

ERASMUS+ · IMASUS

// Workshop Guide

Imagining the Textile Industry We Want

Programme

Erasmus+ · Imagineering Sustainability (IMASUS)

Format

Webinar (~2 hours) + In-person full day (~7 hours)

Participants

~20 VET/FP students per location (18–25) · Textile and fashion background

Partners

Spain — Munkun (Zaragoza) · Italy — Lottozero (Prato) · Greece — ECHN (Athens)

Language

English

About This Guide

This document is the facilitation guide for the IMASUS Workshop — Imagining the Textile Industry We Want. It is addressed to the partner organisations running the workshop across three locations: Munkun (Zaragoza, Spain), Lottozero (Prato, Italy), and ECHN (Athens, Greece).

The workshop uses Imagineering — a complexity-informed design methodology developed by Diane Nijs at Breda University of Applied Sciences — as its core approach. Imagineering moves beyond conventional problem-solving to generate collective creation: the co-design of new realities through shared vision and emergent action.

This guide covers:

- The three-part knowledge base participants work from
- Session 1: Webinar (~2 hours) — full facilitator script and supporting notes
- Session 2: In-person full day (~7 hours) — module-by-module facilitation guide
- Challenge Cards — the full deck of industry challenges
- Outputs, documentation, and adaptation notes for each partner

The guide is a template. Each partner adapts it to their local context — language, case studies, physical materials available — while keeping the Imagineering structure intact.

EU Funding and Licence



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Overview

The workshop moves participants through three design spaces drawn from the Imagineering Systemic Design Approach:

Design Space	What happens here
Inspiration	A-ppreciating + B-reathing: understanding the existing system and its generative potential
Ideation	C-reating: formulating a Creative Tension Engine — a shared vision that reframes the challenge
Implementation	D-eveloping: translating the vision into a concrete, open-format proposal

The two sessions map onto these spaces:

- The Webinar covers A-ppreciating — building shared knowledge and surfacing what already gives the group energy
- The In-person day covers B-reathing (systems mapping), C-reating (Creative Tension Engine), and D-eveloping (concrete proposal)

Knowledge Base

All three resources below are accessible through the IMASUS app. Together they give participants what most design education lacks: a scientifically grounded, practice-connected, and industry-informed starting point.

1. IMASUS Materials Database (CSIC/INMA)

A curated scientific reference of innovative sustainable textile materials, characterised by researchers at the Consejo Superior de Investigaciones Científicas (CSIC) using an ESEM/QUANTA LMA instrument. This is the most novel element of the IMASUS app — a scientific characterisation resource designed specifically for design education.

Each entry includes material origin, properties, applications, availability, and — critically — SEM/ESEM micrographs capturing the material's structure at microscopic level. These images are a unique resource: they make material properties visible and tangible in a way no commercial catalogue does.

The database currently covers approximately 40 materials across these categories:

- Plant-based fibres (cypress, kapok, hemp, pineapple, orange, seaweed-derived)
- Fungal and mycelium materials (MuSkin, MyFi)
- Recycled feedstocks (CIRCULOSE, OnceMore, Econyl, recycled nylon from fishing nets)
- Bacterial cellulose
- Protein fibres
- Lyocell and next-generation cellulose (TENCEL)

// SEM micrograph metadata includes: acceleration voltage (HV in kV), magnification, spot size, working distance (WD), detector type (LFD — Large Field Detector), chamber pressure (Pa, confirming variable pressure / environmental SEM mode), horizontal field width (HFW), scale bar, and instrument name. All metadata is standardised and scientifically validated.

2. IMASUS Training Modules

Four practice-oriented learning modules developed by Lottozero textile laboratories. Each covers a core sustainable design strategy through theory, a real-world case study, and a practical toolkit activity.

Module	Focus area
Zero Waste Design	Patternmaking, cutting logic, material efficiency
Design for Recyclability	End-of-life thinking, fibre science, disassembly
Design for Modularity	Interchangeable components, repair, extended use
Design for Longevity	Physical, emotional, and cultural durability

3. IMASUS Industry Challenges

Findings from research conducted with universities, creative hubs, and industry networks across Europe — identifying the real tensions practitioners face. These findings are translated into the Challenge Cards used to form teams for the in-person session.

