful consumption. By aligning innovation with cultural preservation, the 2nd pilot iteration fosters *new economic opportunities for artisans,* raises awareness of sustainable practices, and demonstrates that heritage and modernity can coexist. It proposes a new model for fashion and craft—one that is inclusive, forward-looking, and rooted in authenticity.

3rd phase

The 3rd pilot iteration will also focus on developing capsule collections that will be presented at both national and international levels. This initiative will engage a diverse range of participants from the Romanian ecosystem, including artisans and craftspeople, fashion designers, engineers, experts from small and medium-sized enterprises (SMEs), as well as researchers and students.

Building on the activities within the Romanian ecosystem for traditional textiles, this pilot will emphasise *sustainability* through a comprehensive approach that incorporates *both recycling and additive technologies.* By prioritising sustainable practices, the pilot aims to showcase how traditional craftsmanship can adapt to modern demands while preserving cultural heritage.

In addition, the iteration will feature an *interactive digital fashion show,* leveraging advanced *3D design software* and Virtual Reality (VR) tools to create digital garments. This innovative showcase will be enhanced by digital avatars and fabric simulations, providing an immersive experience that blurs the line between physical and virtual fashion. This work will be integrated with the CRAFT-IT4SD final exhibition in Fall 2026, in Oulu.

Through these initiatives, the 3rd pilot iteration seeks to highlight the potential of Romanian craftsmanship in a global context, fostering collaboration and creativity while addressing contemporary sustainability challenges. Integrating technology with traditional practices aims to redefine the future of fashion, making it more inclusive, interactive, and environmentally conscious.

Stakeholders and Participants

This section provides an overview of the Romanian Ecosystem Stakeholders and Learning Community activated during the 1st pilot iteration, as well as how this iteration aligns with the pilot's ecosystems and the entire CRAFT-IT4SD multi-stakeholder ecosystem.

The 1st piloting iteration demonstrated how the Romanian craft and heritage ecosystem could be activated and engaged in various creative activities through the development of capsule collections, preparatory and training workshops, hands-on design ateliers, and demonstrators, as well as testing and validation workshops. In the pilot, design activities (integrating fashion and technology design processes) involved students, company representatives, artisans and craftspeople, policymakers, researchers, and experts.

The 1st iteration of the Romanian Pilot brought together a dynamic and diverse range of ecosystem stakeholders who were strategically engaged in designing, producing, promoting and presenting three fashion collections inspired by Romanian heritage. These collections–*Moldavian Folk Motifs* (national), *Easter Egg* (international), and *Cucuteni Echoes* (international)–were created through a collaborative and cross-disciplinary approach that integrated inspirational traditional motifs with modern digital fabrication methods, particularly additive manufacturing.

Key stakeholders involved in the 1st iteration were:

- *Artisans and Craftspeople* sharing knowledge and skills in producing authentic crafts. Their role was to ensure authenticity in representing Romanian craftsmanship and traditional aesthetics through symbolic design elements.
- *Students* from the Design, Management, and Engineering BSc, MSc, and PhD study programmes at TUIASI, participating in workshops and design processes, enhancing their understanding of traditional crafts, materials, and innovative digital tools. Their transdisciplinary involvement served both an educational and capacity-building function.
- *Fashion Designers, Researchers* and *Engineers* co-creating innovative garments that fused craft techniques with digitally enabling processes. They played a critical role in implementing highly

functional, personalisation and additive technologies, such as 3D printing, into wearable designs.

- *SMEs* (from the REGINNOVA association). Local and regional fashion SMEs provided logistical and technical support, including material sourcing, prototyping, pattern making, and access to manufacturing facilities. They acted as innovation intermediaries, transforming the design ideas into collections suitable for fashion showcases.
- *High-End Fashion Brands,* assessing the quality of design, styling, and production of the collections, bridging traditional values with the high-end fashion and modern market demands. Two collections (Cucuteni and Easter Egg) were realised with the support of the brands *irina schrotter* and *CONDUR by alexandru.*
- *Cultural and Event Organisers,* including the organisers of the Romanian Creative Week (https://romaniancreativeweek.ro/), which included two events: *Romanian Fashion Week* and the *UNESCO Paris exhibition* within the *The Living Thread*-initiative (https://romaniancreativeweek.ro/newsroom/ia-cusuta-la-romanian-creative-week-prezentata-in-cadrul-unui-eveniment-impresionant-al-unesco-la-paris-este-una-dintre-cele-mai-mai-frumoase-zile-de-sarbatoare-pentru-patrimoniul-romanesc/). These organisations amplified visibility, lent credibility, and connected the collections to larger cultural conversations.
- *Technological Fab Labs* (3D Printing, CAD, Clothing Manufacturing Labs of TUIASI), providing the infrastructure and expertise for CAD and additive manufacturing, as well as promoting hands-on experimentation with materials, designs, and forms.

The Romanian 1st pilot iteration was a living lab and foundational node in the broader CRAFT-IT4SD multi-stakeholder ecosystem. It showcased at three events how heritage-inspired fashion can be a merging point for tradition, innovation, and sustainability.

- *DIMA- Fashion Nights* is an annual event that brings together university students and high school students participating in the national Junior Designer competition, organised by TUIASI. In this competition, high school students join with their design ideas and creations, and the best works are selected and transformed into clothing items by teams of students from the Faculty of Industrial Design and Business Management at TUIASI. In the 2024 competition, the theme was *Urban Concepts,* and within this theme, students proposed a reinterpretation of traditional Romanian motifs in street fashion using 3D printing. The combination of traditional and digital designs for young fashion consumers highlights the possibilities of technology for reviving crafts of great emotional value.
- *Romania Creative Week 2025* brought together over 1,500 artists from 15 countries, 100 designers, 50 new media artists, and 400 volunteers. Thus, for almost two weeks, the city of Iasi has become a European centre of fashion, arts, digital culture, and creative entrepreneurship. The CRAFTIT-4SD project gained international attention during the Romanian Creative Week (RCW), where the *Easter Egg*-collection was presented. The collection drew inspiration from

the intricate designs and symbolic meanings associated with the traditional Romanian Easter egg. Designers and artisans collaborated to reinterpret these motifs, integrating them into contemporary fashion pieces that resonated with both tradition and modernity. The RCW-event provided a platform for showcasing the versatility of Romanian cultural symbols in the fashion design industry. It also facilitated discussions on the role of cultural heritage in contemporary creative industries, fostering a deeper understanding of the intersection between tradition and innovation.

- The *Cucuteni*-collection by *The Living Thread-initiative* was presented at the UNESCO-headquarters in Paris, at the conference "Gender equality and the future of cultural policies: The importance of women in creative industrial cultures". The Paris event (also part of the Romanian Creative Week) was attended by numerous cultural stakeholders from around the world, including ministers of culture and ambassadors to UNESCO.

Figure 2 Work in Progress for the Cucuteni Capsule Collection. Photo by TUIASI

The 1st pilot iteration was mapped toward the *Learning Ecosystem* by:

- Establishing a *learning community,* particularly around the Moldavian region, where traditional crafts remain vibrant, to foster innovation by facilitating mutual learning among generations, diverse skill levels, and various disciplinary backgrounds. This community unites professionals and young talents, freelance fashion designers, and professionals within engineering, technology, and the cultural and creative sectors.
- Preserving *intangible cultural heritage* and involving various actors while introducing contemporary design techniques and emerging technologies. All three capsule collections acted as *knowledge artefacts,* each embedding heritage symbols, motifs, material experimentation, and production methodologies that can be further studied and replicated.

On a broader scale, the 1st iteration has demonstrated the following characteristics of the Learning Ecosystem:

- *Methodology.* The pilot helped develop a transferable methodology for combining traditional craftsmanship with digital fabrication. This approach supports future replication in other regions, making it a modular component of the overall CRAFT-IT4SD system.
- *Innovation & Sustainability.* The pilot contributed to circular economy goals by integrating additive manufacturing, creating the premises for future developments by exploring low-waste design, local material sourcing (e.g., wool, hemp), reusable materials for 3D printing, and repairable or modular garment designs.
- *Capacity Building & Upskilling.* The educational involvement of students and practitioners positioned the pilot as *a tool for long-term skill development.* It promoted digital literacy among participants, including students, designers, engineers, artisans, and craftspeople.
- *Community and Networking.* All three capsule collections celebrated cultural identities and European values. Also, they stimulated the preservation of creative craftsmanship. The visibility at national and international levels helped reposition the traditional crafts as assets within cultural and creative industries. The pilot's activities aligned with regional, national, and global events and initiatives, demonstrating how localised practices can feed into broader cultural diplomacy and policy frameworks.

Formats, Setting, Process

This section provides an account of how the piloting was designed and conducted; the stages are presented (what, who, how) and accompanied by documentation (selected images, links for videos etc)

Committed to the goal of Bridging Tradition and Innovation in Fashion Design, the 1st Pilot iteration marked a significant milestone in the fusion of traditional craftsmanship with contemporary design and technology. This 1st phase focused on creating three distinct fashion collections that were showcased at various levels: regional, national, and international. Each collection was inspired by specific elements of Romanian heritage, reinterpreted through modern design practices and innovative technologies.

Pilot 1/ Stage 1- Preparatory Workshop with Craftpeople

The Preparatory Workshop (Sept. 2024) was held at Gheorghe Asachi Technical University, Iași, with a total of *19 participants:* craftspeople and artisans, representatives of clusters and associations, designers and researchers, students, and project organisers. The participants were 1st invited to the REGINNOVA venue, where they discussed the integration of 3D virtual prototyping in the redesign of Romanian folk costumes based on sustainability principles. Later, the participants gathered at the TUIASI-venue (Faculty of Industrial Design and Business Management), where *Additive Manufacturing and 3D Printing technologies* were presented, followed by an open discussion of the CRAFT-IT4SD project goals and expectations. During the workshop, the following topics were highlighted:

- *The importance of crafts and traditional industries in technical development and creative industries.* Following the project goal of craft revitalisation, all the piloting actions aim to honor past and traditional techniques, bringing them to the attention of the current public. This approach could lead to innovations in the textiles and creative industries sector. The participants appreciated the outcomes as valuable tools for developing regional technology transfer capacity in 3D printing and traditional crafts, which can be implemented with companies.
- *The impact of the CRAFT-IT4SD Learning Community*. The project materials, which will be created as outcomes, will consist of training workshops, reports, articles, books, and video materials, integrating traditional techniques and stories to make them available to the public.
- *Ethics, Copyrights and Intellectual Property Rights.* Based on input from artisans and craftpeople, a valuable outcome emerged, in terms of upholding ethical heritage values. In this respect, all participants agreed that traditional production will be respected as a niche, masterful design (haute couture). In contrast, productions involving 3D printing techniques are a step towards innovation and modernisation of knowledge.
- *Storytelling and hands-on demonstrations*. The Romanian artisan, Mrs. Leontina Prodan, expert in hemp-based textile creations, demonstrated the traditional hemp processing from seed to fabric in a live demonstration, sharing her experience in traditional crafts and the historical significance of hemp textiles in Romanian culture. She also manually created a hemp doll demonstrating *the traditional "no waste" mentality* and *integrating zero-waste values.* This highlighted the respect that needs to be shown towards conserving heritage knowledge and traditions on the road to digitalisation. Mrs. Cristina Niculescu (Borangic Niculescu) held another live demonstration, sharing the *story of traditional silk collection and manufacturing.* The company is one of the last in Romania to work with traditional methods for growing silk worms and extracting silk thread for silk fabric traditionally called "borangic". Specimens of silk pupae were showcased, and the extraction of silk threads was demonstrated.
- *Role of clusters and associations in promoting creativity, innovation and authentic cultural values.* Fashion and textile clusters and associations play a critical role in fostering an environment that encourages creativity, drives innovation, and safeguards authentic cultural values. These collaborative ecosystems, often structured around geographic proximity or shared industry goals, bring together designers, artisans, manufacturers, researchers, educators, and policy-makers to create synergies that support sustainable and culturally rich development within the fashion and textile sectors.
- *Concluding remarks.* The craftspeople and experts attending the workshop shared samples of their fabrics and materials that have the potential to be used in the project and are suitable for 3D printing. The participants emphasised the need for experiments to validate the materials and focus the capsule collection on technology transfer for both 3D printing and traditional crafts.

Pilot 1/ Stage 2 – TESTING: Moldavian Folk Motifs (DIMA Fashion Night, Nov. 2024)

The Testing-stage marked the preliminary phase of experimentation, aimed at reinterpreting traditional Moldavian motifs by integrating them into contemporary fashion designs using modern

technologies, such as 3D printing. During this phase, several traditional patterns were selected and adapted, including the Traditional Geometric Pattern and the Traditional Rose Pattern, to create culturally inspired yet innovative products. The collection combined artisanal techniques with locally sourced materials such as leather, wool, and hemp-based fabrics, emphasising sustainability and the valorisation of regional resources. A variety of items were designed and produced, including girdles and bags, blending traditional aesthetics and modern design. The key event of this phase was the presentation of the capsule collection during the DIMA Fashion Night 2024, as part of the JUNIOR DESIGNER-project. This national fashion design competition aims to create a dynamic framework for high school students, university students interested in developing fashion businesses, and potential industry supporters. The event brought together approximately *500 participants,* providing an opportunity to showcase the 1st public presentation of the pilot collection. The pre-pilot workshops and showcase event not only explored and tested various forms of folk art but also highlighted the importance of preserving and promoting traditional craftsmanship in the face of globalisation.

Figure 3 Samples of 3D printing on textile fabrics. Photo by TUIASI

The Moldavian Folk Motifs-collection marked the preliminary phase of experimentation with 3D printing technology on various materials and fabrics, while also incorporating folk motifs found in diverse sources, including books, prints, authentic folk costumes, and artisanal objects. Since the project's inception, the CRAFTIT-4SD team has established the following steps: research and concept development, Digital adaptation, Fabric testing, Experimentation with 3D printing, and Adaptations and optimisation of parameters in dependence on the materials and design requirements of each piece in the collection.

- *Research and concepts.* This initial phase involved studying traditional Moldavian folk motifs—analysing their symbolism, patterns, and cultural significance. The goal was to understand how these motifs can be translated into a digital and dimensional form while maintaining their authentic aesthetic value. The selected motifs were digitised and adapted into vectors with

modelling software. This step was critical for transforming the intricate patterns into formats compatible with 3D printing technologies.

- *Experimentation with 3D printing on textile materials*. Various materials and textiles were explored to assess their compatibility with 3D printing. This included rigid and flexible filaments, as well as testing fabrics that can maintain their integrity and shape. The 3D printing parameters were tested to determine which best supports detailed pattern rendering on the chosen materials. Layer thickness, nozzle sizes, and print speeds were adjusted to optimise the quality of the prints.
- *Prototype development.* Early prototypes were created by applying printed motifs to fabrics or embedding them directly during the printing process. These prototypes help identify structural, aesthetic, and functional strengths or weaknesses. Based on testing results, adjustments were made to the motif designs, print parameters, and materials. This iterative process ensures the final designs are visually appealing and technically feasible. Post-processing methods, such as trimming, heating, or bonding, were tested to enhance the integration of 3D elements with textiles. Techniques for sewing, adhering, or embedding were finalised at this stage.
- *Documentation and presentation.* The entire experimentation process was documented through photos, technical notes, and conceptual sketches. This stage also involved preparing the models for the DIMA Fashion Nights 2024 fashion show.

Pilot 1/ Stage 3 – Cucuteni-Collection (UNESCO Paris Headquarters, March 2025)

In the 3rd stage of the 1st pilot iteration, the capsule collection *"Echoes of the Cucuteni civilisation"* was prepared to be presented at the UNESCO Headquarters in Paris. The Cucuteni collection, inspired by the ancient Cucuteni-Trypillia culture, was the centrepiece of this event. The collection aimed to bring attention to one of Europe's oldest known civilisations, highlighting its artistic achievements and cultural significance. The Cucuteni-collection was developed through a collaboration between students and researchers with diverse backgrounds, including arts, design, and engineering, from the Gheorghe Asachi Technical University of Iași. Utilising advanced technologies such as 3D printing and computational design, the collection reimagined ancient motifs and forms, creating a dialogue between past and present. The event at UNESCO not only showcased the artistic talents of the Romanian team but also underscored the importance of cultural heritage in shaping contemporary design narratives.

