

# BRIDGES project

Identifying & building on interregional complementarities

BSSSC meeting  
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# PGI00040 BRIDGES project

## A.1 Project identification

### Project title

Bridging competence infrastructure gaps and speeding up growth and jobs delivery in regions

### Project acronym



BRIDGES

Project duration	Phase 1	Duration	36 Months	Project start date	01/04/2016
	Phase 2	Duration	24 Months	Project end date	31/03/2021
	Total No. months		60		
5th call additional activities					
	Start date		01/10/2021	End date (including closure)	31/03/2023

### Name of the lead partner organisation in English

Regional Council of Kainuu

### Specific objective

1.1. Improving innovation infrastructure policies

N°	Organisation	Country
1-PP	Kainuun Etu Ltd	FI
<b>2-LP</b>	Regional Council of Kainuu	FI
3-PP	Lubelskie Voivodeship	PL
4-PP	Helsinki-Uusimaa Regional Council	FI
5-PP	REGIONAL DEVELOPMENT AGENCY OF WESTERN MACEDONIA S.A. - ANKO	EL
6-PP	Soča Valley Development Centre	SI
7-PP	Pannon Business Network Association	HU
7-PP	Pannon Business Network Association	HU
8-AP	European Business and Innovation Centre of Burgos	ES
9-AP	CENTRE FOR RESEARCH & TECHNOLOGY-HELLAS / INSTITUTE FOR BIO-ECONOMY & AGRI-TECHNOLOGY	EL
10-AP	Stichting DLO	NL

# WHY DO WE HAVE THE BRIDGES PROJECT?

**Effectiveness of RIS3 implementation**, e.g. relatively weak impact of RIS3 on growth, jobs & regional economy renewal (linked to low upscale investments, research excellence, and exploitation of related variety potential); restricted resources towards RIS3 impact.

**Phase 1 + Phase 2:** mismatches between knowledge (research & skills) to the economic base

**Phase 3 (additional activities):** increase resilience through re-shoring and in-shoring of industrial activities; benefit from near shoring options without harming localised industrial development.

Build on existing and emerging regional competitive advantage.

## 1.- Content

1 method + 1 example + discussion

## 2.- Development of the VC mapping tool

- STAGE 1 Selection of value chain and formulation of the supply chain matrix. (2019). It started from Phase 1, Action 2 of the action plan of PP2, 'renewal of the berry industry'.
- STAGE 2 Defining criteria to operationalise the supply-chain matrix and map regional potential (peaks and valleys).(2021).
- STAGE 3 Test application of the VC mapping tool in five (5) EU regions. (2021-2022).
- STAGE 4 Validation of the tool (effectiveness assessment & applicability) and conceptualisation.
- STAGE 5 Diffusion of the tool beyond the BRIDGES regions and feedback analysis. (BERRY+ meeting, 2022).
- STAGE 6 Transferability: the method is operationalised into a transferable, 5-step tool (section below).

# Value chain mapping methodology

## STEP 2 & STEP 3 Selecting proxies and measuring localisation & mapping competitive advantage )

### STEP 1

BERRY+ Industrial modernisation partnership

PGI 00040 BRIDGES

<https://s3platform.jrc.ec.europa.eu/berry>

<http://www.interregeurope.eu/bridges/>  
4 (10)