Session 1 — Webinar

Duration: ~2 hours **Format:** Online (video call with breakout room capability)

Tools: Slides · Collaborative board (Miro or equivalent) · IMASUS app access

The webinar builds shared knowledge, activates appreciative thinking, and forms the challenge groups before the in-person day.

Before the Webinar

Preparation Checklist

- ☐ Send participants the IMASUS app link and access credentials at least 3 days before
- ☐ Share the four Training Modules as pre-reading (optional, not required)
- ☐ Prepare the collaborative board with the Appreciating map template
- ☐ Prepare the Challenge Cards deck (digital version) — share in chat at the end
- ☐ Test breakout room setup (4–5 people per room)
- ☐ Have case study visuals ready: Holly McQuillan, Rifò Lab, Flavia La Rocca / A-POC, Petite Pli

Setting the Right Tone

This webinar is not a lecture. The goal is to generate curiosity and a first sense of collective ownership over the challenge. Participants should leave with one idea they find inspiring and one challenge they want to explore. Keep energy high, avoid dense slides, and make room for responses.

Part 1 — The Four Lenses (60 min)

Introduction (5 min)

SCRIPT

"Welcome to IMASUS — Imagineering Sustainability. Over the next two sessions we're going to do something that's easier said than done in fashion education: we're going to stop talking about what's wrong with the industry and start building what we want it to become."

Today we're going to look at the system through four different lenses. Each one points to a place where the textile industry could be radically different — and where some people are already making that difference.

You don't need to take notes. You need to pay attention to which lens makes you feel something."

NOTE

Pause briefly after the last sentence. Let it land.

Lens 1 — Zero Waste Design (12 min)

THE TENSION

"In conventional garment production, between 15 and 30% of the fabric never makes it into a finished garment. It ends up on the cutting room floor — offcuts, scraps, unusable pieces. This isn't

a marginal inefficiency. At scale, across the global textile industry, it represents an enormous loss of water, energy, land, and labour. And here's the thing: it's not inevitable. It's a design choice."

HISTORICAL ANCHOR

"The Japanese kimono uses zero fabric waste. It's constructed entirely from straight rectangular panels cut directly from the bolt width — no curved cutting, no offcuts. The dimensions of the fabric determine the dimensions of the garment. It's a centuries-old system that solved a problem the fashion industry still hasn't solved at scale."

CASE STUDY — HOLLY MCQUILLAN

*"Holly McQuillan is a New Zealand designer and researcher who has spent decades proving that zero waste is not just possible but generative — that the constraint of using every centimetre of fabric actually produces more interesting, more intelligent garment design. Her work, documented in *Yield: Making Fashion Without Waste*, combines zero-waste patternmaking with digital tools and systems thinking."*

QUESTION TO CARRY

"If waste is a design decision, what would it mean to design it out from the start?"

NOTE

Show one strong image — the kimono construction diagram and one McQuillan garment side by side works well. Keep slides minimal.

Lens 2 — Design for Recyclability (12 min)

THE TENSION

"Less than 1% of textiles are recycled into new clothing. Every year, approximately 92 million tonnes of textile waste are produced globally — that's a truckload of clothing landfilled or incinerated every second. Meanwhile, more than 97% of fibre inputs come from virgin resources. The system is almost entirely linear."

THE STRUCTURAL CAUSE

"The reason recycling rates are so low is not consumer behaviour — it's design. Most garments are made from fibre blends, treated with dyes and finishes, and assembled with trims and components that make them impossible to separate at end of life. Recyclability is determined at the design stage. By the time a garment reaches a recycling facility, it's often already too late."

CASE STUDY — RIFÒ LAB, PRATO

"Rifò Lab, based in Prato — Italy's historic textile recycling district — has built an entire brand and supply chain around regenerated fibres. They design garments from the outset with end-of-life recovery in mind: mono-material construction, simplified trims, documented material flows. Prato has been recycling textiles since the 19th century. Rifò Lab is taking that industrial heritage and turning it into a contemporary design practice."

