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One solution to create business/incomes

for handicraft with waste from industry

Solution n. 2

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The content of this document is based on the results of work carried out by the SYMCRAFT project partners and by the companies, artisans, researchers, intermediary organisations and other stakeholders involved in the project activities. This work included the development and testing of project-specific artificial-intelligence-supported tools used to assist selected tasks such as structuring information, identifying potential matches, supporting idea generation and developing product concepts, digital twins or feasibility studies. AI-supported outputs were treated as working inputs and were reviewed, contextualised and, where applicable, validated by the responsible project partners and participating stakeholders. The authors and project partners remain responsible for the final content, conclusions and recommendations presented in this document.

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TABLE OF CONTENTS

CONTENT

1. EXECUTIVE SUMMARY	4
2. ABBREVIATIONS	5
3. INTRODUCTION AND OBJECTIVES	6
3.1 Background and scope	6
3.2 Target users and intended use	6
3.3 Objectives of Pilot Action 2	6
4. METHODOLOGY USED	7
4.1 Common transnational approach	7
4.2 Five-step methodology used in Pilot Action 2	7
4.3 Shared tool and standardised documentation	7
4.4 Circular Eco-Business Model Canvas structure	8
5. RESULTS OF IMPLEMENTATION	8
5.1 Partnership and output overview	8
5.2 Results by target group	8
5.3 Results by sector	9
5.4 Territorial scale and delivery formats	9
6. SUMMARISATION OF FINDINGS	9
6.1 Material and supply-side findings	9
6.2 Collaboration and governance findings	10
6.3 Market and commercial findings	10
6.4 Regulatory and awareness findings	10
7. EXAMPLES OF APPLICATIONS TO SPECIFIC PRODUCTS/SERVICES	10
7.1 Selection of industrial symbiosis and good practice examples	10
8. RECOMMENDATIONS	12
8.1 Engagement and facilitated matchmaking	12
8.2 Tool-enabled model development and follow-up	12
8.3 Intermediation, governance and regulation	12
8.4 Market access, branding and scaling	13
8.5 Cross-sector replication	13
8.6 Recommended six-output replication planning layer	13
9. CONCLUSIONS	13
10. ANNEXES	14
10.1 ANNEX 1. ECO-BMC TEMPLATE	15
10.2 ANNEX 2. ECO-BMCs OF THE SELECTED APPLICATIONS	16
A2.1 Austria — Summer caps from weaving offcuts	17
A2.2 Austria — 'Fat Yarn' from weaving selvages	18
A2.3 Slovakia — ART WORKS — rope-based visual installation	19
A2.4 Slovakia — ZERO-WASTE BAGS from deadstock textiles	20
A2.5 Czech Republic — Backpacks and bags from technical tarpaulins	21
A2.6 Czech Republic — Jute tablecloths and vegetable bags	22
A2.7 Slovenia — Sustainable denim conceptual collection	23
A2.8 Germany — Premium mushrooms on residual substrate	24
A2.9 Germany — Magaverde® digestate-fibre paper	25
A2.10 Hungary — Coffee-ground mushroom-growing block	26

A2.11 Hungary — Cherry-pit heat/cold therapy pillow	27
A2.12 Italy — Wood Stories premium stationery	28
A2.13 Italy — Soft Inside / RE-BOAT material applications	29
A2.14 Italy — Composite decorative tiles	30
A2.15 Croatia — Laser-engraved wooden souvenir coasters	31
A2.16 Croatia — Decorative candleholder sets	32

10.3 ANNEX 3. REPLICATION GUIDELINE FOR SOLUTION 2 **32**

LIST OF FIGURES

Figure 1. ECO-BMC template	15
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LIST OF TABLES

Table 1. Abbreviations used in Solution n.2	5
Table 2. Five-step methodology implemented in Pilot Action 2	7
Table 3. Circular Eco-Business Model Canvas blocks and completion questions	8
Table 4. Textile-sector industrial-symbiosis and good-practice examples	10
Table 5. Agro-food-sector industrial-symbiosis and good-practice examples	11
Table 6. Wood-and-furniture-sector industrial-symbiosis and good-practice examples	11
Table 7. Annex 2 index of source-aligned Eco-BMC profiles	16
Table 8. Eco-Business Model Canvas — Austria: Summer caps from weaving offcuts	17
Table 9. Eco-Business Model Canvas — Austria: 'Fat Yarn' from weaving selvages	18
Table 10. Eco-Business Model Canvas — Slovakia: ART WORKS — rope-based visual installation	19
Table 11. Eco-Business Model Canvas — Slovakia: ZERO-WASTE BAGS from deadstock textiles	20
Table 12. Eco-Business Model Canvas — Czech Republic: Backpacks and bags from technical tarpaulins	21
Table 13. Eco-Business Model Canvas — Czech Republic: Jute tablecloths and vegetable bags	22
Table 14. Eco-Business Model Canvas — Slovenia: Sustainable denim conceptual collection	23
Table 15. Eco-Business Model Canvas — Germany: Premium mushrooms on residual substrate	24
Table 16. Eco-Business Model Canvas — Germany: Magaverde® digestate-fibre paper	25
Table 17. Eco-Business Model Canvas — Hungary: Coffee-ground mushroom-growing block	26
Table 18. Eco-Business Model Canvas — Hungary: Cherry-pit heat/cold therapy pillow	27
Table 19. Eco-Business Model Canvas — Italy: Wood Stories premium stationery	28
Table 20. Eco-Business Model Canvas — Italy: Soft Inside / RE-BOAT material applications	29
Table 21. Eco-Business Model Canvas — Italy: Composite decorative tiles	30
Table 22. Eco-Business Model Canvas — Croatia: Laser-engraved wooden souvenir coasters	31
Table 23. Eco-Business Model Canvas — Croatia: Decorative candleholder sets	32

1. EXECUTIVE SUMMARY

This document presents Solution n.2 of the SYMCRAFT project — a practical guideline addressed to chambers of commerce, technology transfer agencies, business support organisations and other intermediaries that assist artisans, craft SMEs and manufacturing industries from the textile, agro-food and wood & furniture sectors in developing eco-business models based on the reuse and recycling of industrial waste and by-products.