The capsule collection is a dialogue between tradition and modernity, paying homage to the enigmatic Cucuteni civilisation while embracing the limitless possibilities of contemporary technology. By blending civilisation-specific motifs with cutting-edge 3D printing techniques, this collection reinterprets the essence of a prehistoric culture through the lens of futuristic craftsmanship.

Figure 4 CUCUTENI collection at UNESCO. Photo by Romanian Creative Week

- *Inspiration.* The Cucuteni civilisation, one of the most advanced Neolithic cultures in Eastern Europe, left behind a rich legacy of pottery, textile designs and symbolic art. Their spiral motifs, geometric compositions and organic structures have been translated into the collection's aesthetic, serving as a bridge between an ancient worldview and modern design sensibilities. The collection reimagines these elements in a wearable form, allowing history to be ever-present and ever-seen.
- *Technology and design.* Each piece in the collection embodies a synergy between traditional textile craftsmanship and 3D printing. Some garments feature 3D-printed panels and accessories or elements obtained through the embossing procedure with 3D-printed moulds, enhancing their shape with texture, depth, and an almost armour-like quality, symbolising the strength and endurance of this civilisation. Using 3D printing technology, the collection explores the potential of sustainable innovation. This approach enables the recreation of intricate patterns found on Cucuteni artefacts, while pushing the boundaries of fashion into a new narrative.
- *Aesthetics and colour palette.* The colour palette is deeply rooted in the natural elements that defined the Cucuteni way of life: earthy terracotta, deep ochre, charcoal black and soft white. These shades reflect the pigments used in their pottery, reimagined in textiles that embody the spirit of the past while embracing an elegant and modern silhouette.
- *Conceptual impact*. *Echoes of the Cucuteni civilisation* is more than a fashion capsule collection, it is a tribute to a civilisation that evolved through art, innovation and deep spiritual connection with nature. Through the fusion of tradition and modern technology, it mirrors a future where heritage and innovation coexist in harmony, proving that fashion is not just about clothing - it's about story, culture and evolution.

Pilot 1/Stage 4 – Easter Egg-Collection (Romanian Creative Week, May 2025)

On 23 May 2025, during the RCW/Romanian Fashion Week – Academia Selection event, an innovative clothing collection was presented by students from the Faculty of Industrial Design and Business

Management at the Gheorghe Asachi Technical University in Iași, with the support of Mrs. Irina Schrotter, an active supporter of the creative industries in Romania. Under the coordination of the CRAFTIT-4SD researchers, and in collaboration with specialists from the Reginnova Association and the company CONDUR by Alexandru, the collection highlights a creative dialogue between Romanian cultural heritage and emerging technologies. The works of students *Theona Chelariu, Crina Croitoru, Alina Iacob, Briada Zaplitnii, Raluca Lupu, Iuliana Streba* and *Radu Firicel* offered a contemporary reinterpretation of egg painting, a traditional craft from Bucovina, using additive technologies such as 3D printing. This fusion of heritage and digital innovation provides a new perspective on sustainable fashion design. The collection of 15 outfits reflected Romanian symbols conveyed through modern graphic forms and 3D prints inspired by the exhibits of the Egg Museum in Vama. The colours used – white (purity), black (infinity), Voroneț blue (peace of mind,) and earth tones – represented abundance and hard work, and reinforce the message of a deep connection with local cultural values. Thanks to the students' involvement and their use of additive technologies, it was possible to experiment with innovative ways of transposing traditional symbols into contemporary creations. This not only contributed to a revitalisation of Romanian crafts in a modern visual language, but also underscored the students' invaluable role to the project. The presence of the CRAFTIT-4SD at Romanian Fashion Week 2025 was not just a symbolic participation, but a concrete expression of the firm commitment to supporting excellence in education and research. This appearance in a professional setting of national and international importance confirms that the innovative solutions offered by the newest technologies are deeply connected to the realities and dynamics of contemporary creative industries.

Figure 5 Work in progres for Easter Egg-Collection for Romanian Creative Week 2025. Photo by TUIASI

The *Easter Egg collection (Heritage by 3D Printing. A Contemporary Tribute to Romanian Traditions)* is a heartfelt homage to one of the most intricate and deeply symbolic Romanian crafts: the art of egg decoration (in Romanian, *încondeierea ouălor)*. Rooted in centuries of tradition, this cultural practice embodies a powerful visual language that conveys spirituality, morality, and the rhythms of rural life.

The fashion collection reimagines these timeless motifs through the lens of contemporary aesthetics, resulting in garments that are not only visually outstanding, but also culturally echoing. The project is a fusion of textile art, symbolism, and modern design – a bridge between Romania's rich craft traditions and the evolving world of fashion. It celebrates the power of visual heritage and aims to reignite interest in symbolic meanings while giving them fresh, modern forms.

Symbolism, Colour and Visual Language

At the heart of the collection lies a complex tapestry of symbols, each drawn from Romanian decorative traditions and thoughtfully integrated into the design of each garment:

- *The Sieve:* A symbol of discernment, the *sieve* traditionally represents the separation of good from evil. It echoes the ancient saying, *"The good is gathered, the bad is washed away / Cele bune să se adune, cele rele să se spele "*—a call for spiritual cleansing and moral clarity. In the Easter Egg collection, this motif appears in patterns of layered mesh and transparent elements, emphasising transparency and inner purity.
- *The Diamonds:* These diamond-shaped forms chart the journey of human life, from birth to death, and all the stages in between. They are used as continuous patterns on fabric to reflect the dynamic and often cyclical nature of personal growth.
- *The Flower:* Representing the beauty and fragility of life, floral motifs are expressed through delicate embroidery and printed overlays. Each bloom serves as a metaphor for blossoming, femininity, and renewal.
- *The Belt:* A powerful symbol of continuity and intergenerational legacy, the *belt* is a visual metaphor for the unbroken thread of life. It is often represented in the collection as textile bands, pleated structures, or woven sashes that encircle the body, both decorative and meaningful.
- *Bucovina Towels:* Traditionally used in wedding rituals, these towels symbolise sacred union and spiritual connection (*"What God has joined together, let no man put asunder /Ce Dumnezeu a legat, omul să nu deslege"*). In the collection, their detailed lacework and linear patterns are reimagined as structural details and trim elements.
- *Ram's Horns:* These spiralled motifs are an age-old representation of strength, prosperity, and abundance. In the collection, they are abstracted into sculptural silhouettes and curved seam lines, embodying the essence of protection and family wealth.

In Romanian tradition, colour is never merely decorative, but imbued with spiritual and symbolic depth. The collection respected this chromatic philosophy by carefully selecting hues that enhance and deepen the narrative:

- *White (Purity):* Used as a foundation in many garments, white symbolises innocence, truth, and divine presence.
- *Black (Infinity):* Far from a colour of mourning, black represents the cosmos, eternity, and the unknowable. It is paired with vibrant hues to create contrast and depth.

- *Voroneț Blue (Spiritual Peace):* Inspired by the iconic frescoes of Voroneț Monastery, this distinctive shade of blue evokes inner calm and transcendence. It is prominently featured in flowing fabrics and serene silhouettes.
- *Earth Tones (Abundance, Labour, Diligence):* Ochres, rusts, browns, and greens anchor the collection in the rural Romanian landscape. These are the colours of soil, grain, and hands that work the land—tributes to labour and life-giving abundance.

Design Approach and Philosophy

Every piece in the collection is more than a garment; it is a narrative vessel. By incorporating traditional symbols and beliefs into wearable forms, the project honours the artisanship of our ancestors while making it accessible to a new generation, blending

- *Minimalist tailoring* with intricate surface design, where oval shapes and drapes are dominant
- *Traditional materials* with *innovative cuts* and layered textures,
- *Handcrafted techniques* with *digital textile printing* (3D printed individual panels applied by hand on a support layer) to translate folklore into modern language.

Each look is both a standalone statement and part of a larger story—one that threads together identity, craftsmanship, and cultural continuity.

Additive Manufacturing in Fashion

3D printing, or additive manufacturing, is an emerging technology in the fashion industry that allows designers to construct complex, customised shapes and textures with precision and minimal waste. In this collection, 3D printing serves as both a design tool and a conceptual bridge between the past and the future. By using digital design software and additive techniques, the students were able to:

- Overlap flat surfaces with volumes and 3D shapes of the garments, rendering traditional symbols into three-dimensional ornaments suitable for wearable fashion products
- Support the difficulty of egg painting through digitally precise motifs.
- Create sustainable embellishments that maintain material efficiency and reduce textile waste.
- Prototype ideas quickly, iterating creative solutions that merged folkloric visual aesthetics with experimental forms and 3D prints on textile surfaces.

This fusion of heritage and innovation is a landmark example of how technology can enhance the traditional identity. The garments act as wearable sculptures—each one telling a story carved not only in fabric, but in digitally designed, culturally meaningful relief.

Figure 6 Easter Egg Capsule Collection on runway. Photo credit: Raluca Ciornea for Romanian Creative Week

Cultural Impact

Presented at the 2025 Romanian Fashion Week (https://romaniancreativeweek.ro/), the collection received acclaim for its depth of concept and emotional resonance. It was as a testament to the value of cultural storytelling in fashion and the role of designers as keepers and reinterpreters of collective memory.

The collection is not merely a creative exercise, but a manifesto toward *a new vision for sustainable and cultural fashion.* It demonstrates that cultural heritage is *not static*, and that the future of fashion lies in blending craft with code, tradition with technology. The use of 3D printing doesn't dilute meaning—it *magnifies* it, offering a tactile, futuristic vocabulary to age-old stories. By wearing these garments, individuals do not merely dress themselves—they carry forward a living archive of meanings, hopes, and history. The collection is not just clothing; it is an embodiment of who we are, where we come from, and how we choose to honor that journey.

Thanks to CRAFT-IT4SD's resources and vision, students like Theona Chelariu, Crina Croitoru, Alina Iacob, Briada Zaplitnii, Raluca Lupu, Iuliana Streba, and Radu Firicel were empowered to experiment with cutting-edge methods. Their work is a compelling example of how education, heritage, and technology can converge to create something entirely new—a sustainable, relevant, and expressive vision of cultural identity. The project was coordinated by the Faculty of Industrial Design and Business Management of the "Gheorghe Asachi" Technical University of Iași with support from REGINOVA NE. Companies and cultural institutions, photographers and artists, have supported the initiatives, among others Irina Shrotter, Romanian Creative Week, CONDUR by alexandru, and Muzeul Oului Vama.

Pilot 2/Stage 1 – Analysis of the 1st Pilot Activities: CUCUTENI and EASTER EGG Collections
The 2nd Pilot iteration began in March 2025, running in parallel with the final preparations for the events, including the presentation of the Easter Egg-collection. The 2nd Pilot Iteration aims to build upon the successes and learnings of the 1st phase by introducing advanced digital features and fostering deeper collaboration between artisans and technologists. A key innovation in the 2nd pilot phase is the integration of digital technologies into the design process, offering users seamless access to a range of virtual content. This feature introduces an interactive layer to traditionally crafted fashion items, enriching the consumer experience through storytelling, education, and engagement.

Student, Company, Artisan & Craft Projects

This section provides an overview of projects generated during the piloting, e.g. student projects generated during or after the piloting, artisans' contributions inspired by piloting, and company conducted projects inspired by piloting

In the 1st iteration of the Romanian pilot, three collections were developed between September 2024 and May 2025 by students from three study programs (design, engineering, and management), encompassing three university levels (bachelor's, master's, and PhD). Additionally, the 2nd iteration of the Pilot started in March 2025, in parallel with final arrangements for presentations at the Romanian Creativ Week, May 2025. The projects were conducted under the supervision of CRAFT-IT4SD researchers and with support from designers, engineers, craftspeople, and operators from various companies.

An overview of projects, including concepts, prototypes, and presentations, is detailed in Annex 6. Additionally, in Annex 6, the documentation for the WP6 Learning course development was selected.

Feedback and Evaluation

This section includes an overview of participants' feedback, suggestions, and recommendations, based on feedback sessions and evaluation forms completed by participants. Evaluation documentation is in Pilot Report, Annex 7

The participants' feedback, their suggestions and recommendations were collected through evaluation sessions based on the interview method. The interview set is presented in Annex 7, and it was applied differently to student designers and 3D printing experts. The evaluation allowed for a dual perspective on the entire development process, from the designers' perspective and the technical one. The interviews are still being further analysed. However, here are some reflections and recommendations for the successive iterations:

- One of their primary contributions lies in facilitating knowledge exchange and cross-disciplinary collaboration. The 1st pilot iteration serves as a testing and demonstration of the design process and collection development, where traditional craftsmanship intersects with modern technology, including digital design tools, sustainable materials, and additive manufacturing and 3D printing techniques.
- Through workshops, seminars, and development projects, the activities of the 1st pilot iteration enabled students, researchers, designers, engineers, craftspeople, and experts to experiment with new forms of *aesthetic expressions* and *emotional designs,* thus expanding the creative potential of emerging technologies, such as 3D printing and digitalisation, for the fashion industry.

Moreover, the meetings and discussions with craftspeople and artisans (custodians of cultural heritage) in the preliminary workshop (March 2024) and bilateral meetings with experts from Palatul Culturii Etnographic museum and Muzeul Oului Vama in the preparation of the Easter Egg collection ensured that traditional techniques, motifs, and textile practices are preserved, documented, and incorporated into contemporary design processes. By doing so, they promote cultural continuity while fostering respect for diverse identities and histories. Initiatives such as heritage-based product development, cultural storytelling in branding, and the ethical sourcing of traditional materials allow associations to anchor innovation in authenticity.

Concluding Remarks

This section includes concluding insights on the piloting, whether the piloting activities met the overall objectives and scope of the pilot iteration, which challenges and successes were met during the iteration, and how the iteration bridges into the next pilot iteration and what insights the piloting brought for cross-piloting activities

The 1st pilot iteration of the CRAFT-IT4SD project in Romania provided crucial groundwork for the development of the next two iterations. Moreover, it offered specific insights and recommendations on

Learning Materials to be used for developing the micro credentials in WP6. Thus, significant milestones were reached, such as:

- *Integration of traditional Romanian heritage* into contemporary fashion, focusing on regional motifs, traditional textiles, and artisanal techniques. These designs were showcased through various national and international events, and were celebrated for their blend of authenticity and innovation. The success of these early collections highlighted the vast potential of combining traditional craftsmanship with modern technologies, such as *additive manufacturing* (3D printing).
- *Collaborative efforts* involving a diverse range of participants, from artisans and craftspeople to fashion designers, engineers, students, and SMEs. These multidisciplinary teams explored how traditional materials could be transformed into modern designs that resonate with global fashion trends while promoting sustainability and cultural preservation.
- *Introduction of sustainable practices* into the fashion design process. The 1st iteration focused heavily on how to employ the 3D printing technologies to create unique designs that could be *reused* and *reinterpreted* into other designs.

Building upon these achievements, the 2nd and 3rd iterations will amplify these practices, showcase their effectiveness, and explore new avenues for merging sustainability with technology in fashion. These iterations will not only focus on digitalisation and sustainable design but will also serve as a platform for cultural exchange and global visibility for Romanian craftsmanship.

2.2 Pilot 2: Ostrobothnia, Finland (OAMK)

Title: Traditional Knowledge Meets Tomorrow's Wardrobe for Sustainability

This section provides a short introduction to the pilot, its overall scope and iterative approach with a focus on the 1st pilot iteration and a description of activities conducted.