REGULATORY CONTEXT

"The EU Strategy for Sustainable and Circular Textiles mandates that textile products sold in the EU must be durable, repairable, and recyclable by 2030. Extended Producer Responsibility policies are already in effect in several member states. The industry will need designers who know how to do this."

QUESTION TO CARRY

"If you designed a garment today knowing exactly how it would be recovered five years from now, what would you do differently?"

Lens 3 — Design for Modularity (12 min)

THE TENSION

"We discard garments long before they wear out. Trend cycles, changing tastes, a single element that fails — and the whole garment goes. What if garments were designed to be reconfigured rather than replaced?"

HISTORICAL ANCHOR

"Modular clothing has a long history. In Renaissance Europe, detachable sleeves and collars allowed single garments to be completely transformed. In the Victorian period, interchangeable bodices and skirts multiplied the wardrobe without multiplying the fabric. Modularity was born from material scarcity. We've forgotten it in the age of cheap production."

CASE STUDY — A-POC + FLAVIA LA ROCCA

"In 1997, Issey Miyake and Dai Fujiwara launched A-POC — A Piece of Cloth. A continuous textile tube from which wearers could cut their own garments, customising shape with minimal waste. It was simultaneously a zero-waste construction, a modular system, and a design philosophy: the garment is never finished until the wearer decides it is. More recently, Flavia La Rocca has built a brand around modular fashion as circularity — garments with interchangeable components, designed for repair, transformation, and extended life."

QUESTION TO CARRY

"What if the most sustainable garment was the one that never needed to be replaced — because it could always become something else?"

Lens 4 — Design for Longevity (12 min)

THE TENSION

"Most garments are not discarded because they are broken. They are discarded because we stop caring about them. The problem of textile waste is not only technical — it is cultural and emotional. We have been trained to see clothing as disposable."

THE THREE DIMENSIONS

"Longevity in garment design operates at three levels: physical resistance — the garment that withstands wear, washing, time; adaptability — the garment that grows with the wearer, adjusts to different bodies, different contexts; and emotional durability — the garment that accumulates meaning, that we repair because we care about it, that we pass on rather than throw away."

CASE STUDY — PETITE PLI

"Petite Pli designs children's clothing that grows with the child through pleated structures that expand across multiple size stages. A single garment replaces what would otherwise be four or five purchases. The environmental logic is simple: extending the useful life of a garment is one of the highest-impact interventions available in fashion. But Petite Pli also understood the emotional dimension — parents bond with the garment because it becomes part of the child's story."

QUESTION TO CARRY

"What would it mean to design a garment that someone would want to keep for ten years?"

Transition (5 min)

SCRIPT

"Four lenses. Four places where the industry could be different. Four places where some people are already making it different."

"None of these approaches is a silver bullet. Zero waste design doesn't solve recyclability. Modularity doesn't solve longevity. These are complementary strategies, and the most interesting work happens at their intersections."

"Now I want to hear from you."

Part 2 — A-ppreciating (30 min)

This section activates the first step of the Imagineering Systemic Design Approach: discovering what is already generative in the system. The goal is not to identify what's wrong — that's already clear — but to surface what gives participants energy and hope.

Setup (3 min)

Open the collaborative board and share the screen. The board has four columns, one for each lens, and a central space for cross-cutting observations.

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"I'm going to open a shared board. You'll see four areas, one for each lens we just discussed. I want to ask you a simple question:

Which of these four lenses resonates most with you — and what example from your own context gives you hope?

It doesn't have to be a big initiative. It could be a brand you admire, something you saw a teacher do, a tradition from your region, something you've tried yourself. Write it on the board under the lens it belongs to. Take 3 minutes."

Breakout Rooms (15 min)

Divide into groups of 4–5. Each group discusses:

- What did they put on the board and why?
- What do these examples have in common?
- What feels most urgent to them personally?

N
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A support facilitator joins one breakout room.

The lead facilitator stays in the main room and reads the board contributions while groups are talking, preparing to synthesise.