Solution n.2 builds directly on the results of Pilot Action 2, implemented between mid-2025 and mid-2026 by SYMCRAFT partners across eight countries — Austria, Croatia, Czech Republic, Germany, Hungary, Italy, Slovakia and Slovenia. Following a common methodology and using the dedicated SYMCRAFT Circular Eco-Business Model Canvas Tool, partners engaged industrial waste suppliers and craft/artisan enterprises through informational campaigns, cross-value-chain Co-Creation Workshops, bilateral follow-up calls and joint validation sessions, generating more than forty documented showcases of concrete industrial symbiosis collaboration across the three target supply chains.

This Solution distils that experience into a single reference document: it summarises the methodology and the tool used (Section 4), presents the quantitative and qualitative results achieved across the three sectors and the eight pilot territories (Section 5), consolidates the main findings and difficulties encountered by partners during implementation (Section 6), showcases a representative selection of the most instructive collaborations (Section 7), and — building on both — offers a set of practical, directly actionable recommendations for PPs and Associated Strategic Partners (ASPs) wishing to replicate or scale up this approach in their own territories (Section 8).

2. ABBREVIATIONS

Table 1. Abbreviations used in Solution n.2

Abbreviation	Definition
PPs	Project partners
D	Deliverable
WP	Work package
AP	Associated Partner
BMC	Business Model Canvas
CE	Circular Economy
SME	Small and Medium-sized Enterprise
PA	Pilot Action
ASP	Associated Strategic Partner
FSC	Forest Stewardship Council
IPR	Intellectual Property Rights
CSR	Corporate Social Responsibility

3. INTRODUCTION AND OBJECTIVES

3.1 Background and scope

This document presents the assessment and transferable results of Pilot Action n.2 of the SYMCRAFT project as "one solution to create business/incomes for handicraft with waste from industry" (Solution n. 2).

3.2 Target users and intended use

The **Solution n.2** consist of a guideline addressed to intermediary organisations assisting to artisans and industries from textile, agro-food and wood&furniture sectors for eco-business models from industrial wastes' re-use/recycling and with the best applications, selected from 46 applications to specific products/services designed with the pilot action. The solution include practical suggestions for their uptake by the PPs and the ASP to innovate services and integrate local innovation and circularity plans.

3.3 Objectives of Pilot Action 2

Objectives of the **Pilot action n.2** assessed in this document are...

1. To activate concrete, documented industrial symbiosis collaborations between manufacturing companies generating waste or by-products and craft/artisan SMEs able to transform those materials into new products or services, across the textile, agro-food and wood & furniture supply chains.
2. To test and validate, in eight different national contexts, a common engagement methodology and a dedicated digital tool — the SYMCRAFT Circular Eco-Business Model Canvas Tool — capable of guiding a collaboration from first contact to a fully validated eco-business model.
3. To build a first, sufficiently large and diverse body of comparable good-practice showcases, allowing the SYMCRAFT partnership to identify recurring patterns, critical success factors and common obstacles across countries and sectors.
4. To generate the evidence base needed to produce this Solution n.2: a practical, transferable guideline that other intermediary organisations — within and beyond the current SYMCRAFT partnership — can use to replicate and scale up the approach in their own territories.

4. METHODOLOGY USED

4.1 Common transnational approach

Pilot Action 2 used a shared transnational approach supported by the SYMCRAFT Circular Eco-Business Model Canvas Tool. As documented in the Pilot 2 evaluation source, the methodology implemented and

assessed across the partner territories was an operational pipeline of five sequential steps. Each step produced a practical output that fed into the next.

4.2 Five-step methodology used in Pilot Action 2

The Eco-BMC accompanied the process from the first sketch through development and joint validation. It functioned as a shared working record, progressively completed with the participants; it was not a separate implementation step or a substitute for facilitation.

Table 2. Five-step methodology implemented in Pilot Action 2

Step	Pilot 2 activity and implementation content	Observed output
1	Engagement Targeted outreach and one-to-one preparatory contacts recruited and pre-screened companies for a Co-Creation Workshop.	Companies informed, screened and invited.
2	Matching Facilitated workshop pitches and thematic tables connected waste suppliers with craft/artisan enterprises.	Candidate collaborations identified.
3	First sketch Promising matches drafted a preliminary Eco-BMC during the workshop as a shared visualisation of the collaboration.	Initial Eco-BMC sketch agreed.
4	Development Bilateral follow-up characterised the waste, transformation and product/service and progressively completed the digital Eco-BMC.	Developed Eco-BMC completed.
5	Validation A concluding joint call reviewed the canvas block by block, resolved open points and confirmed the application and collaboration.	Validated showcase ready for reporting.

4.3 Shared tool and standardised documentation

Pilot Action 2 used Digital Tool n. 2 — the Circular Eco-Business Model Tool — to structure and validate the value proposition, partners, activities, resources, customers, channels, costs and revenues of each collaboration. Digital Tool n. 4 — the Markdown Converter Tool — supported the conversion of exported Markdown reports into formatted PDFs for sharing and discussion. All partners followed the same reporting template so the resulting applications could be compared across pilot territories.

4.4 Circular Eco-Business Model Canvas structure

The eleven canvas blocks below are the content structure of the digital working record; they support, but do not replace, the five-step methodology used in Pilot Action 2. Complete them collaboratively from the first sketch, revise them during bilateral follow-up and confirm them through joint validation. Annex 2 applies this canvas structure to the examples selected in Chapter 7. A separate planning layer is presented in Section 8. and Annex 3 as a recommendation for future replication.

Table 3. Circular Eco-Business Model Canvas blocks and completion questions

Canvas block	Questions to complete
Objective	What waste-reduction goal, material stream and product/service define the case?
Key partnerships	Which supplier, craft user, technical, logistics, sales and intermediary roles are required?
Core activities	What collection, sorting, processing, product development, testing, marketing and delivery activities are needed?
Key resources	Which materials, equipment, infrastructure, expertise, finance and staff time are required?
Value propositions	What customer, partner and circular value does the offer create?
Customer relationships	How will customers and partners be acquired, involved, supported and retained?
Channels	How will materials move and how will the product/service reach B2B or B2C users?
Customer segments	Which suppliers, craft or industrial users, brands, resellers and end users are prioritised?
Cost structure	What are the material, labour, energy, equipment, storage, logistics, testing, compliance, packaging and marketing costs?
Revenue streams	Which sales, service, licence, workshop, contract-manufacturing, subscription or co-branding revenues are plausible?
Summary	What is the circular logic, viability condition, principal risk, next validation step and scaling route?