The Pilot in Northern Finland is coordinated by the Centre for Arts Innovation, Oulu University of Applied Sciences (OAMK).

Key focus areas: Traditional Crafts, Ecological values, New Materials, Co-design

Pilot objectives

The Northern Finland pilot has as its main objectives:

- Design and implement a platform for traditional expertise and digital creative entrepreneurs to connect, share and co-design.
- Test approaches for digital practices and platforms connecting with traditional knowledge within the professional craft (handicraft SMEs) and craft education (vocational instructors for traditional craft and textile) sector.

- Develop garment prototypes and examples of sustainable production methods by merging traditional craft practices with emerging technology and new materials.
- To educate the CCSI and consumers to question the principal need of consumption and to invite all to evaluate the underlying value and belief systems of consumer culture and over-production
- Support traditional craft-based innovation methods, business models, and balanced interdisciplinary approaches, as well as articulate meaningful and ethical collaborations between SMEs and other organizations engaged in innovative uses for emerging technology and new materials.

The Oulu project has broadened its scope from clothing and garment production in a Sápmi context to a focus on traditional Northern Finnish crafting in general, as the original content of the pilot description was not sufficiently sensitive towards the Sápmi community and their values. In a Sápmi community, garments and clothing could be described as the opposite of fast fashion. The Sápmi community garment production is based on a value and belief system where individuals are embedded in a close family system of the Sámi craftsperson. Garment is only produced when a practical need for such an item arises, and an existing item cannot be mended. The item is expensive, takes time to make, is sustainable, and holds emotional value, but it is not manufactured to generate value outside the community context. Therefore, marrying business modelling, even with sustainability in mind, is counterintuitive to Sámi traditional culture.

This broader approach to the pilot might still include Sámi crafts but is not solely restricted to it. As Finland is in the leading group of European countries in which natural resources are over-used, it is critical to address this over-use in the project pilot by re-introducing traditional methods, materials and values which bring back nature-led and need-only based production of garments and clothing.

1st phase

The 1st round of the pilot is executed by Oamk staff with textile design and craft skills and skills in new technologies, such as AR, XR, metaverse and gaming. The staff will co-create a pilot with a garment, and implement NFC tags in the garment, through which various content can be accessed. One kind of content could be an original song by Oamk music teaching staff. The garment will be a costume that is used in the Oamk dance teacher training production, and it will be tested in an actual performance/ artistic production. The costume can entail new technologies such as printed circuits and sensors, and the technology can be utilized as part of the performance. The performance or production will occur during the winter of 2024, and the pilot report will include the recorded performance.

2nd phase

The 2nd pilot is done by Northern Finland based organizations and Oamk staff. The idea is to advance from the 1st pilot round to see which technologies can be added and used to create meaningful and

value-adding content to the garment or costume. The 2nd round will engage an artist from outside Oamk by asking for at least three bids from three artists or organisations with specific criteria. The Oamk project staff will 1st source suitable artists/ organisations, then meet with them to go over the project pilot requirements and to get to know their competencies and portfolios and then ask for bids to be delivered. The bids will have separate categories that will each be given points by a panel consisting of both Oamk project staff and outside crafts professionals. Once the panel has graded the bids, the bid with the highest score will be accepted.

3rd phase

The 3rd pilot planned is a cross-pilot site collaboration with artists and companies from the pilot site countries. The idea is to create a pilot, so that co-creation, information exchange, learning, and co-operation between the four pilot site countries can occur in practice. The experiences from the two 1st pilot rounds can be utilised in the final round. Craft traditions, new technologies and co-creation will remain the core of the pilot and technological resources from all four countries and pilot sites can be used. The practical process will proceed like the 2nd pilot round. The Oamk staff will source and interview different artists and companies from the pilot sites and request a bid from at least three artists and companies for the pilot. The Oamk project staff will 1st source suitable artists/ organisations, then meet with them to go over the project pilot requirements, get to know their competencies and portfolios, and then ask for bids to be delivered. The bids will have separate categories, each given points by a pilot site project staff panel. Once the panel has graded the bids, the bid with the highest score will be accepted.

1st pilot iteration: From Waste to Wonder

The *From Waste to Wonder* pilot, developed at Oamk, explores how traditional craftsmanship and modern technology can come together to promote sustainable fashion. Rooted in a mindset that values natural resources and responds to genuine, practical needs, the pilot reintroduces a way of living that aligns with nature's rhythms and seasonal materials. By integrating digital tools—such as embedded technology in garments and interactive educational content—the project not only revives age-old techniques but also enhances their accessibility and relevance in today's world.

The pilot focused on designing and producing nine dance performance outfits using traditional fish leather tanning techniques and integrating digital technologies. Activities included sourcing and processing fish skins, crafting garments from recycled materials, embedding NFC tags, and developing an educational game. The pilot also tested the Open Connector Platform (WP5) as a digital hub for showcasing and linking garments to interactive content. A gamification workshop was held online, and a collaborative dance performance titled *The Oddity Effect* was choreographed and performed by dance students wearing the pilot outfits.

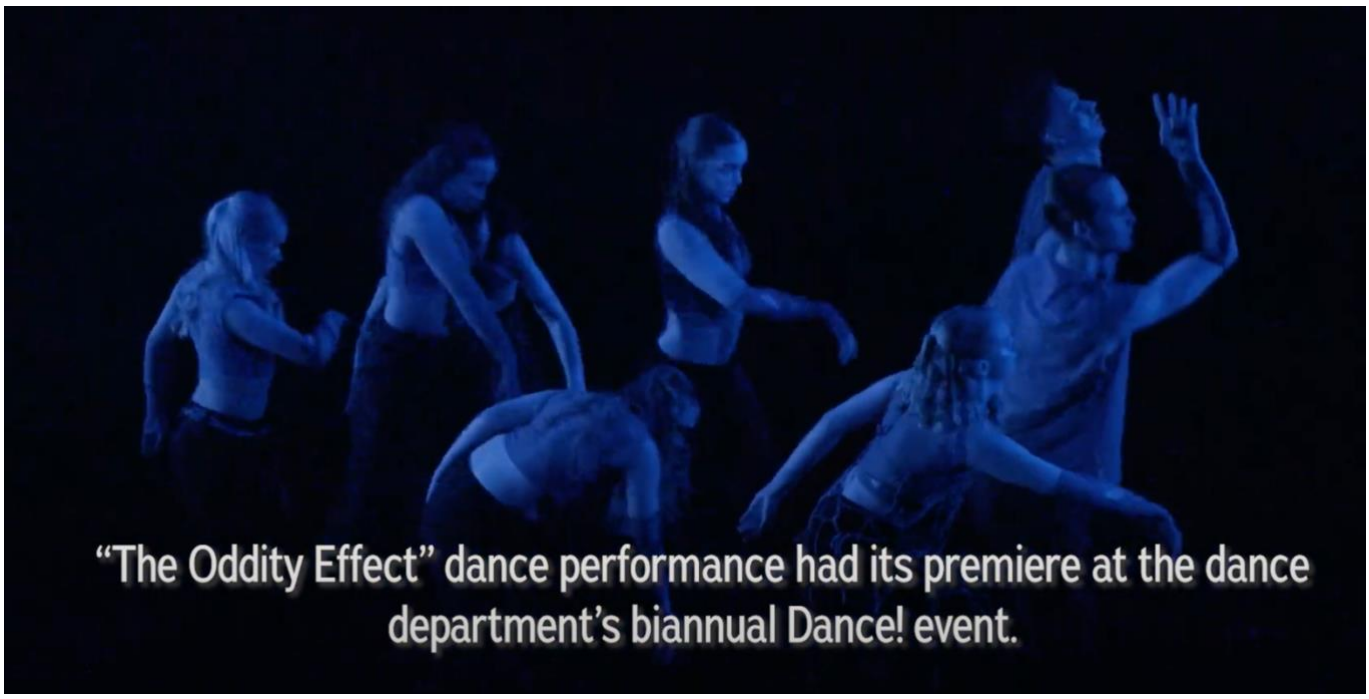

Figure 7 Still from video documentation of From Waste to Wonder (CRAFT-IT4SD Youtube) Credits: OAMK

The objective

The objective *Waste to Wonder* was to design and produce a performance outfit—specifically for dance—that incorporates elements of traditional handicraft heritage. The aim was to explore sustainable materials and revive historical techniques through contemporary costume design.
In addition to the physical creation of the outfit, the project also aimed to integrate digital tools to enhance educational outreach and promote sustainable practices. This was achieved using NFC technology and an open connector platform.

Initial concept and cultural considerations

The original project proposal included the idea of incorporating elements from Sámi traditional crafts. However, this was reconsidered and respectfully revised at the start of the project to avoid cultural appropriation and ensure ethical design practices.

Craft Technique and Process

After evaluating several traditional methods, the team chose to explore fish leather tanning, a centuries-old technique. Fat tanning was selected over vegetable tanning due to time constraints and material availability. The process involved cleaning fish skins, soaking them in a mixture of egg yolk, cooking oil, and neutral soap, and drying them flat to prevent curling. Salmon skins were preferred for their size and ease of handling, while burbot, though easier to tan, was less pleasant to work with. The most labor-intensive phase was drying and softening the skins, which tended to stiffen and curl. Despite this, the resulting material was suitable for decorative costume elements.

Material Sourcing and Tools

Fish skins were sourced from a local supermarket, where staff were supportive due to prior familiarity with similar craft projects. The skins were stored in a freezer, avoiding traditional salt preservation. Tools were minimal: a metal scraper repurposed for cleaning skins, rubber gloves, and household buckets. The process was carried out in institutional facilities, which posed initial concerns about mess and odor—ultimately unfounded.

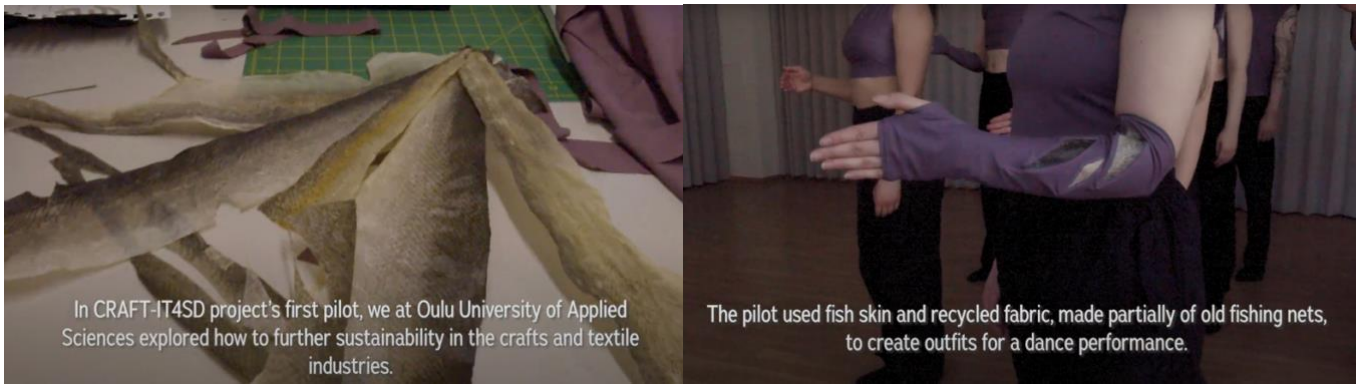

Figure 8 Stills from video documentation of From Waste to Wonder (CRAFT-IT4SD Youtube) Credits: OAMK

Digital Integration and Sustainability

Each costume was embedded with an NFC tag linking to an educational game that teaches how fish parts are used and how the surplus fish skin can be tanned at home. This interactive element extends the project's educational reach and promotes awareness of sustainable materials. Additionally, the outfit was uploaded to an open connector platform, where it can be marketed, sold, and accessed alongside the game. These digital components support sustainability by encouraging transparency, reuse, and knowledge sharing, aligning with circular economy principles.

Stakeholders and Participants

This section provides an overview of the Stakeholders and Learning Community activated during the pilot iteration, as well as how this iteration aligns with the pilot's ecosystems and the entire CRAFT-IT4SD multi-stakeholder ecosystem.

The 1st iteration of the *From Waste to Wonder* pilot brought together a multidisciplinary team of educators, students, and a local sustainable fashion company. The pilot was led by a dedicated team from Oulu University of Applied Sciences (Oamk), supported by students from visual design and dance education programs. In addition, the pilot benefited from the collaboration of Morico, a local design brand committed to sustainability. Together, these participants contributed to the development of garments, digital content, and a performance that embodied the project's values of craft heritage, innovation, and ecological responsibility.

Oamk team in charge of piloting activities

The pilot team in charge of piloting activities was Tommi Karjalainen as the open connector platform testing and content creator, Jan Julin as head of game design and the leader of the gamification workshop, Outi Räsänen as the designer and maker of garments and contact person for dancers, Katarina Rauhala as assistant in garment making and fish skin tanning and Liisa Ronkainen as assistant in fish skin tanning and communication of workshops and pilot activities. Dance teacher Heidi Hartzell worked as the choreographer and teacher for the final dance performance.

Students
Erja Taskinen, a visual design student on the game and dance teacher students Annika Aho, Iida Ahola, Nea Hakala, Sanna Mäkelä, Helka Saraperä, Moona Soronen, Markus Turner, Janina Viero and Ella-Maria Ääninen as dancers and partly creating the choreograph together with Heidi Hartzell for *The Oddity Effect* dance performance.

Companies
Tytti Alapieti is a co-founder of Morico, a local and sustainable design brand. She made parts of the outfits with Outi Räsänen and tested the NFC-tags in the outfits.

Formats, Setting, Process

This section provides an account of how the piloting was designed and conducted; each stage is presented (what, who, how) and accompanied by documentation (selected images, links for videos etc)

Research and testing involved multiple types of Near Field Communication (NFC) tags, assessing their capabilities and interactive potential.

Types of Functionalities Tested:

- Displaying 2D AR content
- Triggering 3D AR content
- Serving as digital business cards
- Implementing a read-counting mechanism
- Launching a video game upon scan

To explore engaging and interactive formats for the pilot workshops, we conducted in-depth research into various low-code and web-based game development platforms. The goal was to identify tools that enable quick development of digital games without requiring extensive programming expertise. Several existing games were reviewed to understand their structure, design choices, and suitability as workshop examples. This analysis included assessing the time, technical resources, and financial investment typically required to develop such games.

The development of the game, created as part of the piloting activities, involved several phases and presented a variety of challenges—both technical and practical. Below is an overview of how the process unfolded and the key issues encountered along the way.

Challenges Faced During Game Development

One of the primary challenges during the development process was managing the tight schedule; time constraints meant that certain design decisions had to be made quickly. A significant portion of development time was spent on refining the core game mechanics, particularly because the game was designed to be playable using just one finger or a computer mouse. This design choice was intentional to ensure the game would be accessible across devices, including web browsers, smartphones, and desktop computers, thereby maximizing inclusivity and usability.

While the actual development process was relatively smooth due to the team's familiarity with the chosen game engine, which both developers had used in the past, working in a small two-person team did stretch their individual competencies to the limit. Each team member had to take on a wide range of responsibilities, which tested their technical and creative capacities.

Another challenge was how to visually and interactively demonstrate the process of tanning fish leather, a topic not inherently simple to translate into a game format. Considerable effort went into determining how to represent this complex process in a way that was both engaging and educational for players.

Game Development Process

The development began with collaborative planning sessions involving the pilot working group, where the team outlined the core concept and educational goals of the game. This early phase resulted in the creation of a preliminary Game Design Document (GDD) that served as a roadmap for development.

Following this, the team produced mock-up images to visualize the game’s potential content. These mock-ups helped establish the initial graphical style, color palette, and key interaction mechanics. Over the next few months, both the gameplay mechanics and graphic assets underwent multiple iterations as the team refined the user experience.

