ÖSTERBOTTENS FÖRBUND – POHJANMAAN LIITTO

Enhancing Circular Economy

Perspectives from the experience of the LARS-project

By Jerker Johnson

- Led by the Regional Council of Ostrobothnia it brings together a partnership of 10 Public authorities and/or research institutions in Poland, Latvia, Lithuania, Germany, Norway, Sweden and Finland. It builds on the Ostrobothnian appoach to S3

- It goes trough 5 steps: 1) Mapping of intervention areas; 2) Gap-analysis; 3) Transnational learning; 4) Policy transfers; 5) Communication. (See: https://www.lars-project.eu/)

- It corresponds to the EC proposal for the new interreg period: ”Building on successful pilot actions 2014-2020, the Commission proposes to create **Interregional Innovative Investments**. Regions with matching ”smart specialisation” assets will be given more support to build pan-Eurpean clusters in priority sectors such as big data, circular economy, advanced manufacturing or cybersecturity”

- LARS is currently setting in place the building blocks for transnational learning.

LARS mapping exercise

Current challenges as we viewed them on the project onset

Selected Area	Argument for selection	Challenge identified	Policy implication	Message to convey
Advanced productions methods	Low productivity value-added	Integration of national companies	R&D dissemination, hands-on advice	Cohesion policy has to support the field
Bio and circular economy	Establish cooperation, exchange experience	Identification of stakeholders, support of R&D	Coupling of policy instruments	Cohesion policy has to support the field
Technologies for energy production	Transnational cooperation boosting develpoment	Lock-in, inclusions of SMEs and	Increased granularity	Cohesion policy has to support the field
Sustainable energy	Advancement of digital solutions	Cooperation with knowledge producers	Building of platforms	Cohesion policy has to support the field

Towards a circular economy

”Discoveries” through transnational cooperation

- Finnish Goverment program stregthening has an objective of circular economy and the approach is outward looking.
- S3 provides the ”tools” and ”building blocks” for learning and discoveries
- Innovation also lies in granularity
- Value-chain approach:

1) Less intermediate consumption or resources into the production
2) A loop from final consumption into the production
3) Learning on good practices among partners
4) Conclusions on policies

Energy Value-Chain

Example from Ostrobothnia

Value chain for Energy technology products (electric motor, ship engine, power facility)

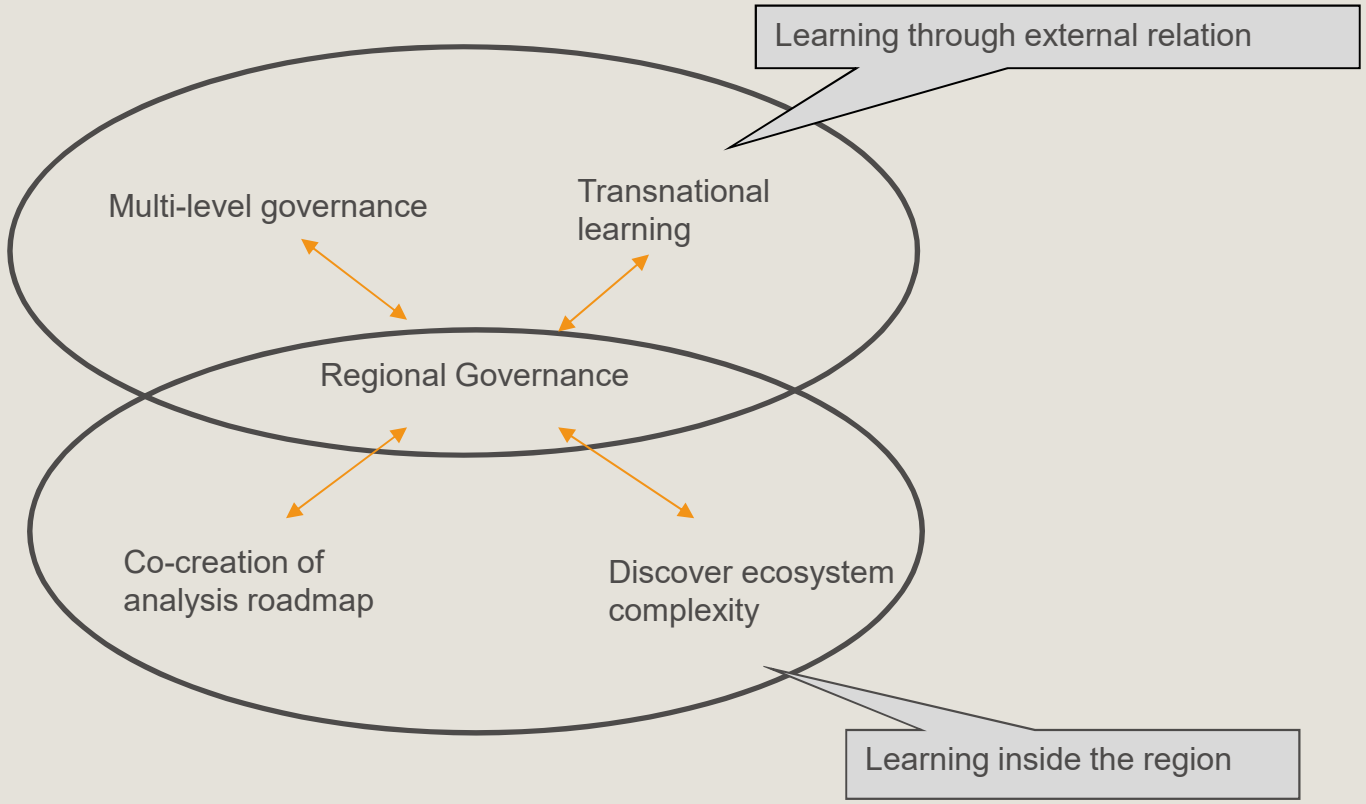
	End product	Level 0 (optional)	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Core processes	Electric motor/Production facility/ship engine	Service	Distribution	Testing	Assembly	Parts	Design	Customer inter-action
Supporting processes		Logistics	Logistics	Quality inspection	Logistics	Purchasing	R&D	Marketing