5. RESULTS OF IMPLEMENTATION

5.1 Partnership and output overview

Pilot Action 2 was implemented across Austria, Croatia, Czech Republic, Germany, Hungary, Italy, Slovakia and Slovenia and generated 46 documented applications to specific products and services. The review uses those regional records together with their paired Solution 1 source cases; the applications vary in maturity and publication readiness.

5.2 Results by target group

By target group: every showcase involves, by design, at least one industrial company generating waste or by-products (the “supplier” side) and one craft or artisan SME, designer, cooperative or social enterprise able to transform that material into a new product or service (the “artisan” side). In several showcases the artisan side is itself a small industrial or design company rather than a traditional craftsman, reflecting the broad definition of “craft SME” adopted by the project.

5.3 Results by sector

By sector: the textile sector is the most represented, with showcases from Austria (5, developed with the regional textile hub on weaving selvages, offcuts and technical garments), Slovakia (5, on ropes, deadstock fabric, diaper and knit scraps, sock offcuts), Czech Republic (5, on textile remnants, discarded shirts, technical tarpaulins and jute coffee sacks) and Slovenia (1 advanced showcase on denim offcuts, with further cases in progress). The agro-food sector is represented by Germany (5 showcases on food-production residues, hemp by-products and biogas digestate fibres) and Hungary (5 showcases on straw, coffee grounds, fruit pits and wool felt offcuts). The wood & furniture sector is represented by Croatia (6 showcases on furniture-production offcuts transformed into souvenirs, decor and games) and by Italy (9 showcases spanning wood, ceramic, glass, plastic and technical-textile residues from manufacturing companies).

5.4 Territorial scale and delivery formats

By territorial level: all showcases were activated at local/regional level, connecting companies within the same pilot territory; several partners (Austria, Slovakia) relied on a single physical or institutional hub — respectively the regional textile hub and the sector intermediary — to concentrate matchmaking and material flows for an entire sector. At transnational level, the common methodology and shared digital tool allowed the SYMCRAFT partnership to aggregate and compare these locally-generated showcases into the single, cross-country evidence base presented in this Solution.

In terms of engagement intensity, Germany organised nine Co-Creation Workshops between June 2025 and March 2026; Slovakia organised two dedicated workshops (November and December 2025); Croatia organised one large cross-company workshop at the Faculty of Forestry and Wood Technology of the University of Zagreb; and the textile-sector partners held a joint online workshop in April 2026 to compare progress across Austria, Slovakia, Czech Republic and Hungary. This variation in format — from a single flagship event to a dense calendar of smaller sessions — is itself one of the transferable results of Pilot Action 2, discussed further in Section 6.

6. SUMMARISATION OF FINDINGS

Across the eight pilot territories, partner workshop reports, follow-up records and the benchmark reviews converge on four thematic clusters.

6.1 Material and supply-side findings

Material and supply-side findings: industrial companies can rarely guarantee continuous volumes or a fully consistent quality of waste/by-product material, since residual streams depend on production cycles and vary by batch (Croatia, Germany); large manufacturers often lack the internal capacity to sort or pre-process their by-products before handover, creating extra work for the receiving artisan (Croatia); conversely, once a reliable waste stream is identified and characterised, it can support several parallel showcases with different artisans, as seen with textile manufacturer's weaving selvages in Austria (three separate artisan collaborations) and with sports-equipment manufacturer's ski-boot liner material in Italy (three separate collaborations).

6.2 Collaboration and governance findings

Collaboration and governance findings: designers, artisans and small craft enterprises often need an intermediary to broker sourcing, logistics, communication and validation. Proportionate informal arrangements can support an immature small-scale test, but the arrangement and decision trigger must be recorded. Move the case to Solution n.3 when roles, material transfer, liability, intellectual property, costs or longer-term cooperation require clearer formalisation.

6.3 Market and commercial findings

Market and commercial findings: for many artisans, the new material represents a genuine commercial opportunity — a lower-cost, distinctive or story-rich input that supports premium positioning — rather than a purely environmental initiative (all partners); industrial suppliers, in turn, value the collaboration primarily for its contribution to their sustainability/CSR profile and, in several cases, for the elimination of disposal costs, rather than for a significant new revenue stream (Croatia, Austria, Germany); distribution and market access remain a bottleneck for smaller craft enterprises, which often lack established sales channels beyond direct sale, craft fairs or their own webshop (Croatia).

6.4 Regulatory and awareness findings

Regulatory and awareness findings: current waste-classification and by-product transfer regulations are not always well understood by either side of the collaboration and do not actively incentivise material exchange, creating administrative uncertainty that can slow down or discourage a promising match (Germany, Croatia); a related, more general finding is that co-creation workshops themselves often represent participants' first concrete exposure to the SYMCRAFT approach and to the very possibility of this kind of collaboration, confirming that awareness-raising and matchmaking, not just technical feasibility, remain the primary barrier to be addressed by any intermediary organisation replicating this Solution.

7. EXAMPLES OF APPLICATIONS TO SPECIFIC PRODUCTS/SERVICES

7.1 Selection of industrial symbiosis and good practice examples

The following selection illustrates the diversity of sectors, materials and business-model directions activated across the pilot territories. Annex 2 provides a corresponding working Eco-BMC for each listed example.

Textile sector

Table 4. Textile-sector industrial-symbiosis and good-practice examples

Country	Industrial symbiosis / partners	Residual material	Product or service application
AT	craft hat-making enterprise × textile manufacturer	Linen/cotton weaving offcuts	Summer caps
AT	craft design enterprise × textile manufacturer	Cotton/linen weaving selvages	'Fat Yarn' for rugs, bags and baskets
SK	ART WORKS — industrial rope manufacturer × visual artist	Leftover fibre ropes	Site-specific visual art installation
SK	ZERO-WASTE BAGS — industrial textile supplier × sector intermediary	Deadstock textiles	Timeless fashion bags
CZ	Backpacks & bags — technical-textile supplier × craft and design enterprise	Discarded technical tarpaulins	Bags and backpacks
CZ	Jute products — coffee roaster × craft and design enterprise	Used jute coffee sacks	Tablecloths and vegetable bags
SI	Sustainable conceptual collection — denim supplier × fashion designer	Denim offcuts	Fashion jacket and accessories