Toward the end of the development cycle, visual effects and sound design were added to enhance the overall atmosphere and polish the final product. The finished game achieved the goal of being informative without overwhelming the player.

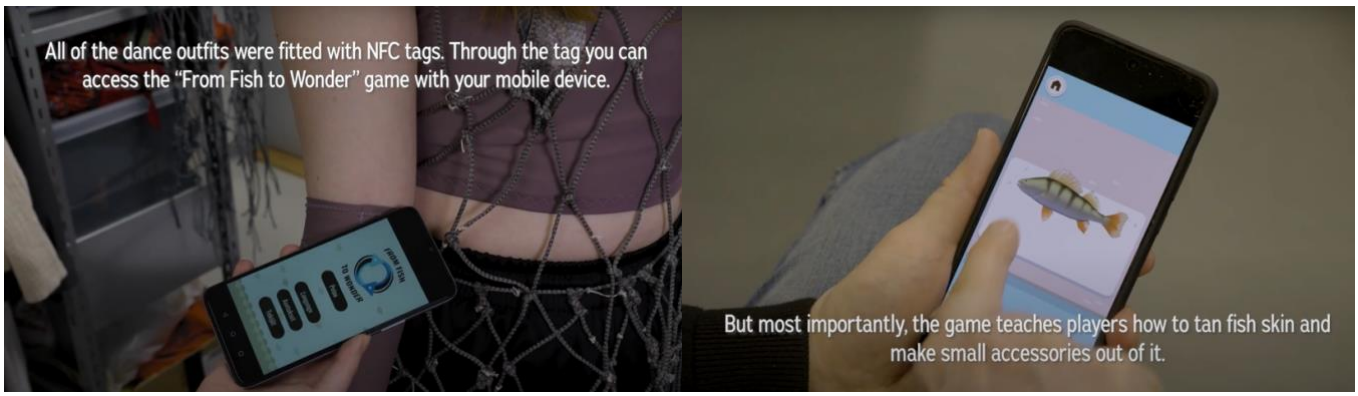

Figure 9 Stills from video documentation of From Waste to Wonder (CRAFT-IT4SD Youtube) Credits: OAMK

Open Connector Platform Experiences

The CRAFT-IT4SD project team at Oulu University of Applied Sciences tested out the Open Connector Platform beta version after the 1st pilot dance dresses and the mobile game "From Fish to Wonder" linked to the dresses through an NFC tag were finished. The main testing of the Open Connector Platform was done by the team member Tommi Karjalainen.

The Open Connector Platform can serve as a hub for a clothing company brand. You can add clothing or other items under that brand and create perks for each item. The perk acts as an additional bonus content that is linked to the item. Each clothing item can be set to contain a unique ID for each individual copy of the physical item. The unique ID links to the perk content. There is a physical NFC tag that is attached to the clothing item. The NFC tag contains the unique item link. You read the NFC tag with your mobile phone and are then redirected to the additional perk content linked to the item on the Open Connector Platform.

We were able to create a brand page for OAMK CRAFT on the Open Connector platform. We added a brand story that contained text and images. Some of the images were created locally using AI with open-source software Krita combined with the Krita AI Diffusion plugin. We used the story editor on the Open Connector Platform to design the story site layouts. We added an item under the brand and in the item page added a description of the dancer's dress that was made for the pilot. Item Story was added, where we detailed the 1st pilot creation with images from the making of process. A perk was created for the dress item. The perk is planned to contain a link to the mobile game "From Fish to Wonder" that teaches how to create the fish skin material for the accessories that were used in the dancer's dresses.

As the Open Connector platform is still in the beta phase, not all desired functionality was yet present, and we discovered some bugs in the platform behavior. For example, we were not able to publish the dress item and link the perk to the item. We could not test linking a game to the perk. At the time of writing this, there is no preview of the full brand and item page on the Open Connector

Platform and the brand website feature is not live yet. Additionally, brand and item names can't be edited after inserting initial data into the fields. We submitted the bugs that we found during the platform testing to the official Fashion Innovation Center-contact. Fixing of the issues may take some time, but hopefully before the 2nd pilot finishes, all of the project participants are able to use more functionality on the platform. It was very valuable for the Open Connector Platform development to put the platform to a real test, and we were happy to help with the process.

Future testing of the platform may include adding direct videos, video links, game link and 3d models to the perks or story pages. Once the item and perk functionality are fully live and working, we can finish the product item page for our 1st pilot dresses. NFC tag linking to the Open Connector Platform item IDs must be tested. The pages for the brand, items and perks can serve as an example of what can be done on the platform currently.

The Open Connector Platform (https://portal.open-connector.com) shows great potential to become a key way for SMEs to add additional value and content to their clothing and craft items. The platform may help the SMEs to adjust to the EU's upcoming Digital Product Passport requirements in the future. Product textile data and care instructions can be added on the platform. The platform development continues, and it is really interesting to see how the platform and community will grow in the future.

The pilot was mindful of cultural sensitivity, particularly in avoiding appropriation of Sámi craft traditions. Fish skin, being a globally used material, was deemed culturally neutral. NFC tags were placed in non-intrusive areas of the garments to avoid interfering with movement. The educational game is freely accessible, ensuring open access and inclusivity. No ethical conflicts were identified in the use of technology or materials.

Student, Company, Artisan & Craft Projects

This section provides an overview of projects generated during the piloting, e.g. student projects generated during or after the piloting, artisans' contributions inspired by piloting, and company conducted projects inspired by piloting

No known daughter pilots or experimentations have begun since the pilot activities. Fish skin as a material has piqued the interest of other project partners and the team at Oamk will continue to implement fish skin to future pilot iterations as well.

Feedback and Evaluation

This section includes an overview of participants' feedback, suggestions, and recommendations, based on feedback sessions and evaluation forms completed by participants.

During discussions with the participating dance teacher students—who also contributed to the co-creation of the choreography—it became evident that younger generations are increasingly conscious of sustainability in fashion. The students collectively expressed a preference for purposeful clothing choices, emphasizing the importance of avoiding unnecessary or excessive garments. Instead, they aspired to build wardrobes where each item is versatile and contributes to a cohesive whole.
Several students highlighted their interest in vintage clothing, and notably, one student demonstrated awareness of forthcoming legislation aimed at curbing fashion-related overconsumption—an insight that was both unexpected and encouraging. According to this group, the future of fashion lies in the concept of a capsule wardrobe: a curated selection of minimalist staples and timeless pieces, chosen for their fabric quality, durability, and enduring design.

The gamification workshop, held online on May 15, 2025, received positive feedback from all participants who responded to the evaluation. Attendees found the session both useful and inspiring, noting that it provided them with new ideas for incorporating gamification into their own future projects.

Participants praised the clarity and confidence of the instructor, as well as the practical nature of the exercises. One participant suggested that the workshop could be even more impactful if delivered as a series rather than a single session, allowing for deeper engagement and continuity. Another participant recommended incorporating introductory activities at the beginning of the session to better understand participants' backgrounds and expectations—such as short open-mic introductions in smaller groups.
Overall, the workshop was described as engaging and thought-provoking, with several attendees highlighting the creative potential of gamification in educational and craft-based contexts.

Concluding Remarks

This section includes concluding insights on the piloting, whether the piloting activities met the overall objectives and scope of the pilot iteration, which challenges and successes were met during the iteration, and how the iteration bridges into the next pilot iteration and what insights the piloting brought for cross-piloting activities

Learning Outcomes

Participants gained hands-on experience in sustainable material use, traditional craft techniques, and digital integration. Students learned about fish leather tanning, costume design, and how to embed and utilize NFC tags in garments. The game development team explored accessible game mechanics and educational storytelling. The pilot also provided insights into the technical and creative challenges of translating craft processes into interactive digital formats. Feedback from the gamification workshop indicated that participants found the session inspiring and useful for future projects.

Good Practices

- *Cross-disciplinary collaboration:* The pilot brought together designers, dancers, game developers, and educators.
- *Sustainability focus*: Emphasis on using waste materials (fish skin) and promoting circular economy principles.
- *Technology integration:* Effective use of NFC tags and the Open Connector Platform to extend the garment's educational and commercial potential.
- *Inclusive design:* The game was designed to be accessible across devices and user-friendly.

Community Building and Co-Design

Although the 1st iteration was primarily experimental and involved a limited number of students and one company (Morico), elements of co-design were present. Students contributed to the choreography and costume creation, and Morico co-founder Tytti Alapieti collaborated on garment production. The gamification workshop fostered peer learning and idea exchange among participants from various backgrounds. The pilot also laid the groundwork for a learning community through LinkedIn and the project website.

Concluding Remarks and Future Directions

The 1st pilot iteration served as a feasibility study, testing the integration of traditional crafts, sustainability, and digital tools in a performance context. It successfully demonstrated the potential of the pilot model, despite some technical limitations with the Open Connector Platform. Future iterations will expand co-creation efforts, involving more students and artisans in the design and development process. The next two rounds will continue exploring dance performance and costume design, with variations in materials and technologies, and a stronger emphasis on community engagement and collaborative learning.

2.3 Pilot 3 MODACC, Catalonia, Spain

Title: Guiding the Adaptation of Micro companies and SMEs to the new legal, sustainable and digital framework in the textile and fashion sector

This section provides a short introduction to the pilot, its overall scope and iterative approach with a focus on the 1st pilot iteration and a description of activities conducted.

The Pilot in Catalonia, Spain, is coordinated by MODACC (Catalan Fashion Cluster).

Key focus areas

Legal framework, eco-design for sustainable products regulation, environmental indicators,
(Legal framework, Sustainable product legislation, cultural heritage, new technology integration)

Pilot objectives

The main objective of the pilot is to prepare SMEs for the upcoming sustainability legislation through the revival of pre-existing knowledge, crafts and cultural heritage, combined with new digital technologies, leading to new business models for sustainability.

The pilot will:

- explore the barriers micro-companies and SMEs need to overcome and the new business models required to respond to the upcoming EU legislation supporting sustainability.
- create a roadmap for adapting the legislation and product requirements for companies.
- create methodologies and measures for SMEs to adapt legislation and product requirements.
- enhance SME's resilience through reskilling and upskilling.

Catalonia's SME fashion ecosystem has great relevance and represents a significant portion of the market, with more than *700 hundred* creating and sharing value to improve competitiveness of the Catalonian market at a local and international level. MODACC (the Catalan fashion cluster) is on a mission to boost the sector's economic, social, and environmental value through various initiatives, bu acting as a driver of change in a constantly evolving sector, promoting collaboration and innovation.

In alignment with the clusters purpose and values, the main goal of the pilot in Catalonia is to facilitate the adaptation of SMEs to the upcoming sustainability legislation through the adoption of new digital technologies and/or sustainable business models. Specific goals for the overall pilot have been defined as:

- Explore the barriers micro companies and SMEs need to overcome and the new business models that are needed in response to the upcoming EU legislation supporting sustainability.
- Create a roadmap for the adaptation of the legislation and product requirements for companies
- Create methodologies and measures for SME to adapt legislation and product requirements
- Enhance SME's resilience through reskilling and upskilling

To achieve the main goal and specific objectives the pilot is segmented into three iterations that contribute to the main goal, by creating shared knowledge among them, involving similar or complementary actors, and providing applicable insights to other project partners. Central thematics have been set to focus efforts on each iteration and secure results that are robust and specific to a thematic. Thematics and objectives of each pilot iterations are as follows:

1st phase: Legislation and Technology

The 1st phase of the pilot project aims to lay a foundation for collaboration between ecosystem agents that have points of synergy and can add value to each other by pre-implementing a technology solution that contributes to the adaptation to the legislation. To do so, the initial phase will consist of an assessment stage with 3 principal activities:

1. Identifying the target group of the project by developing selection criteria for the micro-companies and SMEs that would benefit from participating. Based on the selection of this target group, the ecosystem will be re-mapped to identify potential players in the areas described in the pilot ecosystem section above.
2. Identifying and prioritising the needs of the target group regarding sustainability. For this, three resources will be used: review of existing literature and results from relevant projects; conducting surveys and convening a focus group. The focus group will be representative for the various groups in MODACC's ecosystem and targeted at laying a foundation for collaboration through the joint identification of challenges and needs.
3. The outcome of the literature review, the surveys and focus group interviews, we will make a prioritisation of regulations to narrow down the scope of the project and maximize its impact.

Based on the assessment stage, we will proceed to the scouting stage of innovative digital technologies at a regional level to create a technology directory. The scouting process will include a selection process of the most suitable technologies by establishing selection criteria that adequately respond to the identified needs and priorities. After the creation of the directory, a fair will take place, which will convene the target group and provide the most suitable technologies to facilitate the transition for companies and SMEs to comply with sustainability legislation.

The expected output will be that companies collaborate with the selected technologies to make a pre-implementation. The expected outcome of the collaboration is to lay a solid foundation among ecosystem actors, bringing awareness about how traditional and living heritage can contribute to sustainability and elucidating how technology can enhance the process of adaptation to the upcoming legislation.

2nd phase: Legislation and Impact Measurement

The 2nd phase of the pilot will address one specific normative and will use impact measurement tools such as carbon footprint, Life Cycle Assessment (LCA) or Social Return of Investment (SROI). The objective of the 2nd pilot is to create a roadmap to facilitate the adaptation to a selected normative, by using innovative technologies and impact measurement solutions as supporting tools, while generating educational resources for the members of the ecosystem. The pilot will focus on the same target group as the 1st phase and use the assessment stage results to select a single normative based on selection criteria. MODACC will oversee the creation of educational resources and workshops to work on reskilling or upskilling with the target group members. Parallelly, a legislative roadmap will be created with a strategy to achieve compliance of the selected normative. The output of the 2nd phase will be X number of workshops, a roadmap of the legislation panorama and a strategy to comply with a selected normative, supported by impact measurement tools.

3rd phase: Legislation and Sustainable Business Models

Finally, during the 3rd phase of the pilot, we aim to gain a deeper understanding of the current sustainable business models found in the ecosystem, the way they are perceived by ecosystem actors and how they relate to legislation. To do so, a focus group will take place with members of all the ecosystem categories mentioned above. Questions will be conducted to understand which sustainable business models are being used, which are predominant, and which have the biggest impact. A literature review will take place to analyse the results of other studies. After gathering this information, selection criteria will be developed to select the most impactful and viable sustainable business models for the fashion industry, and we will study, based on our technology directory how innovative technologies can enhance them. Results will be presented in an online publication on sustainable business models supported by technologies, and a guide for micro companies and SMEs for how to implement Sustainable Business Model successfully. We will involve other members of the CRAFT-IT4SD pilots so the online publication can be enriched and developed as a living document.

1st phase activities

The 1st iteration of the pilot was conducted from December 2024 until May 2025. The title given to the iteration was: *Regulation, from challenge to opportunity.* With the intention of reflecting how a challenging scenario, such as legislation integration, can be transformed into a business opportunity when using adequate tools (technologies) and building on the right capacities. The following chart illustrates the set of activities that were conducted during the pilot.