Table 1 The berry industry supply chain grid<sup>7</sup>

	Key technologies		Products	Application	Key investment	Promotion	Policy, 3S, industrial modernisation/ agrifood	Partnership/ Markets
<b>Input /raw material</b>	Cultivation development in field or forest (wilderness)	Facilitative: ICT and logistics	Cultivars, lines, material from specified production	Correct raw material to correct process	Plant breeding	Economic sustainability	Rural (innovation) policy	Horticulture, agriculture, forestry,
<b>Harvesting</b>	Harvesting technology	Primary supply networks	Harvester: robot or hand-held tools	Intensification of the harvesting process	Automatic, robotics	Sustainability, naturalness	(Rural) Innovation policy	Robotic, sensor technology markets
<b>Storing</b>	Storage manufacturing	Logistics	Optimization	Balancing of the input to processing	Renewable energy, material efficiency	Clean technology	Energy and climate policy	Energy technology
<b>Cleaning</b>	Sorting, cleaning, grading – utilization of side flows	Robotics, blockchain technologies	Fresh products	Food and food ingredients	Automatization	Naturalness, organic, freshness, cleanliness, health impacts, sustainability	Nature-based innovation, clean investment, competition, health, SDG metrics	Manufacturing
<b>Processing</b>	Extraction – utilization of side flows, deoil	Assembling critical masses, stabilizing (drying and freezing)	Berry juice concentrates, berry rfc juices and syrups. Purees with seeds.	Food, feed, end ingredients	Extraction facilities- concentration –(hot water, ethanol, supercritical I-CO <sub>2</sub> circulation	Naturalness, organic, freshness, cleanliness, health impacts, sustainability, techn. quality	Nature-based innovation, clean investment, competition, health, SDG metrics	Food technology
	Dewater, dry, deoil, grinding		Berry powders for feed, food	Food, feed, cosmetic ingredients	Mill/grinder, separator, drier, concentrator SFE	Naturalness, organic, cleanliness, health impacts, sustainability, techn. quality	Innovation (purity), clean investment, competition, transparency, health, SDG metrics	Food technology, cosmetics technology
	Functional food and cosmetic ingredient processing	Critical quality of the raw material, wide spectrum	Aromatic ingredients, functional polyphenolics, seed oil, fibre, stains	Cosmetics	Extraction facilities- concentration –(hot water, ethanol, supercritical I-CO <sub>2</sub> circulation	Naturalness, organic, cleanliness, health impacts, sustainability, techn. quality	Innovation (purity), clean investment, nature-based competition, transparency, health, SDG metrics	Cosmetics technology
	Consumer product processing	Encapsulation (micro, nano) from the extract during the drying process	Consumer product for feed, for food, for cosmetic	Consumer products in combination with oat ingredients (together with Valio and Dermosil etc.)	Food technology investments	Taste, applicability, naturalness, organic, health impacts, cleanliness, sustainability, image building	Health, food, Innovation (purity), clean investment, nature-based competition, transparency, SDG metrics	Food, feed, health care, hotel services, sports, fashion and life style enterprises and NGOs

Table 1 Criteria for identifying regional value-chain related peaks and valleys

Criteria	Competitiveness measures	Data collection methods
Business	Turnover, exports, employment, location quotient	Statistical data and statistical analysis
Product	Product range, product added value, product innovation, exports	Statistical data and statistical analysis
Research	On-going research programmes dedicated to addressing the selected domain.	Field data (interviews) with research units in the region. We are seeking concentrations of research
Research results, solutions	Patents, registered IPR, TRL achievement level in projects related to the selected industry.	Review of patents; field data (interviews) with research units in the region.
Skills available	University faculties and educational programmes including technical education dedicated to improving entrepreneurship, management and implementation skills in the selected industry.	Review of educational programmes in the region; field data (interviews) with educational units in the region.
Policy enablers	Strategies and project calls for (i) increasing research inputs to product development; (ii) bringing innovations to market; (iii) commercialising research; (iv) supporting national & interregional collaboration for technology transfer; (v) entrepreneurship programmes in diversified domains of traditional sectors; (vi) incentives for attracting investments related to in- shoring and / or re-shoring evidence-based potential.	Field data (interviews) with educational units in the region.

Table 1 Summary of the value chain (VC) mapping approach.

Value chain mapping based on supply chain linkages								
	Key technologies	Products	Application	Key Investment	Promotion	Policy, 3S, industrial modernisation/ agrifood	Partnership/ Markets	
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# Application of the VC mapping tool

- **STEP 1** Selection of value chain and definition of the supply chain grid.
- **STEP 2** Selection of the criteria for linking the supply chain grid to regional competitiveness. Contracting agency and experts select among the criteria proposed in Table 2 for the value chain mapping. In general, it is expected that the larger a regional economy, the more the criteria will be focusing on quantitative assessments.
- **STEP 3** Data collection through desk research & statistical analysis; data collection through face-to-face interviews with research and education institutions
- **STEP 4** Analysis of the data. Identification of regional peaks and valleys and of the region's positioning in the concrete industry's value chain curve and the potential of the region to move in more competitive position. In-shoring, re-shoring, and near-shoring recommendations are made: the experts carrying out the value chain mappings, in collaboration with the contracting organisations
- **STEP 5** Formulation of initiatives and implementation of the selected options among the recommendations made in Step4.