Agro-food sector

Table 5. Agro-food-sector industrial-symbiosis and good-practice examples

Country	Industrial symbiosis / partners	Residual material	Product or service application
DE	Premium mushroom cultivation	Brewer's grain, coffee grounds, grain husks and straw	Gourmet mushrooms
DE	Magaverde® — technical coordinating SME × paper-making organisation	Fibres from biogas digestate	Mulch paper and packaging paper
HU	Mushroom growing block — local coffee-ground supplier × mushroom-growing enterprise	Residual coffee grounds	Mushroom-growing block
HU	Cherry pit pillow — fruit-spirit producer × textile artisan	Fruit pits from pálinka production	Handmade heat/cold therapy pillow

Wood & furniture sector

Table 6. Wood-and-furniture-sector industrial-symbiosis and good-practice examples

Country	Industrial symbiosis / partners	Residual material	Product or service application
IT	Wood Stories — furniture manufacturer × stationery producer	Solid wood offcuts and veneer scraps	Luxury notebooks and stationery
IT	Soft Inside / RE-BOAT — sports-equipment manufacturer × technical design enterprise / marine innovation enterprise	Ski-boot liner surplus material	Acoustic panels and eco-friendly waste-collection boats for the Venice lagoon
IT	TILES — composite-material developer × glass and mosaic manufacturer & ceramics manufacturer	Marble, glass and ceramic residues	Composite decorative tiles
HR	Wooden Coasters — furniture manufacturer × craft and design enterprise	Solid wood, MDF and particleboard offcuts	Laser-engraved souvenir coasters
HR	Candleholders — furniture manufacturer × design studio	FSC-certified wood offcuts	Decorative candleholder sets

The examples include both finished consumer products and technical or service-oriented applications. They should be read as Pilot 2 good-practice records; the Eco-BMCs in Annex 2 organise the available case logic and the points that participants still need to confirm for replication.

8. RECOMMENDATIONS

8.1 Engagement and facilitated matchmaking

1. Invest first in informational engagement, not just matchmaking: allocate real effort and dedicated resources to a preparatory outreach and recruitment phase — direct calls, business-association channels, one-to-one pre-screening — before any workshop; the quality of the workshop matching depends directly on the diversity and readiness of the companies invited.
2. Design workshops as facilitated matchmaking events, not passive networking: use pitch sessions and thematic tables organised by material type, and have staff actively broker combinations based on prior knowledge of participants rather than leaving matching to chance.
3. Sketch a first business model canvas while enthusiasm is still fresh: wherever feasible, support the most promising matches in drafting even a rough Eco-BMC during the workshop itself, since this single step converts a networking contact into a shared, tangible project.

8.2 Tool-enabled model development and follow-up

4. Provide a lightweight, ready-to-use tool rather than asking artisans to build a business plan from scratch: the SYMCRAFT Circular Eco-Business Model Canvas Tool was consistently reported as easy to use in the field precisely because it does not require prior business-modelling skills.

5. Plan for sustained, multi-call follow-up: two to four structured bilateral calls per showcase were typically needed to move from a first match to a fully validated collaboration; intermediary organisations should budget staff time accordingly rather than expecting a single meeting to suffice.

8.3 Intermediation, governance and regulation

6. Take on the intermediary/broker role explicitly: in most successful showcases, the project partner (or a dedicated hub such as the regional textile hub or the sector intermediary) played an active, ongoing role in the material handover and communication between the two companies; intermediary organisations replicating this Solution should plan to play the same role, not merely a one-off introduction.

7. Accept and support informal agreements at small scale: for showcases involving small volumes and a small number of companies, do not push for formal contracts; verbal, trust-based agreements were repeatedly found to work well and to preserve the flexibility needed at pilot stage. Transfer the case to Solution n.3 when longer-term cooperation requires a documented framework.

8. Offer basic legal and regulatory orientation on waste/by-product classification and transfer: uncertainty on this point was one of the most frequently cited barriers; even simple, plain-language guidance can unblock a promising match.

8.4 Market access, branding and scaling

9. Support artisans on distribution and market access, not only on production: several craft enterprises can produce a compelling new product but lack sales channels beyond direct sale or craft fairs; complementary support (concept-store partnerships, marketplaces, participation in design/craft fairs) increases the real-world impact of a showcase.

10. Where relevant, add IPR, branding and funding advisory support: the Slovak Chamber of Commerce and Industry's experience shows that pairing matchmaking with advice on intellectual property rights, brand/design protection and funding opportunities for marketing and internationalisation strengthens the artisan's ability to scale the collaboration beyond the pilot.

8.5 Cross-sector replication

11. Look across sectors, not only within one supply chain: several of the most original showcases emerged specifically because participants from different sectors (wood, textile, ceramic/glass) were brought into the same room; intermediary organisations should resist the temptation to organise strictly sector-specific events only.

8.6 Recommended six-output replication planning layer

12. For future replication, consider a separate six-output planning layer: Selected Prototype Idea; Customer and Value Proposition Profile; Draft Eco-Business Model; Feasibility Assessment; Validated Market Opportunity; and Eco-Business Implementation Plan. This is a recommendation derived from Pilot 2 for a future Replication Guideline; it does not replace the five-step methodology implemented and evaluated in Pilot Action 2.

9. CONCLUSIONS

Pilot Action 2 demonstrates that a simple, replicable five-step methodology — informational engagement, facilitated matchmaking, early business-model sketching, structured follow-up and joint validation — combined with a lightweight shared digital tool, is sufficient to generate, in the space of about one year and across eight very different national and institutional contexts, more than forty concrete, documented industrial symbiosis collaborations between industry and craft.

The sector-based selection in Chapter 7 reflects the Pilot Action 2 source document and illustrates the breadth of material flows, craft transformations and potential markets achieved in the pilot. Annex 2 provides one source-aligned Eco-BMC for each listed example. The recommended six-output planning layer in Section 8.6 remains a future replication aid and does not change the five-step methodology assessed in this Solution.

The consistency of the findings across such diverse partners and sectors is itself the strongest evidence that the approach is transferable. Solution n.2 packages this experience into an actionable guideline: PPs and Associated Strategic Partners wishing to replicate it in their own territories do not need to start from the objectives of Pilot Action 2 in the abstract, but can adopt directly the methodology, the tool and the eleven recommendations set out in this document, adapting them to their own local industrial fabric and craft tradition.

10. ANNEXES

- 10.1 Annex 1: ECO-BMC template;
- 10.2 Annex 2: ECO-BMCs for the selected applications;
- [10.3 Annex 3: Replication Guideline for Solution 2](#)

10.1 ANNEX 1

ECO-BMC template

Symcraft business model for the prevention or reduction of (potential) waste and the utilization of byproducts



Symcraft business model for the prevention or reduction of (potential) waste and the utilization of byproducts

Business model: Enter your business model title here...