	Activity	*Description*
1	Identification of the target group	Target group was identified with the aim of addressing the needs of a framed sector of the ecosystem, allowing pilot participants to have a more specialized experience. Full list of members of MODACC was organized and selection criteria was defined as follows: Each category was assigned a minimum of 0 points, meaning low alignment, and 3 points, meaning high alignment. Three members of the team individually evaluated each of the cluster members in these categories; results were gathered and later balanced to achieve a result. Brands that had an overall punctuation of 2,5 – 3 were categorized as a high alignment target group. Brands with an overall punctuation of 1,9 – 2,4 were categorized as medium alignment target group. Brands with lower punctuation were categorized as a low alignment target group.
2	Stakeholder mapping	A mapping exercise was conducted to identify and classify relevant stakeholders capable of influencing or contributing to the project's goals. A comprehensive list of institutions, innovation agents, public authorities, and sectoral actors was compiled. Stakeholders were prioritized based on their relevance and proximity to the fashion and textile ecosystem. Priority stakeholders were contacted individually and invited to participate in co-creation activities such as focus groups and workshops.
3	Prioritization of normative	A review and analysis of the EU legislative framework under the European Green Deal and the Circular Economy Action Plan was conducted, focusing exclusively on legislation with a direct impact on the textile and fashion sectors. Regulations were classified by urgency of implementation and complexity. The most urgent and complex items were selected and presented to focus group participants. Both SMEs and

		stakeholders then voted to identify the most relevant regulations to be addressed in the pilot.
4	Necessities assessment	With the objective of creating a capacity building and technology supplier fair that could answer directly to the needs of the previously identified target group, we conducted two separate focus groups to understand the needs of the SMEs from the target group regarding legislation and technology implementation.
5	Workshops and Webinars	Based on the insights gathered during the needs assessment, a series of workshops and webinars were designed and delivered to build participants' capacities around sustainability, circularity, and compliance. These events followed a structured format, including planning, scouting of facilitators, and execution. Interactive tools such as live polling, breakout groups, and real case studies were used to promote engagement. Content was tailored to SMEs and aimed at bridging the gap between regulation and business practice.
6	Scouting and selection of technology suppliers	Technologies were scouted in response to the specific challenges and needs expressed by SMEs during the focus groups. The selection prioritized solutions with operational presence in Catalonia, strong potential for implementation, and — where possible — a positive contribution to sustainability. Technologies were evaluated on relevance, feasibility, and alignment with SME constraints. The final selection was integrated into workshops and showcased at the TECNOMODA fair.
7	Technology fair	TECNOMODA was designed as a sector-focused innovation fair that connected SMEs with solution providers. It built upon the knowledge acquired during the workshop phase and the expressed needs of the SMEs. Its goal was to facilitate the integration of technology and legislation as a competitive advantage. Technology providers were invited as exhibitors, and SMEs from the target group received personalized invitations. After the event, a satisfaction survey was shared with exhibitors to assess impact and gather recommendations.

Stakeholders and Participants

This section provides an overview of the ecosystem stakeholders and learning community activated during the pilot iteration, of how this iteration maps towards the pilot's ecosystems and towards the entire CRAFT-IT4SD multi-stakeholder ecosystem.

The execution of the pilot involved a diverse and complementary group of actors, structured into *three key categories:* the internal *pilot team*, the group of *partner organizations and collaborators,* and the wider pool of *general participants*. Each group played a distinct and essential role in the development, implementation, and impact of the pilot, contributing expertise, perspectives, or engagement in different phases of the process.

1. Pilot Team – MODACC

The internal pilot team from MODACC served as the core unit responsible for the design, coordination, and delivery of all pilot-related activities. The team was composed of five professionals with multidisciplinary expertise, whose roles were clearly defined to ensure smooth execution and accountability across all phases:

- *David Garcia – Cluster General Manager*: As the overall supervisor of the pilot, David Garcia provided strategic guidance, ensured alignment with MODACC's mission, and oversaw the coherence of the pilot with broader cluster initiatives. He acted as the ultimate point of validation for key decisions and milestones.
- *Lidia Morcillo – Innovation Manager*: Lidia co-led the pilot's operational planning and execution. She was in charge of aligning the piloting activities with innovation objectives and maintaining active contact with SMEs to ensure responsiveness to their needs.
- *Juliana Penagos – European Programmes Project Manager*: As co-lead alongside Lidia, Juliana took responsibility for coordinating the timeline, managing stakeholder interactions, and ensuring that pilot activities fulfilled both local and European-level expectations. She also played a central role in report drafting and result consolidation.
- *Clara Nuria Solé – Communications Specialist*: Clara led the communication and dissemination strategy, ensuring consistent messaging across channels and supporting outreach efforts to maximize participation. She also managed the visual and editorial identity of the pilot and its documentation.
- *Clara Mallart – Sustainability Specialist*: Clara contributed as a thematic expert in the field of sustainability. She played a key role in one of the facilitated workshops, where she helped translate complex legislative frameworks into practical insights for SMEs and provided contextual guidance on environmental compliance.

The combination of expertise in innovation, project management, communications, and sustainability allowed the MODACC team to cover all strategic, technical, and operational dimensions of the pilot.

2. Partner Organizations and Collaborators

The 2nd group of contributors includes a range of *external entities and professionals* who acted as collaborators or partner organizations throughout the pilot. These stakeholders contributed at various levels, most notably through:

- Facilitating and co-hosting workshops
- Participating as exhibitors or presenters during the TECNOMODA Technology Fair
- Providing expertise or case studies during webinars
- Acting as connectors between the pilot and external innovation ecosystems

This group encompasses:

- *Technology providers and startups* in the fields of digitalization, circular design, lifecycle impact measurement, and traceability.
- *Educational institutions and training centers,* which helped bridge gaps between research, practice, and talent development.
- *Industry experts and consultants* in sustainability, ecodesign, regulation, and innovation.
- *Other clusters or networks,* which helped amplify the reach of the pilot.

The involvement of these actors ensured that the content and experiences offered through the pilot were not only theoretically robust but also highly practical and applicable. A complete list of the organizations and experts involved is listed in *Annex 3,* along with a summary of their specific contributions.

3. General Participants
The 3rd and broadest group includes *general participants,* defined as organizations or individuals who engaged with the pilot through focus groups, workshops, webinars, or by attending the TECNOMODA fair. These participants came from a range of backgrounds and levels of prior engagement with MODACC:

- *SMEs* from the identified high- and medium-alignment target groups.
- *Large companies* with an interest in sustainability-driven transformation.
- *Artisan and micro-enterprises* exploring innovation at a smaller scale.
- *Students and emerging professionals* from design, engineering, or sustainability-related fields.
- *New contacts* who were previously unconnected to MODACC but joined through outreach or referrals, thus expanding the cluster's network and influence.

The diversity of this group enriched the pilot experience, bringing together a variety of perspectives and use cases. Their engagement was essential not only for testing the relevance of the activities, but also for validating the ecosystem-wide applicability of proposed solutions.

Formats, Setting, Process
This section provides an account of how the piloting was designed and conducted; each stage is presented (what, who, how) and accompanied by documentation (selected images, links for videos etc)

Target group selection methodology
A robust methodology was developed to identify and categorize potential piloting participants among members of MODACC. The process was designed to ensure a strategic selection of companies based on their alignment with the objectives of the pilot, such as readiness to engage with circular economy practices, openness to innovation, and relevance within the value chain.

Process:
- *Compilation of Participant Pool: A comprehensive list of MODACC cluster members* was generated as the baseline.
- *Definition of Evaluation Criteria: Specific alignment indicators were defined, including* innovation capacity, previous sustainability initiatives, openness to collaboration, and relevance to textile/fashion transformation goals.

- *Scoring System:* Each evaluation criterion was rated on a scale from 0 (low alignment) to 3 (high alignment).
- *Individual Evaluations:* Three members of the project team independently assessed all eligible companies across the selected criteria to minimize bias.
- *Balancing and Averaging:* Scores were averaged and adjusted to balance discrepancies among individual evaluators.

Categorization:

- *High alignment target group:* Companies with a score between 2.5 and 3.0
- *Medium alignment target group*: Scores ranging from 1.9 to 2.4
- *Low alignment target group:* Scores below 1.9

This scoring model facilitated the creation of a prioritized shortlist, ensuring that the most relevant and engaged companies were invited to participate in the piloting actions.

Stakeholder mapping methodology

Recognising that successful ecosystem transformation requires the involvement of a broad range of actors, a stakeholder mapping exercise was conducted to identify key institutions, organizations, and individuals capable of influencing or supporting the project's objectives.

Process:

- *Initial Identification:* A broad map of potential stakeholders was developed, including industry federations, government agencies, research institutions, innovation clusters, educational centres, sustainability experts, and service providers.
- *Relevance Assessment:* Stakeholders were ranked according to their influence, level of engagement with the textile/fashion ecosystem, and proximity to project priorities.
- *Targeted Engagement:* Entities deemed of high relevance were contacted 1st to ensure timely involvement in co-design activities, workshops, and feedback loops. Communication strategies included personal invitations, info sessions, and direct outreach through project partners.

The mapping ensured not only the inclusion of relevant actors but also the diversity of perspectives needed to co-create viable and scalable solutions.

Prioritization of normative

To provide meaningful content and generate awareness among SMEs and stakeholders, a deep dive into European sustainability legislation was undertaken, with a particular focus on frameworks directly impacting the textile and fashion sectors.

Scope:

- *Coverage:* The analysis included legislation under the *European Green Deal,* the *Circular Economy Action Plan,* and the *EU Strategy for Sustainable and Circular Textiles.*
- *Filtering Criteria:* Only those legislative items with tangible implications for fashion and textile SMEs were retained for further assessment.
- *Classification System:* Selected laws and directives were categorized by:
    - *Urgency of implementation* (e.g., entry into force dates, risk of non-compliance)
    - *Complexity of adaptation* (e.g., required changes in production, reporting, traceability)

Focus Group Integration:
The filtered and classified legislation was presented to participants during the focus groups. Attendees were invited to assess and *vote* on which items were most pressing and relevant for their businesses. This participatory selection allowed the pilot to focus on the top-ranked topics with the highest perceived impact, ensuring alignment with real-world priorities and needs.

Necessities assessment
To anchor the pilot in the real needs of the sector, two dedicated focus groups were conducted with representatives from both SMEs and stakeholder organizations. These sessions aimed to diagnose key challenges, identify barriers to sustainability adoption, and collect suggestions for strategic action.

Structure:
- Format: In-person sessions, moderated by expert facilitators, held in a participatory and dialogic format.
- Participants: Each group involved approximately 10 participants, selected for their experience, strategic positioning, and willingness to contribute.
- Sessions:
    - SME Focus Group: Focused on day-to-day operational challenges, regulatory compliance, and business model adaptation.
    - Stakeholder Focus Group: Addressed systemic issues, policy coherence, capacity building, and ecosystem coordination.

Output:
- Key insights were documented, categorized by theme, and digitalized.
- Findings directly influenced the content and structure of workshops and other capacity-building activities.
- Several recommendations led to the development of tailored actions within the piloting timeline.

Workshop creation and execution
Workshops were conceived as participatory spaces for learning, exchange, and co-creation. They addressed both knowledge gaps and action-oriented challenges identified during the assessment phase.

Phases:

1. *Planning Phase:* Defined goals, participant profiles, duration, and delivery format (in-person vs. virtual). A pedagogical framework was designed to balance theoretical input with practical engagement.
2. *Scouting Phase:* Experts, facilitators, and tools were identified and engaged. Content was contextualized to reflect participant needs and local realities.
3. *Execution Phase:* Workshops were delivered using interactive methodologies, including breakout sessions, live polling, collaborative mapping, and role-playing. Post-event surveys were conducted to evaluate satisfaction and learning outcomes.

Scouting and selection of technologies

The process of scouting and selecting technologies was a key pillar of the piloting strategy, aimed at identifying innovative tools and solutions that could support SMEs in advancing towards more sustainable and circular business models. This process was not conducted in isolation, but rather grounded in the needs expressed by SMEs and stakeholders during the focus groups, ensuring direct alignment between the ecosystem's challenges and the technological responses offered.

Needs-Based Approach

Following the focus group sessions, a list of prioritized needs and operational challenges faced by SMEs in the Catalan textile and fashion sector was compiled. These needs covered a range of areas, such as product traceability, sustainable materials sourcing, impact measurement tools, circular design methodologies, digitalization of production processes, and end-of-life management strategies. These findings served as the guiding framework for the scouting phase.

Scouting Methodology

With the identified priorities in mind, the project team initiated a targeted scouting process to map and analyze technological solutions capable of responding to these specific needs. The scouting was conducted through a combination of desktop research, consultations with innovation hubs, startup databases, existing technology providers, and MODACC's own network of partners and collaborators.

Technologies were primarily scouted based on the following three key criteria:

1. Local Presence in Catalonia: Preference was given to solutions developed or represented by entities operating within Catalonia. This geographical proximity facilitated easier engagement, potential pilot deployment, and long-term collaboration. The emphasis on local innovation also aligned with regional development goals.
2. Relevance and Potential of the Solution: Technologies had to demonstrate a clear application potential for SMEs. This included usability, maturity level, compatibility with current workflows, and capacity to deliver tangible value in the short-to-medium term.

3. Contribution to Sustainability: While not an exclusive requirement, technologies that offered clear environmental or social benefits were strongly favored. This included tools that enhanced material efficiency, reduced emissions or waste, improved transparency, or enabled circular business models. The sustainability contribution was assessed qualitatively, based on the solution's intended use, measurable impacts, and alignment with EU policy priorities.

Selection Process

Once a broad pool of candidate technologies had been identified, an internal selection phase followed. Each solution was evaluated using a scoring grid that reflected the criteria above, as well as considerations such as:

- Ease of implementation for small businesses
- Affordability and scalability
- Proven track record or pilotability
- Degree of innovation and uniqueness

Technologies that scored highly across these dimensions were shortlisted and validated with select stakeholders. In some cases, additional meetings or demos were organized to further assess their relevance and integration potential.

Integration into Piloting

The final selection of technologies was incorporated into two main channels:

- *Workshops:* Featured as case studies or hands-on demonstrations to raise awareness among participating SMEs.
- *Technology Fair:* Exhibited live during the event, offering attendees the opportunity to interact with providers, ask questions, and explore practical applications.

This demand-driven and context-aware approach to technological scouting ensured that the tools presented were not only innovative, but also fit-for-purpose, regionally anchored, and realistically implementable within the operational constraints of the sector.

Technology fair

The Technology Fair, officially named TECNOMODA, represented the culmination of the piloting activities and served as a dynamic encounter to connect technology providers with SMEs in the textile and fashion sector. The event was designed to be both a dissemination action and a strategic matchmaking opportunity, grounded in the real needs of the ecosystem and enriched by the capacity-building process developed throughout the project.

Objectives and Strategic Framing

The conception of TECNOMODA was directly informed by two preceding stages:

1. The results of the SME-focused needs assessment, which identified key operational and compliance challenges that could be addressed through innovation.
2. The knowledge and skills gained during the workshop phase, where participants became more familiar with sustainability requirements, circularity concepts, and the legislative frameworks driving change in the fashion and textile industries.

With this foundation, the fair was strategically designed to:

- Facilitate direct collaboration between SMEs and technology providers;
- Showcase innovative solutions capable of supporting environmental and digital transformation;
- Accelerate the integration of EU legislation into business operations through technological enablers;
- Promote innovation as a competitive advantage rather than a compliance burden.

The aim was to position legislation not as a constraint, but as an opportunity for companies to modernize, differentiate, and lead in the shift toward sustainable practices.

Planning and Participant Engagement

The fair's preparation involved several targeted actions to ensure relevance and impact:

- Technology Providers were carefully selected through the scouting and evaluation process outlined previously. Those with high alignment to SME needs and demonstrable value were invited to participate as exhibitors, with spaces allocated for demonstrations, networking, and one-on-one consultations.
- SMEs identified as relevant or strategically positioned to benefit from the showcased solutions were personally invited. In addition to general communications, personalized invitations were sent to priority SMEs to encourage participation and tailor their experience at the fair.
- Event Curation involved a balanced mix of demonstration booths, keynote sessions, interactive panels, and informal networking spaces, all designed to promote practical engagement between providers and potential adopters.