Synthesis in Plenary (10 min)

Bring everyone back. Lead facilitator synthesises what appeared on the board:

- What patterns emerged? Where did responses cluster?
- What surprised you?
- What does this tell us about where energy exists in this group?

S
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I
P
T

"Look at this board. This is what you brought to the room. These are not problems — they are starting points. This is what we call appreciating: finding the generative core of the system, the places where something is already trying to become different.

The in-person session will start from here."

Pre-work Assignment (5 min)

SCRIPT

"Before we meet in person, there's one thing I need you to do. I'm going to share a set of Challenge Cards in the chat now. These are challenges derived from research with industry, educators, and practitioners across Europe — the real tensions the sector is facing.

Read through them and choose one — the one that connects most directly to what you care about, what you've seen, what you want to work on.

Then write one paragraph answering this:

I want to work on [this challenge] because [something from my own experience or context].

Send it to [facilitator email / submit via IMASUS app] before [date]. We'll use your responses to form the teams for the in-person session. There are no wrong answers. The only wrong answer is not sending it."

NOTE

Share the Challenge Cards link in the chat.
Confirm the submission deadline and method.
Allow time for questions.

Closing (2 min)

SCRIPT

"That's the webinar. Before the in-person session, go and look at the IMASUS app — the materials database, the training modules, the industry report. Not to study. Just to let things connect.

We'll see you in [city] on [date]. Come ready to make something."

Facilitator Notes: Common Situations

If the breakout discussion is slow to start

NOTE

Prompt with: "Start with the thing you put on the board. Tell the group why you chose that example, not why it's important in general — why it matters to you."

If participants want to debate which approach is 'best'

NOTE

Redirect: "We're not choosing sides today. We're building a map of what's possible. All four lenses are part of the same system."

If the Appreciating exercise surfaces frustration or cynicism

NOTE

Don't suppress it. Acknowledge it: "That frustration is information. It tells us something about where the system is stuck. Hold onto it — it will matter in the in-person session."

Then steer back: "But even in a stuck system, there are exceptions. What's one exception you've seen?"

If technical issues interrupt breakout rooms

NOTE

Fall back to the main room and run the discussion in plenary with direct questions to individuals.

Session 2 — In-person Day

Duration: ~7 hours **Format:** In-person, full day

The in-person session moves from understanding the system to proposing a change. Each team produces a concrete output and a Creative Tension Engine.

Time	Session block
09:00 – 09:30	Opening (30 min)
09:30 – 10:45	Module B — Breathing (75 min)
10:45 – 11:00	Break
11:00 – 12:30	Module C — Creating (90 min)
12:30 – 13:15	Lunch
13:15 – 15:15	Module D — Developing (120 min)
15:15 – 15:30	Break
15:30 – 16:30	Final Pitches + Collective Closing (60 min)

Opening (30 min)

Synthesis of what emerged in the webinar and in the pre-work submissions. Introduction of the day's structure and the Imagineering frame.

S C R I P T	<i>"Today we are not fixing problems. We are designing for emergence."</i>
	<i>What you sent us in your pre-work told us something: [share 2–3 observations from the submissions — recurring themes, interesting tensions, surprising responses].</i>
	<i>We've used those responses to form your teams. Your team is built around a shared challenge — not a shared answer, but a shared question. You'll spend today turning that question into something real."</i>
N O T E	Reveal teams. Give 5 minutes for teams to find each other, introduce themselves, and confirm they're working on the right challenge.

Module B — Breathing (75 min)

IMAGINEERING STEP B

Understanding the bigger picture through systems thinking.

Teams map the textile system from the perspective of their chosen challenge, using the System Frame tool. The Ellen MacArthur Foundation Butterfly Diagram provides a shared visual reference for the circular loops at play.

Each team produces a system map that identifies:

- The key actors in the system
- The current flows (materials, money, information, power)

- The leverage points where change could generate movement

NOTE

Circulate between teams. Your role is not to validate their maps but to ask questions that push deeper:
"Who benefits from the current system staying as it is?"
"Where does this flow come from? Where does it go?"
"What's the smallest change that would have the biggest effect?"