Objective				
Key partnerships	Core activities	Value propositions	Customer relationships	Customer segments
	Key resources		Channels	
Cost structure		Revenue streams		
Summary				

Figure 1. ECO-BMC template.

10.2 ANNEX 2

ECO-BMCs of the selected applications

This annex follows the examples listed in Chapter 7 and the eleven Eco-BMC blocks described in Section 4.4. Each table is a concise, source-aligned working model derived from the Pilot 2 case description. Entries identify the collaboration logic and the points that must be confirmed with participants; they do not replace the five-step methodology used in Pilot Action 2.

Table 7. Annex 2 index of source-aligned Eco-BMC profiles

Profile	Country	Pilot 2 example	Sector
A2.1	Austria	Summer caps from weaving offcuts	Textile
A2.2	Austria	'Fat Yarn' from weaving selvages	Textile
A2.3	Slovakia	ART WORKS — rope-based visual installation	Textile
A2.4	Slovakia	ZERO-WASTE BAGS from deadstock textiles	Textile
A2.5	Czech Republic	Backpacks and bags from technical tarpaulins	Textile
A2.6	Czech Republic	Jute tablecloths and vegetable bags	Textile
A2.7	Slovenia	Sustainable denim conceptual collection	Textile
A2.8	Germany	Premium mushrooms on residual substrate	Agro-food
A2.9	Germany	Magaverde® digestate-fibre paper	Agro-food
A2.10	Hungary	Coffee-ground mushroom-growing block	Agro-food
A2.11	Hungary	Cherry-pit heat/cold therapy pillow	Agro-food
A2.12	Italy	Wood Stories premium stationery	Wood & furniture
A2.13	Italy	Soft Inside / RE-BOAT material applications	Wood & furniture
A2.14	Italy	Composite decorative tiles	Wood & furniture
A2.15	Croatia	Laser-engraved wooden souvenir coasters	Wood & furniture
A2.16	Croatia	Decorative candleholder sets	Wood & furniture



A2.1 Austria — Summer caps from weaving offcuts

Pair: AT-2 / AUT-1 | Maturity status: Prototype

Pilot 2 source example | Partners: craft hat-making enterprise; textile manufacturer; sewing/finishing and retail partners | Material: linen/cotton weaving offcuts | Output: summer caps

Table 8. Eco-Business Model Canvas — Austria: Summer caps from weaving offcuts

Eco-BMC block	Source-aligned working entry
Objective	Convert linen/cotton weaving offcuts into summer caps through a practical industry–craft collaboration.
Key partnerships	craft hat-making enterprise; textile manufacturer; sewing/finishing and retail partners
Core activities	Sort by fibre and colour; clean; pattern; cut; sew; finish; label; photograph and test wear/care
Key resources	Offcuts, composition data, patterns, sewing equipment, maker skill, labels and packaging
Value propositions	Lightweight limited-series caps with local textile provenance and visible waste prevention
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct sales, design shops, tourism retail, craft fairs and online channels
Customer segments	Design-conscious consumers, visitors, ethical-fashion retailers and corporate-gift buyers
Cost structure	Sorting, cleaning, design, sewing labour, trims, labels, packaging, sales and logistics
Revenue streams	Retail caps, limited editions, wholesale orders and co-branded batches
Summary	Pilot 2 source example: linen/cotton weaving offcuts → summer caps. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.2 Austria — 'Fat Yarn' from weaving selvages

Pair: AT-3 / AUT-4 | Maturity status: Prototype

Pilot 2 source example | Partners: craft design enterprise; textile manufacturer; makers of rugs, bags and baskets; logistics and retail partners | Material: cotton/linen weaving selvages | Output: 'Fat Yarn' and crafted rugs, bags and baskets

Table 9. Eco-Business Model Canvas — Austria: 'Fat Yarn' from weaving selvages

Eco-BMC block	Source-aligned working entry
Objective	Convert cotton/linen weaving selvages into 'fat yarn' and crafted rugs, bags and baskets through a practical industry–craft collaboration.
Key partnerships	craft design enterprise; textile manufacturer; makers of rugs, bags and baskets; logistics and retail partners
Core activities	Collect; sort; join or twist selvages; define yarn formats; prototype; test; make and sell products
Key resources	Selvages, storage, joining/twisting tools, craft skills, patterns and product-test access
Value propositions	A distinctive bulky craft input and tactile products that retain the source textile story
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct maker supply, design/homeware retail, craft fairs, workshops and online sales
Customer segments	Textile makers, craft studios, homeware buyers, design shops and workshop participants
Cost structure	Collection, sorting, preparation, labour, tools, sampling, packaging and distribution
Revenue streams	Prepared yarn sales, finished products, commissions and workshops
Summary	Pilot 2 source example: cotton/linen weaving selvages → 'Fat Yarn' and crafted rugs, bags and baskets. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.3 Slovakia — ART WORKS — rope-based visual installation

Pair: SK-1 / SVK-1 | Maturity status: Prototype

Pilot 2 source example | Partners: industrial rope manufacturer; visual artist; commissioner/venue; installer and safety advisers | Material: leftover fibre ropes | Output: a site-specific visual art installation

Table 10. Eco-Business Model Canvas — Slovakia: ART WORKS — rope-based visual installation

Eco-BMC block	Source-aligned working entry
Objective	Convert leftover fibre ropes into a site-specific visual art installation through a practical industry–craft collaboration.
Key partnerships	industrial rope manufacturer; visual artist; commissioner/venue; installer and safety advisers
Core activities	Select ropes; assess condition; develop concept; engineer supports; fabricate; install; document and maintain
Key resources	Rope offcuts, artist expertise, studio, fixing systems, structural/fire advice and installation crew
Value propositions	A unique commissioned artwork that gives industrial rope remnants cultural and spatial value
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct commissions, curatorial networks, public art calls, exhibitions and cultural partners
Customer segments	Cultural venues, municipalities, festivals, corporate spaces and private commissioners
Cost structure	Material handling, design, engineering, fabrication, transport, installation, insurance and maintenance
Revenue streams	Commission fees, design/fabrication contracts, exhibitions and related workshops
Summary	Pilot 2 source example: leftover fibre ropes → a site-specific visual art installation. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.4 Slovakia — ZERO-WASTE BAGS from deadstock textiles