Mapping of value chains
LARS partner, example

LARS Value Chain Model

Region	Lithuania					
Area of Intervention	The advanced manufacture for flexible manufacturing systems					
Product	Flexible manufacturing systems for wood, food, metal and other industries					
	Simplified SWOT		Core Business		Supporting Organisation	
Value Chain Level	Strengths	Weaknesses	Name	NACE Code	Name	NACE Code
Level 1 Design/Redesign/Development	• There are at least several good companies who try to enter this level of the value chain; • Priority in smart specialization strategy;	• Lack of critical mass of companies working at that level; • Lack of cooperation between companies and research institutions; • Lack of competences ; • Lack of knowledge about international value chains and weak international cooperation; • Dominance of contract manufacturing, lack of own products; • High dependence on cheap labour.	Design: • UAB Entech group; • UAB Factobotics; • UAB Elinta;	71; 72; 74	Design: • UAB GTV; • Panevėžys centre of mechatronics (applied R&D); • Lithuanian digital innovation hub for robotics (matchmaking/cooperative research); • Center for physical science and technology (applied R&D).	71; 72; 74; 94
Level 2 Raw Material/Secondary Raw Material (Farming; Manure Production; Material Examination; Silviculture; Harvesting)	• Good collaboration with suppliers; • Growing need for raw materials; • Good availability of components of necessary materials;	• Fluctuating prices of raw materials (metals); • Innefficient usage of raw materials (Low energy efficiency; No circular economy principal applied; Low level of eco innovations); No economy of scale (high purchasing prices);	Supply of materials: • UAB Eoltas; • UAB Altas IT; • UAB Jupojos technika; • UAB Craft bearings; • UAB Signeda.	45	Supply of materials: • UAB Girteka – GTV; • Association LINPRA (engineering industry).	45; 94
Level 3 Production (Testing; Handling Side Fractions; Pretreatment; Anerobic Digestion)	•Growing intergration into niche export markets (Sweden, Denmark, Finland, Norway, Germany, Belgium, Netherlands); • Highly developed manufacture sector (20 % of GDP, capacity utilization at historical highest level); • Many supporting organizations; • Growing number of companies who offer systematic solutions; • Priority in smart specialization strategy; • Government support schemes (export development, digitalisation of manufacture); • High efficiency; • Developed business relations in target export markets; • Constant investment in productivity; • High quality of human resouces (engineers); • Growing cooperation between companies;	• Risk of slow down in export markets (Eurozone and Scandinavia);• Possible over investment into manufacturing capacity; • Improvement in productivity reached its maximum; • Drastic increase in labour costs and lack of workforce; • Lack of R&D and innovation; • Lack of cooperation between supporting organizations, especially associations; • Significant lag behind EU average in regard to productivity/value added; • Automatisation in European industry - changes in value chain relations	Hardware components manufacture: • UAB Arginta; • UAB Metalistas LT; • BCT (Baltec CNC Technologies); • UAB Rokiškio mašinų gamykla; Systems manufacture: • UAB Rifas; • Artilux NMF; • Horas MPM; • Terra IT; • Indeform UAB.	25; 28; 71; 74; 26; 27	Hardware components manufacture: • UAB Technologiniai valdymo sprendimai; • UAB Aiva Sistema; • Association LINPRA (engineering industry); • Lithuanian robotics association; • Association Infobalt; Systems manufacture: No active supporting organizations (maybe German chamber of commerce only).	94; 71; 74