System Frame Tool

The System Frame is a structured mapping exercise adapted from Imagineering Chapter 6 (Wanderley & Campos). It asks teams to work outward from their challenge:

- Core: the specific challenge they are addressing
- Inner ring: the actors directly involved (who makes decisions? who is affected?)
- Outer ring: the structural forces shaping the system (regulations, economics, culture, technology)
- Leverage points: where could a small change ripple outward?

NOTE

Large-format paper works best for this. Digital equivalent: Miro or FigJam.

Module C — Creating (90 min)

IMAGINEERING STEP C

Formulating the Creative Tension Engine.

The Creative Tension Engine (CTE) is the core conceptual tool of Imagineering. It is not a problem statement. It is not a solution. It is a reframing — an evocative description of a different reality that creates energy and draws people toward it.

The CTE has three elements:

- Name — an evocative, memorable phrase that reframes the challenge
- Promise — what this change makes possible for people in the system
- Principle — a simple rule that guides decentralised decisions

NOTE

The Fashion District Arnhem is the most direct textile precedent for the CTE. Share it as an example before teams begin.
Warn against descriptions of solutions ('we will build a app') — the CTE should describe a different reality ('a textile system where...'), not a project.

Cross-group Feedback Round (20 min)

Each team presents their CTE draft in 3 minutes. Other groups respond with one question each — not critique, but genuine curiosity:

- "What would make me want to be part of this?"
- "What does this make possible that didn't exist before?"

NOTE

Keep the round moving. 3 min presentation + 2 min questions per team, strictly timed.

Module D — Developing (120 min)

IMAGINEERING STEP D

Making the vision real, involving others.

Teams develop a concrete proposal starting from their CTE. The format is deliberately open — it can be a garment, a campaign, a manifesto, a process, a guide, or a service. The criterion is not completeness but generativity: does it move something? Does it invite others to join?

Available Resources

All of the following are available through the IMASUS app and the physical materials station:

- IMASUS Materials Database — participants can browse the CSIC-characterised materials and their micrographs. A proposal that invokes a specific material should be able to point to a specific entry in the database.
- Industry Challenge Cards — the full deck is available for cross-referencing, so teams can see how their challenge connects to the broader landscape of industry needs.
- Training Module toolkit activities: Recyclable Redesign Challenge (recyclability) · Modular Wardrobe Remix Challenge (modularity) · Redesign an Old Garment (longevity) · Zero Waste patternmaking exercises (zero waste)
- Physical and digital materials station — physical samples where available per location
- IMASUS app — used to document work in progress as a combined log and portfolio

NOTE

Facilitators circulate as coaches, not evaluators.

If a team is stuck, ask: "What would need to be true for your CTE to be real? What's the smallest version of that?"

If a team is too abstract, ask: "Can you show me where in the Materials Database you'd start?"

Final Pitches + Collective Closing (60 min)

Pitches (40 min)

Each team presents in 5 minutes. The audience responds not with grades but with one question:

"What would make me want to be part of this?"

NOTE

5 min per team is strict. Use a visible timer.

Invited guests (industry practitioners, educators) may attend this segment — confirm with each partner location.

Individual Closing (20 min)

Each participant writes or draws their next step — one concrete action they will take in the next two weeks. These are collected digitally through the IMASUS app as part of the project's WP3 output and feed into the WP4 Methodology Toolkit.

SCRIPT

"Before you leave: write down one thing. Not a goal, not a project — one action. Something concrete you will actually do in the next two weeks because of today."

It can be small. It should be real."

Challenge Cards

The Challenge Cards are derived from the IMASUS Training Modules and Industry Needs Report. They translate the industry research into design challenges accessible to VET/FP students. Cards are used in the webinar pre-work assignment to form teams for the in-person session.

There are 10 cards across four categories: Material, Design, System, and Business.

Material Challenges

C1

Material
I

Most garments use fibre blends that make recycling technically impossible. How do you design for mono-material construction without sacrificing aesthetics?

C2

Material
I

Sustainable materials are significantly more expensive than conventional alternatives. How do you make circular design accessible to small producers and emerging designers?