Pair: SK-2 / SVK-2 | Maturity status: Prototype

Pilot 2 source example | Partners: industrial textile supplier; sector intermediary; designer/maker network; hardware, retail and logistics partners | Material: deadstock textiles | Output: timeless fashion bags

Table 11. Eco-Business Model Canvas — Slovakia: ZERO-WASTE BAGS from deadstock textiles

Eco-BMC block	Source-aligned working entry
Objective	Convert deadstock textiles into timeless fashion bags through a practical industry–craft collaboration.
Key partnerships	industrial textile supplier; sector intermediary; designer/maker network; hardware, retail and logistics partners
Core activities	Inventory; sort; design modular patterns; cut; sew; finish; quality-check; label and market
Key resources	Deadstock, storage, sewing equipment, patterns, skilled makers, hardware and traceability labels
Value propositions	Durable small-batch bags with material provenance and reduced demand for virgin textiles
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Fashion/design retail, direct and online sales, events, corporate orders and partner networks
Customer segments	Circular-fashion consumers, corporate-gift buyers, design retailers and institutional clients
Cost structure	Sorting, sampling, sewing labour, hardware, quality control, packaging, marketing and delivery
Revenue streams	Retail/wholesale bag sales, custom batches, corporate gifts and repair services
Summary	Pilot 2 source example: deadstock textiles → timeless fashion bags. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.5 Czech Republic — Backpacks and bags from technical tarpaulins

Pair: CZ-4 / CZE-4 | Maturity status: Market

Pilot 2 source example | Partners: technical-textile supplier; craft and design enterprise; cleaning, hardware, logistics and sales partners | Material: discarded technical tarpaulins | Output: bags and backpacks

Table 12. Eco-Business Model Canvas — Czech Republic: Backpacks and bags from technical tarpaulins

Eco-BMC block	Source-aligned working entry
Objective	Convert discarded technical tarpaulins into bags and backpacks through a practical industry–craft collaboration.
Key partnerships	technical-textile supplier; craft and design enterprise; cleaning, hardware, logistics and sales partners
Core activities	Collect; inspect; clean; design; cut; sew; add hardware; quality-check; tag; deliver and repair
Key resources	Tarpaulin, washing/drying capacity, sewing equipment, patterns, hardware, skills and tags
Value propositions	Unique durable products and a documented service for converting a client's own tarpaulins
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct B2B projects, design retail, events, online channels and repair contact
Customer segments	Circular-design consumers, banner-owning organisations, event clients and institutional gift buyers
Cost structure	Collection, cleaning, sorting loss, design, labour, hardware, tagging, packaging and shipping
Revenue streams	Product sales, commissioned batches, corporate gifts and repair services
Summary	Pilot 2 source example: discarded technical tarpaulins → bags and backpacks. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.6 Czech Republic — Jute tablecloths and vegetable bags

Pair: CZ-5 / CZE-5 | Maturity status: Feasibility

Pilot 2 source example | Partners: coffee roaster; craft and design enterprise; cleaning/sewing partners; food/craft retailers | Material: used jute coffee sacks | Output: tablecloths and vegetable bags

Table 13. Eco-Business Model Canvas — Czech Republic: Jute tablecloths and vegetable bags

Eco-BMC block	Source-aligned working entry
Objective	Convert used jute coffee sacks into tablecloths and vegetable bags through a practical industry–craft collaboration.
Key partnerships	coffee roaster; craft and design enterprise; cleaning/sewing partners; food/craft retailers
Core activities	Collect; empty; inspect; clean; grade; pattern; cut; sew; finish; label and test use/care
Key resources	Jute sacks, cleaning/drying area, sewing tools, patterns, linings/trims and maker skills
Value propositions	Useful rustic products with recognisable coffee provenance and local reuse value
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Cafés, farm/zero-waste shops, craft markets, direct orders and online sales
Customer segments	Households, zero-waste shoppers, cafés, farm shops, gift retailers and market vendors
Cost structure	Collection, cleaning, sorting loss, sewing labour, trims, labels, packaging and selling
Revenue streams	Retail products, café co-branded editions, wholesale and workshops
Summary	Pilot 2 source example: used jute coffee sacks → tablecloths and vegetable bags. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.7 Slovenia — Sustainable denim conceptual collection

Pair: SI-1 / SLO-1 | Maturity status: Prototype

Pilot 2 source example | Partners: denim supplier; fashion designer; sewing/finishing partners; fashion presentation and retail partners | Material: denim offcuts | Output: a fashion jacket and accessories

Table 14. Eco-Business Model Canvas — Slovenia: Sustainable denim conceptual collection

Eco-BMC block	Source-aligned working entry
Objective	Convert denim offcuts into a fashion jacket and accessories through a practical industry–craft collaboration.
Key partnerships	denim supplier; fashion designer; sewing/finishing partners; fashion presentation and retail partners
Core activities	Sort by weight/colour; compose panels; pattern; sew; finish; fit-test; document and present the collection
Key resources	Denim offcuts, storage, design/pattern skill, sewing equipment, trims, models and photography
Value propositions	A coherent limited collection combining expressive design with locally recovered denim
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Exhibitions, fashion events, direct commissions, boutiques and selected online channels
Customer segments	Circular-fashion consumers, design audiences, stylists, cultural venues and boutique retailers
Cost structure	Sorting, sampling, design, sewing labour, trims, fittings, photography, events and packaging
Revenue streams	Limited-edition sales, commissions, exhibition orders and workshops
Summary	Pilot 2 source example: denim offcuts → a fashion jacket and accessories. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.8 Germany — Premium mushrooms on residual substrate

Pair: DE-3 / DEU-1 | **Maturity status:** Feasibility

Pilot 2 source example / Partners: Residue suppliers; mushroom grower; substrate/hygiene advisers; food-market partners / Material: brewer's grain, coffee grounds, grain husks and straw / Output: gourmet mushrooms

Table 15. Eco-Business Model Canvas — Germany: Premium mushrooms on residual substrate