The Entrepreneurial Discovery Process
A perspective of the field

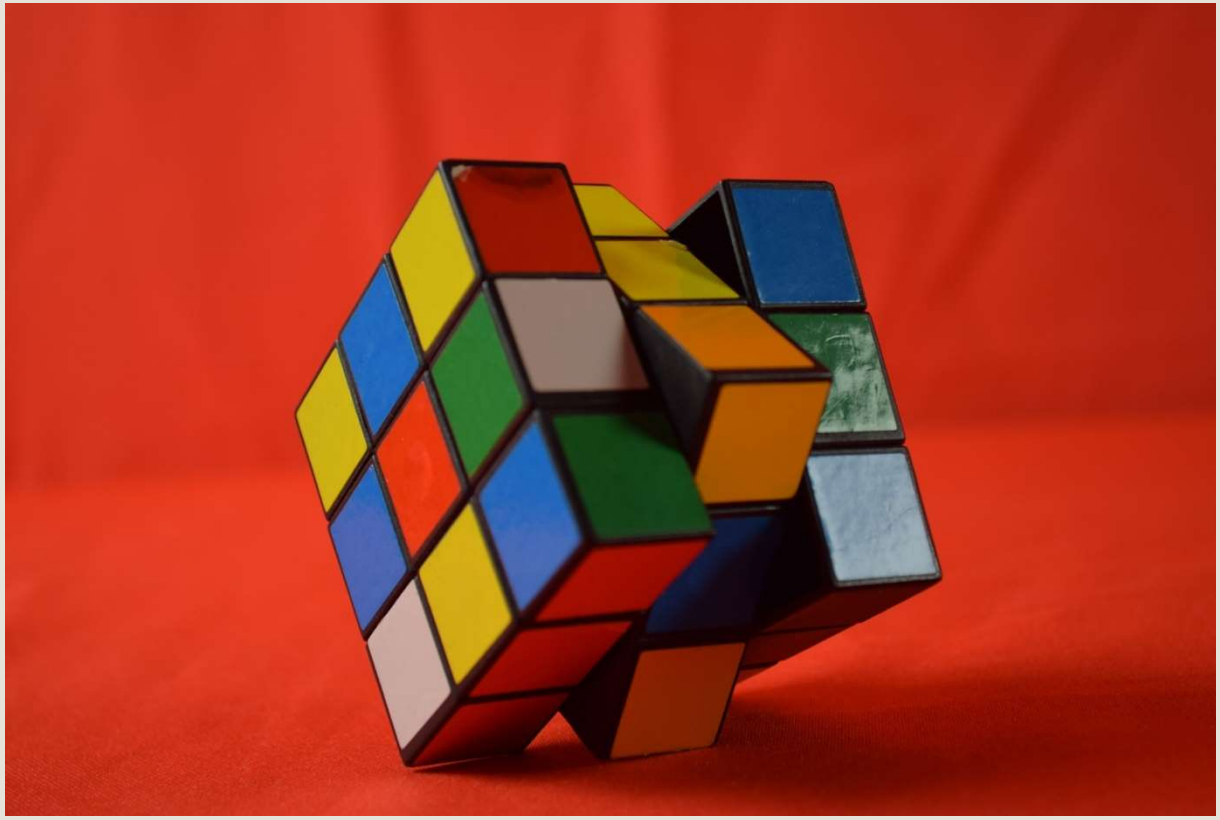


Building stakeholder capacity

How regions can work together to receive ”critical mass”

Activities	Outputs	Expected results
“Story telling”	Workshops, seminars	Development inspiration
Learning from leaders	SECI - analysing	Guidance for policy development
Learning from “good practises”	Documentation	Training material for policymaking, visualization
Building platforms for experience exchange	Actors know who to turn to outside their vicinity, “critical mass”	Process innovation guidance/procedure for management
Follow-up research	Academic output on how to support regions towards S3	Enhanced understanding of core principles/challenges

Thank you for your attention...



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