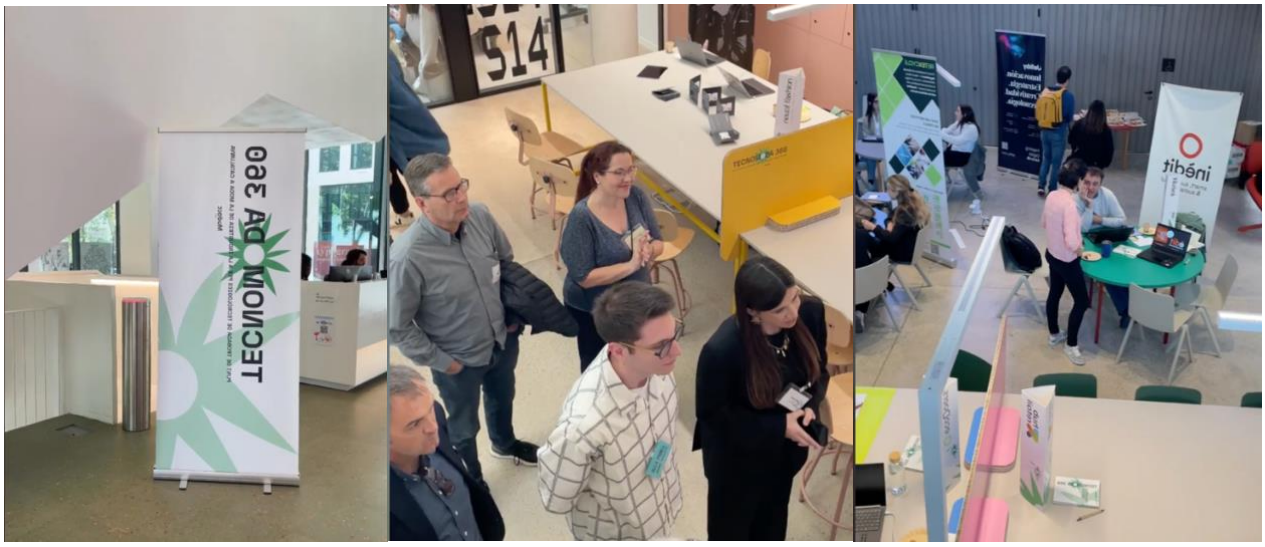

Figure 10 Impressions from the TECHNOMODA Fair. Photo by MODACC

Execution of TECNOMODA

The event was successfully implemented, attracting a significant number of participants from across the sector. The exhibition area featured a curated selection of technologies spanning areas such as:

- Digital traceability
- Lifecycle impact measurement
- Eco-design tools
- Smart materials and automation
- End-of-life management platforms

Throughout the event, interactions between providers and SMEs were encouraged via guided tours, thematic zones, and pitch presentations. These moments enabled SMEs to discover solutions tailored to their size and resources, and technology providers to better understand the operational realities of potential users.

Post-Fair Evaluation and Results Analysis

Following the execution of TECNOMODA, a final analytical stage was carried out to assess the success and impact of the event. This phase was centred on gathering and analysing feedback from exhibitors via a structured satisfaction survey. The survey focused on aspects such as:

- The perceived relevance of attendees
- Quality of interactions
- Potential leads or partnerships generated
- Suggestions for future improvements

This feedback was used to generate a qualitative and quantitative evaluation of the fair's effectiveness, helping identify both short-term outcomes (e.g., potential collaborations) and long-term opportunities (e.g., follow-up actions or regional innovation strategies).

Student, Company, Artisan & Craft Projects

This section provides an overview of projects generated during the piloting, e.g. student projects generated during or after the piloting, artisans' contributions inspired by piloting, and company conducted projects inspired by piloting

No known spin-out activities or experimentations have begun since the pilot activities.

Feedback and Evaluation

This section includes an overview of participants' feedback, suggestions, and recommendations, based on feedback sessions and evaluation forms completed by participants.

This section provides a comprehensive overview of participants' feedback, suggestions, and recommendations, gathered through a combination of structured feedback sessions and evaluation forms completed by attendees. The objective of this process was to assess the effectiveness and relevance of the various activities carried out, and to collect insights that could inform future improvements.

Feedback was collected across a wide range of formats and settings, including both in-person and online activities. These included focus groups, co-creation workshops, interactive webinars, and the technology fair. In all cases, the methodology for gathering feedback was standardized using online surveys, created and administered via the Google Forms platform. Depending on the context, these surveys were distributed in two primary ways: either shared on-site during the event using QR codes displayed to participants or sent electronically afterward to registered attendees through mailing lists. This dual approach ensured a broad reach and maximized the response rate.

The profile of the individuals who responded to the surveys varied according to the type and focus of the activity. For example, participants in technical workshops may have included professionals from industry, while respondents from webinars may have represented a more diverse and international audience.

To facilitate analysis, the following table was prepared. It outlines the structure of the survey instruments used for each category of activity, the main respondent profiles, and the specific sets of questions that were included. This structured representation supports a clear understanding of how feedback was gathered and the scope of the data collected across different engagement formats.

Feedback results were collected for each survey and weighted to obtain summarized data in order to perform results analyzes. For scale measured questions the medium was calculated by summing all responses and diving into the total of respondents. For yes/no questions no questions percentages were calculated for each set of answers.

The results of the feedback surveys were collected systematically for each activity and subsequently processed to produce summarized data sets, enabling a comprehensive analysis of participant responses. The evaluation aimed to extract both quantitative and qualitative insights to inform future planning and decision-making.

For questions using a Likert scale or other numerical rating systems, the analysis involved calculating the mean (average) score. This was done by summing the numerical values of all responses and dividing the total by the number of respondents for each question. This approach allowed for a consistent and comparable interpretation of satisfaction levels and perceived effectiveness across different events and formats. In the case of binary (yes/no) questions, percentages were calculated for each response category. This enabled a clear visualization of general agreement or disagreement with specific statements, providing insight into shared attitudes or perceptions among participants. For open-ended questions, qualitative content analysis was conducted. Responses were reviewed and grouped into thematic categories to identify common suggestions, emerging concerns, and noteworthy recommendations. This qualitative data added contextual depth to the quantitative findings and helped capture nuances that closed questions could not fully reveal.

The combined use of statistical summaries and thematic analysis ensured a well-rounded understanding of the participants' experiences, highlighting both measurable trends and individual perspectives.

Concluding Remarks

This section includes concluding insights on the piloting, whether the piloting activities met the overall objectives and scope of the pilot iteration, which challenges and successes were met during the iteration, and how the iteration bridges into the next pilot iteration and what insights the piloting brought for cross-piloting activities.

The systematic mapping, selection, and engagement activities conducted across the ecosystem in combination with the meticulous feedback and evaluation mechanisms, will provide a strong foundation for the pilot's 2nd and 3rd phase. The expected outcome of the 1st pilot phase has been to provide a solid foundation among ecosystem actors, bringing awareness about how technology can enhance the process of adaptation to the upcoming legislation.

2.4 Pilot 4 Central Region, Denmark (VIA University College)

Title: Combining Craft with Digital Technologies for Sustainability in Garment Design and Consumer Approaches

The pilot in Central Region Denmark is coordinated and led by Center for Applied Research in Textiles, Design and Circularity, VIA University College.

Key focus areas

Prototyping, Experimentation, Sprints, Users/Consumers

The ecosystem in Central Region Denmark includes a strong multi-helix environment with diversity of players: SMEs and startups, micro-sized and one-man companies. The pilot focuses on the latter, as micro-companies play a pivotal role in the ecosystem and the industry–in general more than 90% of the industry. Historically, VIA University College, leading the pilot, was established as the industry's own school to build capacity for the regional textile and garment industry, which means that there are solid relations and collaborations between VIA Design & Business and the industry in the region. In addition to the many textile companies, the pilot's ecosystem consists of local public authorities (Herning and Ikast-Brande municipalities, as well as the region), the National Association for Fashion & Textiles (DM&T), "Bæredygtig Herning" (Sustainable Herning) a regional co-workspace and catalyst committed to sustainable development, the national innovation cluster Lifestyle and Design, the Business Development Centre supporting SMEs, FAoD and DKoD (national organizations for professional designers, craftsmen and architects) and the Danish consumer organization Tænk.

Pilot objectives

The pilot's objective is to use craftmanship to push technology boundaries and experiment and prototype for sustainable development.

Pilot activities approach
The three pilot phases are built over the same frame and organized as a process that allows the participants to Explore, Envision, Experiment and Evaluate

The pilot scope is:

- Explore and develop future scenarios addressing craft, heritage, technology and sustainability;
- Develop digital technology transfer capacity for AI and NFC to be implemented in micro companies;
- Develop skills in employing design sprint methodology;
- Develop individual NFC community and/or products for engagement with consumers;
- Consumer engagement in the Biometric Lab;

Overall, the Danish Pilot focuses on obtaining a closer relationship between micro companies and consumers to enhance consumer knowledge of craft and heritage using technology. The pilot is built around a design sprint approach and consists of three iterations focusing on different aspects of employing Technology to communicate, develop and experiment with company specific approaches to craft.

The three pilot phases target

- 1st interation: future scenarios, AI and NFC tags as digital carriers
- 2nd iteration: analogue & digital material exploration and development
- 3rd iteration: body diversity using body scanning and 3D design tools.

Each iteration is finalized with the possibility of testing the companies' results individually in the biometric lab to evaluate customer reactions to their proposals. The three iterations enable the micro companies to prepare for the digital Passport, to gain a deeper understanding of their customers preferences and to explore how to engage customers in their unique craft and heritage. Elements that potentially prolong product life and reduce product replacements, thus contributing to a reduction in overproduction and overconsumption.

1st Phase
Combining Craft with Digital Technologies for Sustainability in Garment Design and Consumer Approaches

Key focus areas: Digital technologies, sustainability, crafts and heritage. Future Scenarios, design sprint, AI tools, NFC tags, neuro lab.

The 1st Danish Pilot iteration focused on providing micro companies with technological tools to obtain a closer relationship between themselves and their customers in order to enhance costumer knowledge of craft and heritage.

The pilot project consisted of three shared workshops. Based on their individual approaches to craft, the companies jointly explored *future scenarios, AI tools,* and *NFC tags.* Following the three workshops, the companies were invited to work in lab environments and to receive individual sparring with experts representing the different areas. This part enabled the companies to develop proposals for consumer communities and/or products, which were evaluated with user tests in the Biometric lab.

Working with scenario building, AI tools and NFC tags as digital carriers enabled micro-companies to explore, experiment, and test potentials and challenges. This contributed to paving the way for the micro-companies' abilities to comply with future legislation (Eco-design Directive) including Digital Product Passport (DPP) and transparency in data and value chains.

In addition, the use of NFCs was explored with the aim of helping micro-companies to create communities around their product, communicate their specific craftsmanship and/or heritage and thereby possibly create a framework that contributes to a greater respect for and attachment to their products.

2nd phase (Autumn 2025)
With resource scarcity and contributing to the green transition, it is important to explore alternatives to virgin materials and traditional finishes. Be it biomaterials, recycled materials, regenerated materials, natural dying, printing, etc.

Thus, the *2nd pilot phase* is organized around a sprint experiment with materials, using analogue and digital tools. Following the sprint, the companies are invited to work in the labs for a longer period. The sprint is kickstarted with a Material-Driven Design workshop and finalized with user tests in the Biometric Lab

The 2nd phase is kicked off with introduction to Material Driven Design, MDD (Karana et al, 2015), Material Driven Design for Apparel and Textiles, MDD4AT (Ready, 2024), and the Sensorial Wheel (Hartvigsen, M.L. & Hasling, K. M., 2022). The point of departure for these models is to explore new (alternative) materials critically to identify their unique qualities. Based on the insights and the inspiration, the 2nd phase is an envisioning phase in the lab environments (e.g. knit, print, weaving, embroidery, dyeing etc.) where experiments are carried out with the development of own materials and/or further development of existing materials. We will work with both analogue and digital tools. In the part of the 2nd phase, material outcomes are tested with users to explore how users experience

and evaluate new types and new developments of materials. This is done in the biometric lab with eye-tracking and interviews.

3rd phase (Spring 2026)
The *3rd pilot phase* is organized around a sprint exploring the diversity of bodies. Following the sprint, the participating companies are invited to work in the labs for a longer period of time. The sprint is kickstarted with field studies in the form of observation and wardrobe studies and finalized with user tests in the biometric lab

The 1st part of the 3rd phase starts with field research to gain knowledge about the company's users, including observations in stores and wardrobe studies. This step focuses on understanding real user preferences and challenges in the interaction with clothing as opposed to assumptions made about users. The next step includes body scanning of core and potential users and development of avatars. The avatars are used in 3D programs (e.g. CLO3D) for ideation and design development together with analogue and digital prototyping. The process moves back and forth between the digital and the physical world. Both physical and digital prototypes are subsequently tested with users in neuro-lab including eye-tracking and interviews.

Stakeholders and Participants
This section provides an overview of the ecosystem stakeholders and learning community activated during the pilot iteration, of how this iteration maps towards the pilot ecosystems and towards the entire CRAFT-IT4SD multi-stakeholder ecosystem.

This section provides an overview of the *Danish Ecosystem Stakeholders* and *Learning Community* activated during the pilot iteration.

The 1st pilot iteration followed two lines of activation

- workshops with micro companies representing a part of the Danish Ecosystem Stakeholder Community
- workshops including students representing the Learning community.

The 1st pilot iteration demonstrated how technology can contribute to disseminating craft and craft knowledge to a wider audience and pave the way for future use of technological tools.
(Detailed list of Partners and participants in *Annex 3.* List of Pilot Team members in *Annex 4)*

Figure 11 Impression from the NFC-workshop. Photo by VIA UC

The 1st pilot iteration brought together a dynamic and diverse range of ecosystem stakeholders, representing different approaches to craft and heritage. Student representations were equally diverse with participation of both Danish and international students, representing professions covering the value chain in the Fashion and Lifestyle industries.

The *key stakeholders* involved in the 1st pilot iteration were:

- *Artisans and Craftspeople* representing micro companies that focus on apparel, textiles, upcycling,
- *Commercial stakeholders* representing SMV's within workwear, sportswear, and furniture

- *Students* from VIA University College representing Purchasing, Branding & Marketing, Retail, Entrepreneurship, Furniture Design, Graphic Design, Pattern Makers, and Fashion Design at BA-level participated in workshops and design processes, enhancing their understanding of digital tools and future scenarios. Their involvement served both an educational and capacity-building function.
- *Researchers and teachers* representing Branding & Marketing, Entrepreneurship, Fashion Design, and Textile Design, contributing knowledge and facilitation skills and ensured seamless execution of workshops and data collection.
- *Biometric Lab* (including eye tracking), providing the infrastructure and expertise for testing and evaluating company proposals and ideas with potential customers.

Formats, Setting, Process

This section provides an account of how the piloting was designed and conducted; each stage is presented (what, who, how) and accompanied by documentation (selected images, links for videos etc)

The 1st pilot iteration focused on providing micro companies with technological tools to obtain a closer relationship between themselves and their customers to enhance costumer knowledge of craft and heritage. The pilot project consisted of three shared workshops.

Based on their individual approaches to craft, the companies jointly explored *future scenarios, AI tools,* and *NFC tags.* Following the three workshops, the companies were invited to work in the labs and to receive individual sparring with experts representing the different areas. This part enabled the companies to develop proposals for consumer communities and/or products, which were evaluated with user tests in the Biometric lab.

Working with scenario building, AI tools and NFC tags as digital carriers enabled micro-companies to explore, experiment, and test potentials and challenges. This contributed to paving the way for the micro-companies' abilities to comply with future legislation (Eco-design) including digital passport and transparency. In addition, the use of NFCs can help micro-companies to create communities around their product, communicate their specific craftsmanship and/or heritage and thereby possibly create a framework that contributes to a greater respect for and attachment to their products.