Eco-BMC block	Source-aligned working entry
Objective	Convert brewer's grain, coffee grounds, grain husks and straw into gourmet mushrooms through a practical industry–craft collaboration.
Key partnerships	Residue suppliers; mushroom grower; substrate/hygiene advisers; food-market partners
Core activities	Collect quickly; formulate substrate; pasteurise/sterilise; inoculate; incubate; fruit; harvest; pack and manage spent substrate
Key resources	Fresh residues, spawn, clean processing area, climate control, food-safety knowledge and cold chain
Value propositions	Local gourmet mushrooms produced from underused food-production residues
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct foodservice supply, farmers' markets, specialty shops, subscriptions and workshops
Customer segments	Restaurants, specialty food retailers, local consumers and educational participants
Cost structure	Collection, hygiene treatment, spawn, energy, labour, contamination loss, packaging and delivery
Revenue streams	Fresh mushroom sales, restaurant supply, grow kits, workshops and spent-substrate uses where permitted
Summary	Pilot 2 source example: brewer's grain, coffee grounds, grain husks and straw → gourmet mushrooms. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.9 Germany — Magaverde® digestate-fibre paper

Pair: DE-1 / DEU-3 | Maturity status: Pilot

Pilot 2 source example | Partners: technical coordinating SME; paper-making organisation; fibre-processing, testing, converting and agricultural partners | Material: fibres from biogas digestate | Output: mulch paper and packaging paper

Table 16. Eco-Business Model Canvas — Germany: Magaverde® digestate-fibre paper

Eco-BMC block	Source-aligned working entry
Objective	Convert fibres from biogas digestate into mulch paper and packaging paper through a practical industry–craft collaboration.
Key partnerships	technical coordinating SME; paper-making organisation; fibre-processing, testing, converting and agricultural partners
Core activities	Clean; dry; refine fibres; formulate; make paper; test machinery and field use; qualify claims and scale
Key resources	Digestate fibre, preparation equipment, paper-making access, laboratories, trial sites and technical staff
Value propositions	Secondary fibre for application-specific papers with a traceable residue route
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct B2B trials, paper/converter partnerships, agricultural channels and technical samples
Customer segments	Growers, paper converters, packaging users, regional brands and distributors
Cost structure	Fibre preparation, transport, formulation, paper trials, testing, certification and scale-up
Revenue streams	Prepared fibre, paper/product sales, contract production and possible process licensing
Summary	Pilot 2 source example: fibres from biogas digestate → mulch paper and packaging paper. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.10 Hungary — Coffee-ground mushroom-growing block

Pair: HU-1 / HUN-3 | **Maturity status:** Prototype

Pilot 2 source example | Partners: local coffee-ground supplier; mushroom-growing enterprise; café collection points; spawn, hygiene, education and retail partners | **Material:** residual coffee grounds | **Output:** a mushroom-growing block

Table 17. Eco-Business Model Canvas — Hungary: Coffee-ground mushroom-growing block

Eco-BMC block	Source-aligned working entry
Objective	Convert residual coffee grounds into a mushroom-growing block through a practical industry–craft collaboration.
Key partnerships	local coffee-ground supplier; mushroom-growing enterprise; café collection points; spawn, hygiene, education and retail partners
Core activities	Collect; control contamination; sterilise; mix; inoculate; incubate; pack; instruct and manage spent substrate
Key resources	Fresh grounds, straw, spawn, water, steriliser, clean workspace and incubation capacity
Value propositions	An accessible local circular product that combines food production with learning
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Café/farm sales, local shops, online orders, school programmes and workshops
Customer segments	Home growers, families, schools, workshop participants and local food customers
Cost structure	Collection, sterilisation energy, inputs, labour, clean-space control, losses, packaging and distribution
Revenue streams	Growing-block sales, mushrooms, workshops, education kits and café co-branding
Summary	Pilot 2 source example: residual coffee grounds → a mushroom-growing block. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.11 Hungary — Cherry-pit heat/cold therapy pillow

Pair: HU-4 / HUN-4 | **Maturity status:** Prototype

Pilot 2 source example | Partners: fruit-spirit producer; textile artisan; cleaning/drying, textile, testing and retail partners | **Material:** fruit pits from pálinka production | **Output:** a handmade heat/cold therapy pillow

Table 18. Eco-Business Model Canvas — Hungary: Cherry-pit heat/cold therapy pillow

Eco-BMC block	Source-aligned working entry
Objective	Convert fruit pits from pálinka production into a handmade heat/cold therapy pillow through a practical industry–craft collaboration.
Key partnerships	fruit-spirit producer; textile artisan; cleaning/drying, textile, testing and retail partners
Core activities	Collect; separate; clean; dry; grade; fill sewn covers; seal; test heating/cooling; label and pack
Key resources	Fruit pits, washing/drying capacity, fabric, sewing tools, filling controls, labels and packaging
Value propositions	A reusable thermal comfort product with a local fruit-production and craft story
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct and online sales, wellness/gift retail, tourism channels and craft fairs
Customer segments	Wellness consumers, households, gift buyers, pharmacies/wellness shops and tourism retailers
Cost structure	Cleaning/drying, textile and sewing labour, testing, labels, packaging, marketing and logistics
Revenue streams	Retail/wholesale pillows, gift sets, co-branded tourism editions and custom orders
Summary	Pilot 2 source example: fruit pits from pálinka production → a handmade heat/cold therapy pillow. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.12 Italy — Wood Stories premium stationery

Pair: IT-1 / ITA-1 | **Maturity status:** Feasibility

Pilot 2 source example | Partners: furniture manufacturer; stationery producer; cutting, finishing, adhesive, binding and design-retail partners | **Material:** solid wood offcuts and veneer scraps | **Output:** luxury notebooks and stationery

Table 19. Eco-Business Model Canvas — Italy: Wood Stories premium stationery

Eco-BMC block	Source-aligned working entry
Objective	Convert solid wood offcuts and veneer scraps into luxury notebooks and stationery through a practical industry–craft collaboration.
Key partnerships	furniture manufacturer; stationery producer; cutting, finishing, adhesive, binding and design-retail partners
Core activities	Sort by species/thickness; cut; laminate; bind; finish; quality-check; pack and document provenance
Key resources	Wood/veneer lots, paper, binding inputs, cutting/press equipment, finishes and design skill
Value propositions	Compact premium products combining Italian furniture provenance with material efficiency
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct B2B sales, hospitality/conference supply, museum shops, design retail and online channels
Customer segments	Corporate gift buyers, architects, hospitality clients, museum/design retailers and consumers
Cost structure	Sorting, small-lot handling, finishes, binding labour, minimum runs, packaging and samples
Revenue streams	Corporate commissions, retail stationery, sample packs, hospitality orders and limited editions
Summary	Pilot 2 source example: solid wood offcuts and veneer scraps → luxury notebooks and stationery. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.13 Italy — Soft Inside / RE-BOAT material applications