C3

Material
I

The industry lacks a reliable, accessible database of verified sustainable materials. How do you help designers find and choose materials they can trust?

Design Challenges

C4

Design

15–30% of fabric is wasted at the cutting stage. How do you redesign the patternmaking process to eliminate pre-consumer waste?

C5

Design

Most garments are discarded before they wear out. How do you design for emotional attachment and longevity?

C6

Design

Garments are rarely designed with end-of-life in mind. How do you integrate recyclability and disassembly into the design process from the start?

System Challenges

C7

System

Universities and industry operate in separate silos. How do you build knowledge-sharing infrastructure that connects research with practice?

C8

System

Circular economy principles are well understood theoretically but rarely implemented at scale. How do you bridge the gap between pilot projects and mainstream adoption?

C9

System

Consumers are often unaware of what their clothes are made of or where they go at end of life. How do you design transparency and traceability into the garment itself?

Business Model Challenges

C10
Busine
ss

The economic incentives of fast fashion make it structurally cheaper to produce waste than to design it out. How do you build a business model that makes sustainability financially viable?

Outputs and Documentation

All outputs are logged through the IMASUS app, which serves as both a portfolio for participants and a data source for the project's ongoing deliverables.

Output	Session	App entry	Feeds into
Pre-work submission (Challenge Card + paragraph)	Webinar	Log entry	WP3 · Team formation
System map	In-person, Module B	Photo/diagram upload	WP3 · Workshop Report
CTE formulation (name + promise + principle)	In-person, Module C	Structured form	WP4 · Methodology Toolkit
Final proposal	In-person, Module D	Open upload (any format)	WP3 · Prototype collection
Materials referenced	In-person, Module D	Links to Materials DB entries	CSIC Materials DB · WP4 Innovation Cards
Individual next step	Closing	Short text entry	WP3 · WP4

The connection between proposals and specific Materials Database entries is particularly valuable: it creates a traceable link between scientific characterisation (CSIC) and design application (participants), which directly informs future database development and the WP4 Materials Innovation Cards.

Adaptation Notes for Partners

Each partner adapts the workshop to their local context while keeping the Imagineering structure intact. The following notes apply to each location.

Spain — Munkun (Zaragoza)

Emphasis on technology and sustainability fusion. The digital tools and CSIC materials database are particularly foregrounded — CSIC's INMA institute is based in Zaragoza and is the scientific partner responsible for the Materials Database and micrograph library. This makes the connection between the scientific resource and its application especially tangible for Zaragoza participants.

Suggested local anchors: The workshop is hosted at HAC_R Creativo, a fashion design school. Two student groups participate: 4th-year students (Experimental Pattern Making) work hands-on with IMASUS materials to produce physical designs; 3rd-year students (Materials, Fibres and Textile Structures) engage with the theoretical content. Physical material samples from Revoltech have been confirmed for the session. The format may be expanded via open call to reach participants beyond the school group, including contacts from the CSFW Madrid conference (April 23).

Italy — Lottozero (Prato)

Emphasis on innovative textile solutions and circular economy, with the Rifò Lab case study (Prato) as a local anchor. Prato's industrial history as a textile recycling district gives the Recyclability lens particular resonance — participants are often already embedded in this ecosystem.

Suggested local anchors: The workshop is structured as an open call with reserved spaces for a fashion group Lauren has an existing relationship with. An external facilitator has been confirmed. Design professors from Milan campuses are being invited to ensure the methodology is transferable beyond the immediate group.

Greece — ECHN (Athens)

Emphasis on integrating traditional craftsmanship with sustainable practices. The A-ppreciating phase may draw on local textile heritage — Greek woven traditions, natural dye knowledge, regional craft networks — as a generative source.

Suggested local anchors: The workshop topic is traditional cultural and material heritage, which requires a different approach from Spain and Italy. Specific local external inputs are still to be confirmed by ECHN. Andrii expects everything ready and reported by the end of May.

Shared across all locations

All three sessions use the same Challenge Cards, the same IMASUS app, and the same Imagineering structure. Outputs from all locations feed into the same WP3 and WP4 deliverables, making cross-location comparison possible and enriching the shared evidence base.