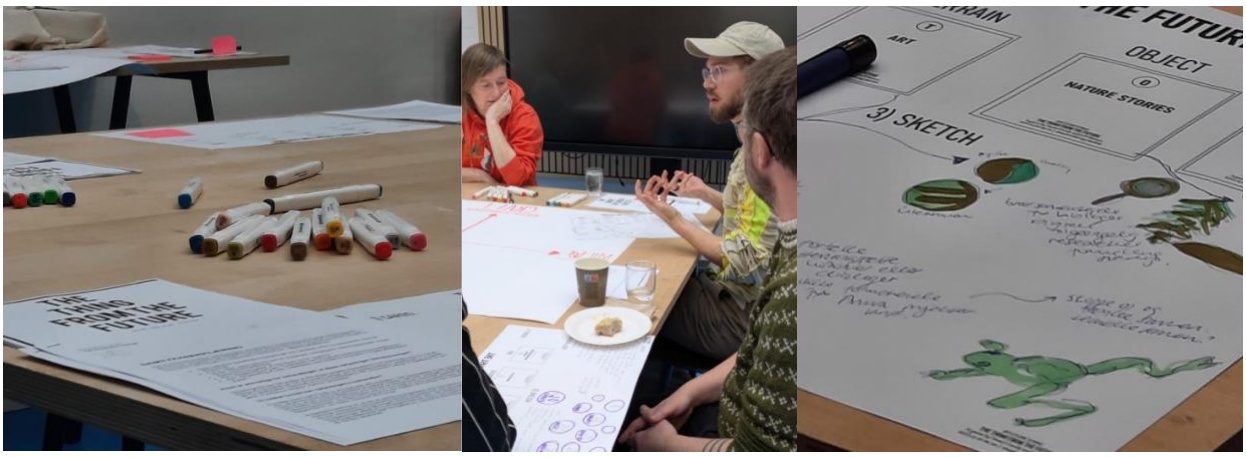

Figure 12 Impressions from the Future Scenarios workshop. Photo by VIA UC

Target group	*Title*	*Event format (workshop, webinar, lab, or other)*	*Location (online/onsite)*
Workshop 1 with Companies January 2025	The Thing from the Future	Introduction, workshop & presentations	Onsite
Workshop 1 with students (international) January 2025	The Thing from the Future, NFC	Introduction & workshop	Onsite
Workshop 2 with students (Danish/international) January 2025	AI tools; AIRocket	Introduction & workshop	Onsite
Workshop 3 with students (Danish) January 2025	The Thing from the Future, NFC	Introduction, workshop & presentations	Onsite
Workshop 4 with students (Danish) January 2025	AI tools; AIRocket	Introduction & workshop	Onsite
Workshop 5 with students (International) January 2025	NFC-tags as digital Carriers	Workshop & presentations	Onsite
Workshop 6 with students (Danish) January 2025	AI tools; AIRocket	Workshop & presentations	Onsite
Workshop 7 with students (Danish) January 2025	NFC-tags as digital Carriers	Workshop & presentations	Onsite
Workshop 8 with students (Danish) January 2025	AI tools; AIRocket	Workshop & presentations	Onsite
January 2025	Outline of research study and relevant stimuli	Lab Day	Biometric Lab

Workshop 2 with Companies February 2025	AI tools; AIRocket	Introduction & workshop	Onsite
Workshop 3 with Companies February 2025	NFC-tags as digital Carriers	Introduction & workshop	Onsite
March 2025	Reseach design, dialogue with all 5 participating micro-sized enterprises on stimuli, with pre-tests of 5 persons	Dialogue meeting	Online
March 2025	Neurolab-test of 8 respondents using Eye-tracking and Facial Expression analysis	Lab Day	Biometric Lab
April 2025	Neurolab-test of 11 respondents using Eye-tracking and Facial Expression analysis	Lab Day	Biometric Lab
April 2025	Neurolab-test of 9 respondents using Eye-tracking and Facial Expression analysis	Lab Day	Biometric Lab
April 2025	Dialogue meeting with the participating enterprise Hvidt Skrald on the results and further research opportunities	Lab Day	Online
April 2025	Test with Pupil Invisible Glasses on product with NFC-tag and storytelling (7 respondents)	Lab Day	Biometric Lab
Training Workshop with students and lecturers 21.May 2025	NFC-tags as digital Carriers	Training Workshop, conducted towards the CRAFT-IT4SD Learning Communities and Learning objects	Onsite

Student, Company, Artisan & Craft Projects

This section provides an overview of projects generated during the piloting, e.g. student projects generated during or after the piloting, artisans' contributions inspired by piloting, and company conducted projects inspired by piloting

Data on a number of projects generated during the pilot iteration is being collected, but not yet available.

Feedback and Evaluation

This section includes an overview of participants' feedback, suggestions, and recommendations, based on feedback sessions and evaluation forms completed by participants.

Workshops conducted have been documented in templates, which include qualitative feedback and reflections on workshop outcomes and possible further development for local courses as well as for the CRAFT-IT4SD Learning Community.

Example of Workshop Documentation, with feedback and reflections

WORKSHOP - AIDC WORKSHOP FOR STUDENTS	
28.05.2025, Herning	
Contact Person from Pilot Team (Name and contact info)	Klaus Greve True (klgt@via.dk) Martin Storkholm Nielsen (mstn@via.dk)
Describe the workshop and the workshop format (max 500 characters)	The workshop introduced NFC (Near Field Communication) as an accessible AIDC (Automatic Identification and Data Capture) technology to students in design and business. Participants experimented hands-on with NFC tags using their own smartphones and explored how AIDC can create value in design, branding, and retail. Conceptual input was paired with playful exploration, case work, and group reflection.
Experimentation / Investigation conducted	Students tested and wrote data to different types of NFC-tags using apps such as NFC Tools. They explored reading from and writing to the tags, tested their range and storage limits, and experimented with automations. A group exercise tasked them with applying AIDC technologies to a value chain case (Steam Coffee), highlighting use cases for ESG reporting, traceability, and transparency.
Crafts techniques applied	Students worked with NFC-tags in physical formats relevant to design and fashion contexts: flexible stickers and button tags attachable to textiles using Prym pliers. While not explicitly a crafts-focused workshop, the session included examples of e-threads and embedded NFC in garments, prompting reflection on the integration of digital tech into material-based design practices.
Technologies applied	The workshop focused on NFC tags, smartphones (iOS/Android), and mobile apps like NFC Tools, NFC Tasks, Shortcuts, and MacroDroid. Students used these to read and write data, create automations, and test NFC functionalities. Concepts such as blockchain and IoT, and platforms like the Open Connector Platform were introduced to contextualize NFC within the broader landscape of AIDC technologies.
Business Models tested	The Steam Coffee case exercise challenged students to apply AIDC technologies to real-world business scenarios, with emphasis on traceability, sustainability, and value creation across supply chains. Students reflected on how NFC and other AIDC tech can support ESG reporting, enhance customer experience, and differentiate brands through digital-physical interaction.
Sustainability Measures applied	The workshop explored how NFC can support sustainability indirectly—through enhanced transparency, lifecycle tracking, and reduced need for printed materials. The Steam

	Coffee case explicitly addressed environmental and social impact across value chain touchpoints.
Number of Participants	33
Stakeholder group(s): who participated?	Participants were Danish and international students from the *Retail Design & Business* and *Branding & Marketing* specializations within the PBA Design & Business program. The mix of backgrounds fostered an interdisciplinary dialogue between technology, design, and business.
Preliminary Results	All students successfully interacted with NFC-tags, writing and reading various data types (URLs, text, timers). Several expressed excitement upon realizing they could use the tags independently and immediately in their personal or project work. The Steam Coffee case enabled applied thinking around NFC's role in business contexts, producing novel ideas for digital integration and user experience design.
Insights & Learnings	NFC's low adoption barrier (due to built-in smartphone support) enabled quick engagement and experimentation. The session demonstrated that even simple technologies can open rich discussions on value creation, digital integration, and sustainable innovation. Hands-on use was crucial to demystify the technology and inspire real-world application.
Future Scope and Recommendations for Including the Workshop as Learning Material	This workshop shows strong potential as a recurring or modular component in interdisciplinary design and business education. Future iterations should allow for more time, deeper experimentation, and individual exploration between sessions. Follow-up workshops could include prototyping NFC-enabled products, integration with storytelling or service design, and exploration of back-end infrastructure (databases, APIs, etc.).
If Recommendations for Interactive Learning Objects, please add	Develop short tutorial videos for using NFC tools and apps, a collection of mini-case studies for ideation, and digital exercises for simulating NFC-enabled user journeys. Consider creating a shared bank of use-case inspiration from fashion, retail, and sustainability contexts.

Concluding Remarks

This section includes concluding insights on the piloting, whether the piloting activities met the overall objectives and scope of the pilot iteration, which challenges and successes were met during the iteration, and how the iteration bridges into the next pilot iteration and what insights the piloting brought for cross-piloting activities

The three shared workshops of the 1st pilot iteration included both company and student tracks, all built on the design process of Exploring, Envisioning, Experimenting and Evaluating. Working with scenario building, AI tools and NFC tags as digital carriers can enable micro-companies (the main target group of the pilot) to explore, experiment, and test potentials and challenges, and enhance the micro-companies' abilities to comply with future legislation (Eco-design Directive) including Digital Product

Passport (DPP) and transparency in data and value chains. Additional to the three workshops, the companies were invited to work in lab environments and to receive individual sparring with experts representing the different areas. This part enabled the companies to develop proposals for consumer communities and/or products, which were evaluated with user tests in the Biometric lab. The lab work, particularly the user tests in the Biometric lab will be continued across the next two pilot phases to enhance the impact on consumer engagement.

3.WP and Ecosystem Collaboration: New Circular Business Models and NFC-tagging for Engagement

During the 1st pilot phase, there has been interaction and engagement across CRAFT-IT4SD WPs and the pilot ecosystems, particularly with WP5 and project partners VTT and FIC (Fashion Innovation Center).

VTT conducted activities for T5.1 (Mapping and Description of Current Business Models in Selected Pilot Sites, April 2025) and T5.2 ("Analysing the climate impact of selected SME fashion business models in Europe", forthcoming) at all four CRAFT-IT4SD pilot sites. These activities have included the following:

- With the help of pilot site representatives, recruiting micro and small sustainable fashion companies and textile sector association representatives for interviews on sustainable fashion business (T5.1)
- With the help of pilot site representatives, recruiting four micro and small sustainable fashion companies as case companies for business model climate impact assessment (T5.2)
- Conducting interviews with micro and small sustainable fashion companies and textile sector association representatives on sustainable fashion business (T5.1)
- Initiating the business model climate impact assessments with four micro and small sustainable fashion companies (T5.2)

The interviews with micro and small sustainable fashion companies and textile sector association representatives on sustainable fashion business were anonymous (T5.1). The names of the four companies participating in the business model climate impact assessment will be published in D5.2 with the permission of the participating companies. This work, based in the pilot ecosystems, qualifies CRAFT-IT4SDs focus on the circular sufficiency-based economy, the policy to reduce overproduction and overconsumption, and to facilitate the market access of small and micro-companies with responsible and circular value chains. The work in T.5.1. and T5.2. will also feedback into the pilot ecosystems, and the continued engagement of small and micro-companies.

Fashion Innovation Center (FIC) provided a training workshop (May 2025), introducing CRAFT-IT4SD partners, pilot team members, students and fashion designers to The Open Connector Platform

and the use of NFC-tags, technology approaches which are already prevalent in the pilot activities and will have a further uptake in next pilot phases.

Describe the workshop and the workshop format (max 500 characters)	Fashion Innovation Center (FIC, SE) arranged a cocreation training workshop together with Flair.Fashion in hybrid format. Within this workshop students were introduced to EU policies on sustainability compliance and teamed up with brands to create new digital opportunities for fashion brands. • Introduction to upcoming global legislation, with a focus on regulations by the European Union and the Digital Product Passport • Partner with fashion designer from curated list to develop a new concept • Prepare concepts and present to group • Feedback • Q&A
Experimentation / Investigation conducted	The objective was to enable participants to understand the legal requirements of the European Union's Digital Product Passport and beyond; and to create a digital layer and explore new opportunities and user-based experiences for fashion brands and businesses.
Crafts techniques applied	-
Technologies applied	Open Connector Alliance Platform (OCA Platform) and NFC tags
Business Models tested	• New business models in the intersection of physical and digital • Digital twinning • New marketing tools
Sustainability Measures applied	Digital Product Passport as part of design.
Number of Participants	25
Stakeholder group(s): who participated?	SMEs, fashion designers and students currently enrolled in fashion programmes.
Preliminary Results	Beta products and services, and innovative new marketing campaigns for the brands. In addition to these, students' digital skills were upskilled and they learned about EU policies affecting their work.
Insights & Learnings	There was a huge enthusiasm, willingness and capabilities to explore new business models and innovative ways to become more sustainable within the fashion industry. Students were very keen on continuing training. As for our own learning, we decided to run this workshop on a regular basis once or twice a year based on the demand and excitement of students.
Future Scope and Recommendations for Including the Workshop as Learning Material	There are two pillars of which this workshop is based on: policy and OCA Platform Policy slides do not withstand time; therefore, policy slides need to be updated before every run due to new policy updates on the

	current status of sustainability and competitiveness policies regarding the fashion industry. As time also goes by, the element of compliance from EU on DPP and other reporting directives CSRD and CSDDD evolves also. Educator must be familiar with OCA Platform with NFC tag to utilise those within this workshop.
If Recommendations for Interactive Learning Objects, please add	Soft skills: Listen and hear students' concerns and take those concerns seriously. Acknowledge the emotional state of fashion students because they are students within an industry that is falling apart. That puts them under a great stress. This course is about future and hope – emphasise new ways things can be done. Hard skills: For the trainer, it is essential to have their own profile in OCA Platform and have the NFC tags. It is essential to have worked with these before running the workshop.

4.WP6 Integration with Pilot Ecosystems as Learning Communities

CRAFT-IT4SD is with WP6 Learning Communities dedicated to advancing cross-sectoral Learning Ecosystems within the area of CCSI (Cultural and Creative Sector and Industries). During 1st pilot iteration a collaborative learning community was developed with contributions from partners and pilots, which were communicated on LinkedIN.

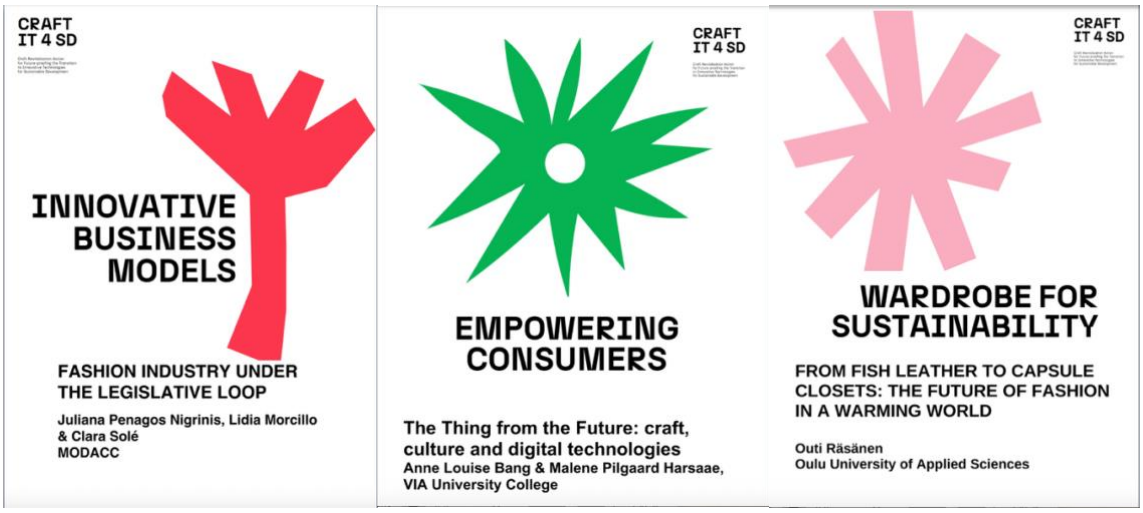

Figure 13 A small sample of blog-publications for the LinkedIN Learning Community

This learning community, going beyond CRAFT-IT4SD already leverages insights and results from the pilot programmes, and the pilot programmes have – during their activities, with documentation and reports – additionally contributed workshop designs, practice documentation and creative productions which will be implemented into the comprehensive learning service, which will offer interactive training content within micro-credential-based curricula. Additionally, after each iteration of the four

pilots, comprehensive training sessions are designed to share *best practices* and encourage a vibrant atmosphere of *peer learning* across the ecosystems and beyond.