Pair: No Solution 1 pair recorded / ITA-6 + ITA-7 | Maturity status: Prototype
Pilot 2 source example | Partners: sports-equipment manufacturer; technical design enterprise; marine innovation enterprise; acoustic, marine, logistics, testing and public-service partners | Material: ski-boot liner surplus material | Output: acoustic panels and waste-collection boats for the Venice lagoon

Table 20. Eco-Business Model Canvas — Italy: Soft Inside / RE-BOAT material applications

Eco-BMC block	Source-aligned working entry
Objective	Convert ski-boot liner surplus material into acoustic panels and waste-collection boats for the Venice lagoon through a practical industry–craft collaboration.
Key partnerships	sports-equipment manufacturer; technical design enterprise; marine innovation enterprise; acoustic, marine, logistics, testing and public-service partners
Core activities	Characterise material; separate the two routes; prototype panels and boat components; test; document and pilot in use
Key resources	Liner surplus, cutting/forming equipment, acoustic/marine engineering, test access and demonstrator sites
Value propositions	Two high-visibility routes for a technical textile: interior acoustic function and lagoon environmental service
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct technical co-development, architect/material libraries, public/private pilots and sector partnerships
Customer segments	Interior specifiers and hospitality buyers; lagoon operators, municipalities and environmental organisations
Cost structure	Sorting, processing, engineering, tooling, testing/certification, assembly, pilot operation and maintenance
Revenue streams	Panel/product supply, design/engineering contracts, service or public procurement and licensing where appropriate
Summary	Pilot 2 source example: ski-boot liner surplus material → acoustic panels and waste-collection boats for the Venice lagoon. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.14 Italy — Composite decorative tiles

Pair: IT-3 / ITA-3 | Maturity status: Prototype

Pilot 2 source example | Partners: composite-material developer; glass and mosaic manufacturer; ceramics manufacturer; formulation, testing, design and specification partners | Material: marble, glass and ceramic residues | Output: composite decorative tiles

Table 21. Eco-Business Model Canvas — Italy: Composite decorative tiles

Eco-BMC block	Source-aligned working entry
Objective	Convert marble, glass and ceramic residues into composite decorative tiles through a practical industry–craft collaboration.
Key partnerships	composite-material developer; glass and mosaic manufacturer; ceramics manufacturer; formulation, testing, design and specification partners
Core activities	Characterise residues; formulate; mould/cure or fire; finish; test by use; make sample boards and demonstrators
Key resources	Qualified residues, binders/process equipment, laboratories, moulds, finishing skill and design capacity
Value propositions	Distinctive premium surfaces combining several industrial residues and strong material storytelling
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Direct specification, architect/material libraries, hospitality projects, premium retail and galleries
Customer segments	Architects, interior designers, hospitality projects, premium retailers and collectible-design buyers
Cost structure	Residue qualification, binders, tooling, energy, finishing, testing, samples and installation trials
Revenue streams	Tile/panel sales, collectible objects, custom development, project supply and possible licensing
Summary	Pilot 2 source example: marble, glass and ceramic residues → composite decorative tiles. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.15 Croatia — Laser-engraved wooden souvenir coasters

Pair: HR-4 / CRO-1 | Maturity status: Prototype

Pilot 2 source example | Partners: furniture manufacturer; craft and design enterprise; laser-cutting, finishing, tourism-retail and packaging partners | Material: solid wood, MDF and particleboard offcuts | Output: laser-engraved souvenir coasters

Table 22. Eco-Business Model Canvas — Croatia: Laser-engraved wooden souvenir coasters

Eco-BMC block	Source-aligned working entry
Objective	Convert solid wood, mdf and particleboard offcuts into laser-engraved souvenir coasters through a practical industry–craft collaboration.
Key partnerships	furniture manufacturer; craft and design enterprise; laser-cutting, finishing, tourism-retail and packaging partners
Core activities	Sort by board type; define safe uses; design motifs; laser cut/engrave; finish; test; pack and sell
Key resources	Offcuts, material identification, laser cutter, design files, finishes, ventilation and packaging
Value propositions	Compact locally designed souvenirs that use small furniture-production offcuts efficiently
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Tourism/gift retail, museums, hospitality, direct orders, events and online sales
Customer segments	Visitors, gift buyers, hospitality venues, tourism organisations and corporate clients
Cost structure	Sorting, design, laser time, ventilation, finishing, quality control, packaging and retail margin
Revenue streams	Retail/wholesale coaster sets, hospitality orders, custom motifs and corporate gifts
Summary	Pilot 2 source example: solid wood, MDF and particleboard offcuts → laser-engraved souvenir coasters. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.



A2.16 Croatia — Decorative candleholder sets

Pair: HR-3 / CRO-6 | **Maturity status:** Prototype

Pilot 2 source example | Partners: furniture manufacturer; design studio; finishing, safety-testing, packaging and design-retail partners | **Material:** FSC-certified wood offcuts | **Output:** decorative candleholder sets

Table 23. Eco-Business Model Canvas — Croatia: Decorative candleholder sets

Eco-BMC block	Source-aligned working entry
Objective	Convert fsc-certified wood offcuts into decorative candleholder sets through a practical industry–craft collaboration.
Key partnerships	furniture manufacturer; design studio; finishing, safety-testing, packaging and design-retail partners
Core activities	Sort; dimension; design; machine; sand; finish; fit inserts; test heat/stability; pack and market
Key resources	Certified wood offcuts, woodworking tools, design files, finishes, candle inserts, test access and packaging
Value propositions	Small-series decor combining certified wood provenance with visible recovery of usable offcuts
Customer relationships	Co-design where relevant; clear product/care information; feedback and repeat-order contact.
Channels	Design/gift shops, hospitality, direct orders, tourism channels and online sales
Customer segments	Design consumers, gift buyers, hospitality venues, tourism retailers and corporate clients
Cost structure	Sorting, machining, labour, finishes, inserts, safety tests, packaging, marketing and shipping
Revenue streams	Retail/wholesale sets, custom hospitality orders, corporate gifts and limited editions
Summary	Pilot 2 source example: FSC-certified wood offcuts → decorative candleholder sets. The Eco-BMC is a source-aligned working model for joint completion, not a claim of commercial validation.

10.3 ANNEX 3: REPLICATION GUIDELINE FOR SOLUTION 2

Click to the link: [Annex 3: Replication Guideline for Solution 2](#)