# Value chain mapping methodology

## STEP 4 & STEP 5 Decide initiatives

- Where to focus investments, how and why (in-shoring and re-shoring)
- What type of interregional partnerships to seek (near-shoring; without excluding technology transfer)
- Alternatively, regions with economic and / or RIS3 relatedness, might start their collaboration by mutual value chain mapping.
- Match making sessions are needed: research to business, business to business, research to research.



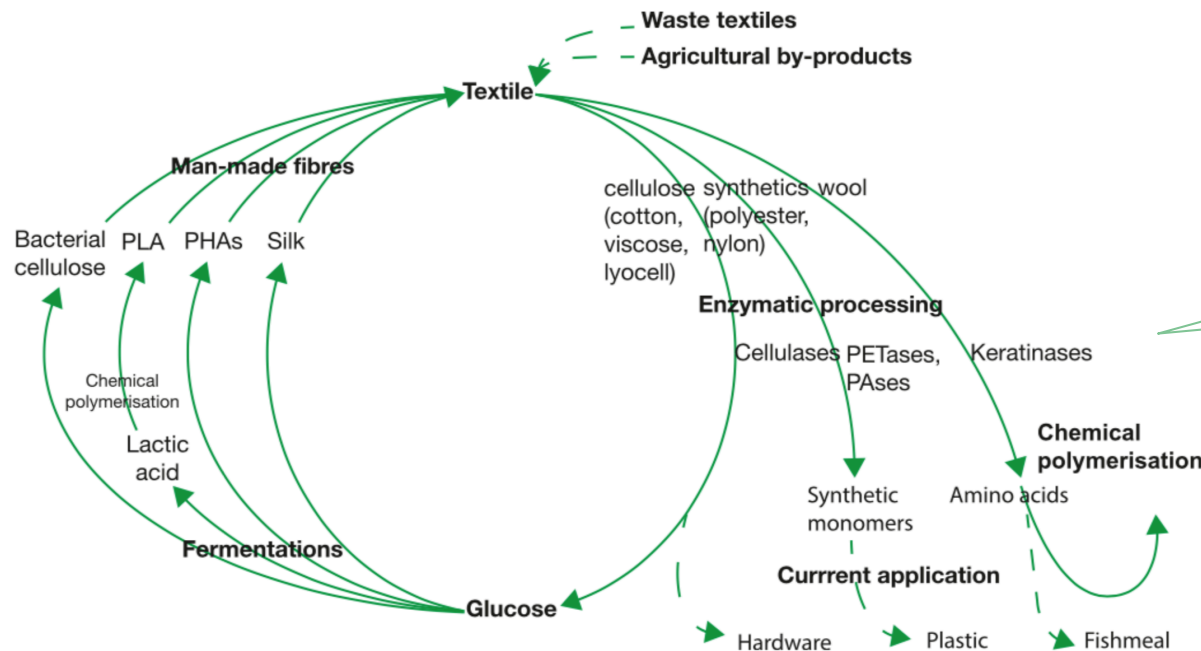
# Example from Helsinki - Uusimaa: Renewable & recyclable textiles value chain mapping

VALUE CHAINS AS ECONOMIC & REGIONAL DEVELOPMENT INSTRUMENTS, based on

— (1) The EC’s 2020 New Industrial Strategy and the 2021 Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s recovery, {SWD(2021) 351 final} - {SWD(2021) 352 final} - {SWD(2021) 353 final}, page 10: “The Commission will work in close cooperation with the relevant stakeholders to identify measures to reinforce the EU position in global value chains, including by strengthening and diversifying external trade, creating new opportunities also for low- and middle-income countries”.

— (2) A New European Innovation Agenda, {SWD(2022) 187 final}: “Help create “regional innovation valleys” that will strengthen and better connect innovation players through Europe, including in regions lagging behind.”