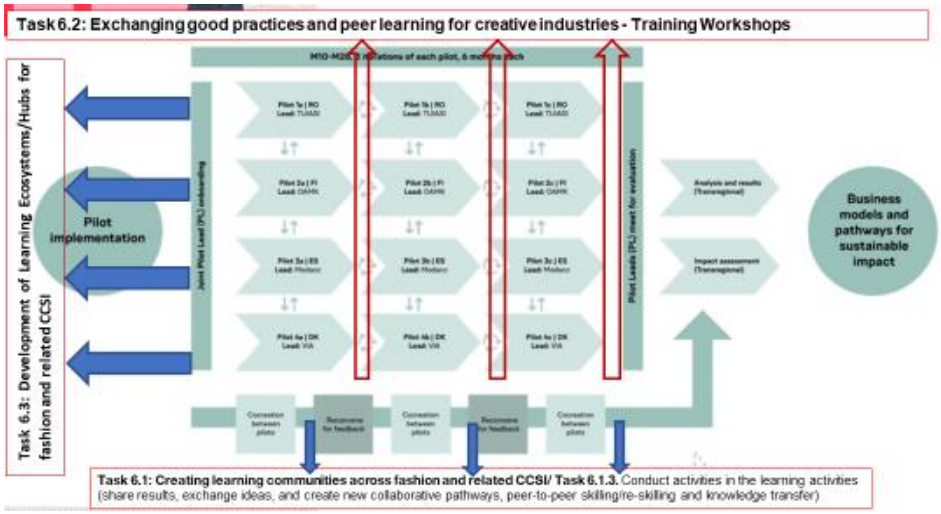

Figure 14 Ecosystems as Learning Communities (WP6)

The Learning Community-initiative (WP6), where participants will engage in meaningful learning experiences, enhancing their skills and competencies in an evolving job market, will to a maximum degree build on the well designed and knowledge based programmes with the four CRAFT-IT4SD pilots across their three iterations as the focus for the Pilot Learning Communities is on four dynamic areas within the pilots' ecosystems: *Innovative Business Models* to drive creativity and adaptability in various sectors, the *Wardrobe for Sustainability,* promoting environmentally friendly fashion choices and practices, *How to Empower Consumers,* equipping individuals with the knowledge and skills necessary to make informed choices, and finally the key subject of *Crafts and Emerging Technologies,* fostering a synergy that enhances traditional techniques with modern advancements.

The pilot contributions for the Learning Community, also reported in the Pilot Reporting Template, will have an uptake with T6.3. (August 2025) and be integrated into D6.2. The Final Report on Learning Ecosystems.

5.Pilot Contributions towards Impact Pathways and KPIs

The four CRAFT-IT4SD-pilots, the actions conducted through their three iterations and the results created, are key to the three main expected impact pathways identified by the CRAFT-IT4SD toward short-, medium- and long-term impact:

- Enhanced and updated understanding of CCSIs in sustainable climate transition;
- Research and knowledge-based approach(es) to CCSIs in driving a sustainable climate transition;
- Contributions to support CCSIs in climate transition in line with the 2030 goals.

The three pathways for impact link to specific UN Sustainable Development Goals, and in Fall 2024 CRAFT-IT4SD made the recommendation of adding SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) regarding *the value chains, up- and downstream, for fashion and textile,* and SDG 17 (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development) *with reference to the multi-helix ecosystems of the 4 CRAFT-IT4SD-pilot ecosystems.*

Continuous reporting and communication of the four pilots' activities and progress across the three iterations are seminal to the direction and implementation of CRAFT-IT4SD approaches and measures; the pilot reports also contribute to a preliminary assessment of the impact to be expected from in the four pilot sites and their reported results (outputs and outcomes).

For the 1st pathway to impact identified by CRAFT-IT4SD, *Enhanced and updated understanding of CCSIs in sustainable climate transition* which aims at securing the knowledge-based sustainable climate transition supporting CCSI ecosystems created via the 4 CRAFT-IT4SD-pilot sites, the 1st pilot iterations shows systematic actions on the regional level to increase the understanding of CCSI business models in the context of sustainable climate transition by investigating business models' current state, future development, aspirations and alternatives, and business challenges and opportunities identified in relation to sustainable climate transition in and across the four pilot sites.

These actions with the 1st pilot iteration specifically target the UN Sustainable Development Goals 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, and 12: Ensure sustainable consumption and production patterns for short-term impact, which has been identified as strengthening the regional sustainable climate transition through CCSI ecosystems and expanding sustainable climate transition beyond the CCSI sector and the regional level.

For the 2nd pathway to impact identified by CRAFT-IT4SD, *Research and knowledge-based approach(es) to CCSIs in driving a sustainable climate transition,* which aims at *securing practical tools and skills to drive sustainable climate transition in the pilots,* the 1st pilot iteration show systematic and engaging approaches in providing knowledge- and practice-based approach(es) by bringing enhanced understanding of how the CCSI, from a cultural point of view and relating to the role of heritage and craft, act as drivers in the green transition. Also, for micro and small companies, the 1st pilot iterations contributed science- and technology-based knowledge to enable sustainable business activities and product and service development.

These actions with the 1st pilot iteration specifically target the UN Sustainable Development Goal 12, targeted for the 2nd impact pathway: Ensure sustainable consumption and production patterns, and contribute to the short-term impact identified as understanding how crafts, digital technologies and climate sustainability combine with garment design approaches, leading to value-added design products building on sustainable climate measures and enabling circular business models through the integration of digital tools and co-creation/co-design.

For the 3rd pathway to impact identified by CRAFT-IT4SD, *Contributions to support CCSIs in climate transition in line with the 2030 goals,* which aims at identifying climate hotspots to enable making concrete GHG emission reduction plans in the pilot ecosystems, supporting the CCSI in the climate transition by increasing the understanding of new business models for the green transition of and across the CCSI sectors, the 1st pilot iteration provided new knowledge of the economic aspects of the sustainable climate transition, enabling new business models and developing best practices for upskilling and reskilling. Pilot actions also created and showcased initiatives for co-developing/co-designing products and services with the use of digital technologies and for a circular economy.

These actions with the 1st pilot iteration specifically target the UN Sustainable Development Goal 11, targeted for the 3rd impact pathway: Make cities and human settlements inclusive, safe, resilient and sustainable, and contribute to the identified short-term impact to secure future-proof, economically viable, climate-friendly business models for CCSI micro companies and SMEs in broader ecosystems, enhancing the understanding of and skills for green technologies and digital capabilities of business practitioners, designers and entrepreneurs operating in CCSI and related sectors.

6.Concluding Remarks

This Initial Report of Pilots, with detailed reports from the four CRAFT-IT4SD pilots on 1st iteration actions and engagements, honours the engaged, creative and systematic work performed in the four pilot sites and with the local ecosystems. The Initial Report builds on descriptions and documentation provided by the individual pilots in the Pilot Reporting Template, and by choice also lends space to the particular voices of the four pilots in reporting. The report also covers how the pilots interacted with CRAFT-IT4SD partners beyond WP4 and specifically points to the strong integration of pilot activities (WP4) with the CRAFT-IT4SD (WP6) Learning Communities. The report also makes a preliminary assessment of what impact can be expected from the 1st iteration of the four pilots, locally in the pilot ecosystems, and across the CRAFT-IT4SD pilots, on a European level. Updating the identified three CRAFT-IT4SD impact pathways will continue with the Interim Report of Pilots (D4.3.) and the Final Report of Pilots (D4.4.), which will provide the overall and transferable results from the CRAFT-IT4SD pilot and pilot ecosystem operations, including a process for validation and evaluation of impact measures and KPIs.

Annex to Initial Pilot Report
Pilot Reporting Template

Pilot Reporting Template

Document Information

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(*) Dissemination level: (PU) Public, fully open, e.g., web (Deliverables flagged as public will be automatically published in CORDIS project's page). (SEN) Sensitive, limited under the conditions of the Grant Agreement. (Classified EU-R) EU RESTRICTED under the Commission Decision No2015/444. (Classified EU-C) EU CONFIDENTIAL under the Commission Decision No2015/444. (Classified EU-S) EU SECRET under the Commission Decision No2015/444.

The Pilot Reporting Template (with Annexes) will provide information, knowledge, good practices, recommendations from the 4 CRAFT-IT4SD Pilots and their activities during pilot iterations, towards WP4 (Pilot Coordination) and towards WP6 (Skills and Learning Communities).

The Pilot Reporting results will be integrated with WP4 Deliverable 4.2., and there will be an uptake of good learning practices and recommended learning activities and processes from the 4 Pilots in WP6, Task 6.1 (Creating a Learning Community), Task 6.2. (Exchanging Good Practices and Peer Learning), Task 6.3. (Development of Learning Ecosystems and Hubs), and finally for Task 6.4. (Develop a Playbook of Good Practices for Emerging Skills).

For reporting, please work directly in the template, save with the pilot's name and number (e.g. Pilot 1, Moldavia, Romania) and pilot iteration (e.g. 1. Iteration, month-month/year), and share in PDF.

1.Introduction

This section provides a short introduction to the pilot, its overall scope and iterative approach with a focus on the the 1st pilot iteration and a short description of activities conducted.

Please, include

- Overall Pilot Scope (the title of your pilot + short description)
- 1.Iteration-Piloting: Objectives and Aims
  (you may provide also an overview of Iteration 2+3 for context)
- Describe 1. Iteration Piloting Activities
  (design of iteration and list of activities are under 3.0)

2.Participants

This section provides an overview of the ecosystem stakeholders and learning community activated during the pilot iteration, of how this iteration maps towards the pilot's ecosystems and towards the entire CRAFT-IT4SD multi-stakeholder ecosystem.

Please, additionally

- Present the Pilot Team in charge of piloting activities
- Give an overview of partners (organisations, industry etc.) if applicable, and participants (Students, Company representatives, Artisans and Crafts-people, Policy makers, Experts) in the pilot activities
- List of partners and participants (Annex 3)
- List of Pilot Team members (Annex 4)

3.Formats, Setting, Process

This section provides an account of how the piloting was designed and conducted; each stage is presented (what, who, how) and accompanied by documentation (selected images, links for videos etc)

Please, additionally include

- an overview of Data Collection and Analysis, towards Sustainability Measures)
- an overview of technologies applied and tested
- a short assessment of ethics challenges if any, e.g. data sharing, ownership and heritage communities, applying technology to crafts

- Include in Annexes
  1) Communication of piloting activities (Annex 1)
  2) List of workshops, webinars, labs etc. with links to agendas uploaded in Sharepoint (Annex 2)
  3) (Select) workshop presentations (Annex 5)

- For WP 6: Provide an overview of contributions made for The Learning Community (LinkedIN and Website entries listed in Annex 8)
- WP6: Provide a case-description of the selected WP6 Learning Workshop, with agenda, documentation and presentations (Annex 9)

4.Student, Company, Artisan & Craft Projects

This section provides an overview of projects generated during the piloting, e.g. student projects generated during or after the piloting, artisans' contributions inspired by piloting, and company conducted projects inspired by piloting

- Include if applicable, an overview of projects (e.g. concepts, prototypes, presentations etc.) developed by piloting participants' groups: Students, Company representatives, Artisans and Crafts People (Annex 6)
- For WP6: Select documentation for WP6 Learning and Course Development (Highlight in Annex 6)
-

5.Feedback and Evaluation

This section includes an overview of participants' feedback, suggestions, and recommendations, based on feedback sessions and evaluation forms completed by participants.

- Include evaluation documentation in Annex 7

6.Concluding Remarks

This section includes concluding insights on the piloting, whether the piloting activities met the overall objectives and scope of the pilot iteration, which challenges and successes were met during the iteration, and how the iteration bridges into the next pilot iteration and what insights the piloting brought for cross-piloting activities

- For WP6: Include specific insights and recommendations on Learning Material to be used for WP6-course development

7.List of Annexes

1. Documentation for Communication / Advertising of Piloting Activities (links)
2. List of Workshop, Webinar, Labs. etc. Links for Agendas
3. List of participants for each activity
4. List of Pilot Team Members
5. Presentations made during the activities (list of presentations, links to (select) presentations in pdf in Sharepoint)
6. Participants' Projects (Case-template + images, videos, presentations)
7. Feedback forms / results per activity (include sample results)
8. Documentation of contributions for the Learning Community (WP6)
9. Case-documentation of Learning Workshop (WP6)

Annex 1: Communication / Advertising of Piloting Activities

Date	Title	Communication Channel(s)	Reach of Communication

Annex 2 Workshops, Webinars, Labs (+ links to agendas)

Date	Title + link to agenda uploaded in Sharepoint	Event format (workshop, webinar, lab, or other)	Location (online/onsite)

Please, upload agendas and other documentation in Sharepoint (Pilot Name/Number Folder) if applicable, and create link in template

If you want to highlight an activity beyond the WP6 Selected Workshop (T6.2), please feel free to use the template in Annex 9

Annex 3: Participants lists Workshops, Webinars, Labs (+ links to agendas)

ACTIVITY TITLE
Date, Venue

Name, Surname	Organisation / Study Programme	Occupation / Study Level

Name, Surname	Organisation / Study Programme	Occupation / Study Level

Please, expand and repeat for each piloting activity

Annex 4 Team Member List

ACTIVITY TITLE
Date, Venue

Name, Surname	Organisation	Occupation

Name, Surname	Organisation	Occupation

Please, repeat for each piloting activity if the team had changing team members

Annex 5: List of (select) presentations from the piloting activities (link to presentations uploaded in Sharepoint)

ACTIVITY TITLE		
Date, Venue		
Presenter	Title	Link to presentation (if applicable)

Please, repeat for each piloting activity
WP6: Please, highlight material you would like to include as learning material in curricula for micro courses

Annex 6: Participants Projects

PROJECT TITLE	
PROJECT TEAM: COMPANY, STUDENT GROUP, ORGANISATION	
Contact Person (name and contact info)	
Describe the Project (max 500 characters)	
Experimentation / Investigation	
Collaboration, e.g. with company, pilot team, student group or other (if applicable)	
Preliminary Results	
Insights & Learnings	
Future Scope (if applicable)	
Sustainability Measures Applied	
Craft Techniques Applied	
Technologies Applied	
Business Model Applied	
Organisational Date	Name of Organisation / Company Links to Website / SoMe

Documentation (if applicable): Images, Visualisations, Links to videos etc. Please, add captions

Please, repeat the Case-template if applicable
For WP6: Please, keep in mind that projects could become case-studies for micro courses, and highlight such cases

Annex 7: Feed Back/Evaluation Documentation

ACTIVITY TITLE
Date, Venue
Include Sample Results from Feed Back/Evaluation Forms

Annex 8 (WP6): List of Contributions for the Learning Community

Date of Publication (LinkedIn) and link to website	Authors	Title	Reach of Publication

Please, feel free to expand if applicable

Annex 9 (WP6): Documentation for the Selected Learning Workshop (T6.2.)

WORKSHOP TITLE	
DATE/VENUE	
Contact Person from Pilot Team (Name and contact info)	
Describe the workshop and the workshop format (max 500 characters)	

Experimentation / Investigation conducted	
Crafts techniques applied	
Technologies applied	
Business Models tested	
Sustainability Measures applied	
Number of Participants	
Stakeholder group(s): who participated?	
Preliminary Results	
Insights & Learnings	
Future Scope and Recommendations for Including the Workshop as Learning Material	
If Recommendations for Interactive Learning Objects, please add	

Please, share documentation:

Images and visualisations
Links to videos, to presentations, process documentation (miro board, Trello board etc.)
Please, add captions

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