*Journal of Cleaner Production 326 (2021) 129325*



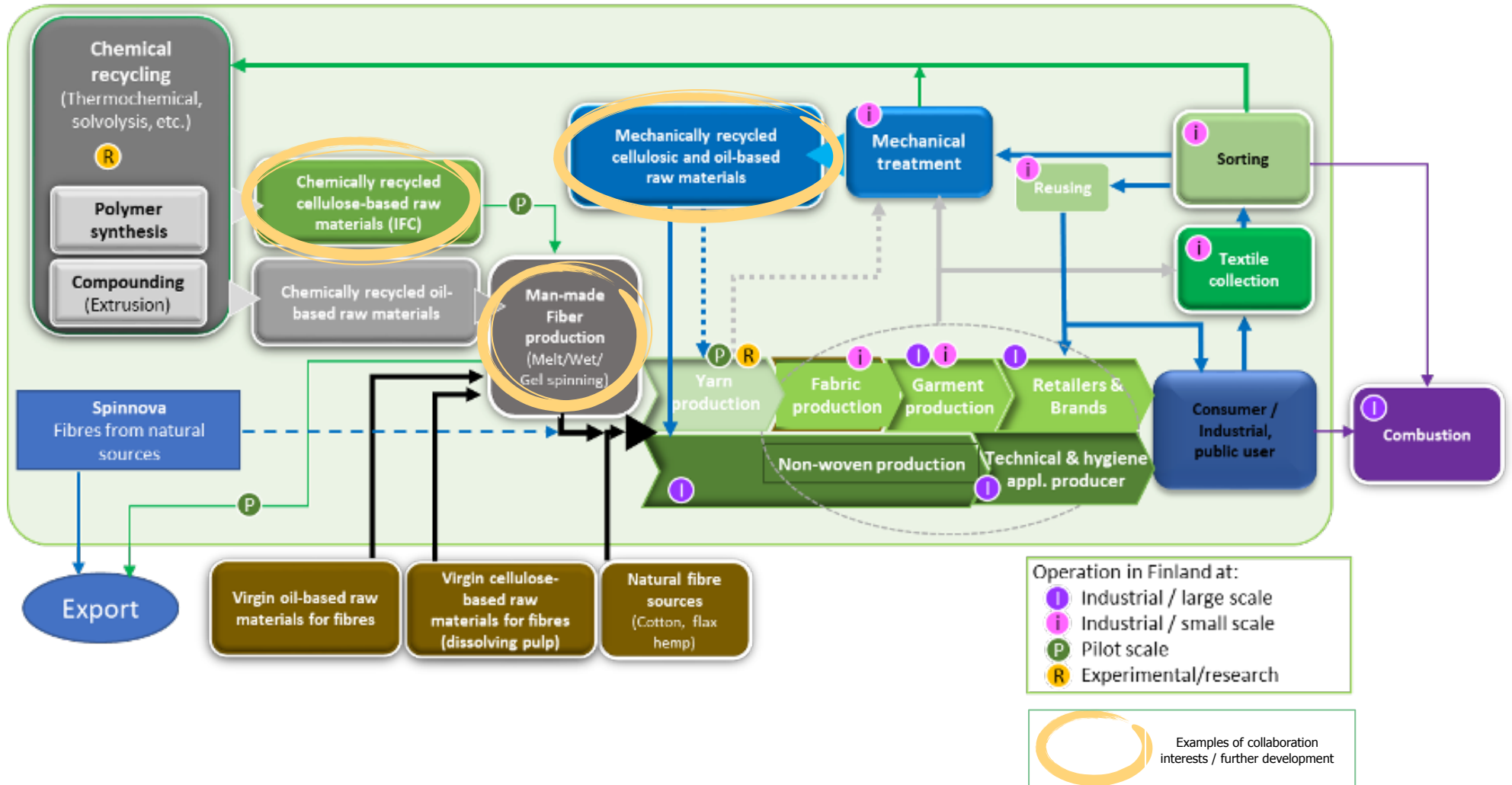
Renewable and recyclable textiles value chain map as a concept. Issue is, (i) where is a region located within it, and (ii) what kind of potential initiatives it generates, raises.....

Fig. 1. Establishing a closed-loop bio-based process for cellulose-based textile recycling routes.

## 2.2. Mapping of case studies for textile recycling in mechanical, chemical and bio-based processes



# Example from Helsinki - Uusimaa: Renewable & recyclable textiles value chain mapping



VTT Source: CUSTOMER REPORT VTT-CR-00622-22; page 10

<https://uudenmaanliitto.fi/wp-content/uploads/2022/09/Textile-value-chain-mapping.pdf>

# Example from Helsinki - Uusimaa: Renewable & recyclable textiles value chain mapping

- 1.- STRATEGIC OBJECTIVE: renewal of the textile industry based on e.g. 0-harm (no plastics) textiles.
- 2.- END MARKET OBJECTIVE: primarily and initially fibres; secondarily clothing based on new fibres.
- 3.- VALUE CHAIN MAPPING: in addition to textiles, associated research, dedicated higher education and innovation infrastructures
- 4.- STRENGTHS AND DEVELOPMENT INTERESTS: mechanically processed cellulose, chemically processed cellulose, man-made fabrics
- 5.- INTERREGIONAL COLLABORATION
  - 5.1 Positioning of the interested BERRY+ regions in the value chain (positioning can be on end product, production technologies, design, distribution, production of intermediate goods, raw materials, research priorities, ...)
  - 5.2.- Discussion on collaboration options, priorities and funding
- 7.- NEXT STEPS
  - 7.1 Regional / national initiatives
  - 7.2 Interested regions
  - 7.3 Funding options
  - 7.4 Meetings, initiatives concepts and project preparation
- 8.- TIMETABLE

# Lessons learnt / critical aspects

- 1. The competences of the expert who made the supply chain grid:** The person who is making the supply chain map is a high-level science & industry expert. Our experience is that anything less than that reduces the effectiveness and, most importantly, the potential understanding of the issues at hand.
- 2. The competences of the expert who made the data collection, the statistical analysis and the interviews:** mapping the regional peaks and valleys, requires a statistician and a regional economic developer. We have researched how the identification of the peaks and the valleys can be linked to current regional statistics and to regional competitiveness, and also what are some unknown or underutilised strengths.
- 3. The on-going collaboration between contracting and the contracted (i.e. the experts) organisations and especially the active & positive involvement of regional policy makers.** The value chain mapping findings have to be mainstreamed into development initiatives. They relate to in-shoring, re-shoring and near-shoring of value chains. Regional authorities and policy decision makers need to be involved to
- 4. The collaboration between and among regional authorities that are participating in the same value chain.** It starts from the national level and proceeds to European level. The near-shoring will start through such initiatives that require deeper understanding and MoU confirmations.
- 5. Continue improving the methodology, and researching further how it can be systematised, and liaise with more complementarity mapping tools.** We remind that our methodology has been conceived as a complementary approach to that introduced by GP7 (Balland & Boschma 2019<sup>[1]</sup>) which identifies interregional linkages based on the technologies present in patents. To identify interregional complementarities, requires that two regions interested in the same value chain, are making in parallel the value chain mapping or, that thanks to known performance of the region and / or the RIS3 planning studies, such complementarities are indicated.

<sup>[1]</sup> Pierre-Alexandre Balland and Ron Boschma (2019). SMART SPECIALISATION: BEYOND PATENTS. Project 2018CE160AT089/090 Final report.

Pierre-Alexandre Balland, Ron Boschma, Joan Crespo & David L. Rigby (2019) Smart specialization policy in the European Union: relatedness, knowledge complexity and regional diversification, *Regional Studies*, 53:9, 1252-1268, DOI: 10.1080/00343404.2018.1437900. To link to this article: <https://doi.org/10.1080/00343404.2018.1437900>.

Pierre-Alexandre Balland & Ron Boschma, 2019. "Mapping the potential of EU regions to contribute to Industry 4.0," *Papers in Evolutionary Economic Geography (PEEG)* 1925, Utrecht University, Department of Human Geography and Spatial Planning, Group Economic Geography, revised Sep 2019.

# Discussion

## MORE INFORMATION

Method developed during and by the BRIDGES project partners.

Value chain mapping methodology available here: [https://projects2014-2020.interregeurope.eu/fileadmin/user\\_upload/tx\\_tevprojects/library/file\\_1665894195.pdf](https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1665894195.pdf) .

Example of value chain mapping report, on renewable and recyclable textiles, Helsinki-Uusimaa, available here: <https://uudenmaanliitto.fi/wp-content/uploads/2022/09/Textile-value-chain-mapping.pdf>

## DISCUSSION

## THANKS & CONTACTS

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