



**SOLINSA**  
Support of Learning and Innovation  
Networks for Sustainable Agriculture

Agricultural Knowledge Systems In Transition :  
Towards a more effective and efficient support of Learning  
and Innovation Networks for Sustainable Agriculture

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# How to implement and to turn operational the LINSA concept

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**SOLINSA Training Course**

*The presentation includes examples from the reports prepared by SOLINSA researchers*

**BSC**  
BALTIC STUDIES CENTRE



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# Aims

- The participants understand how the concepts can help a LINSAs “supporter” in his/her daily work
- They are given an illustration of the use of these concepts in the Latvian and other LINSAs experience
- The participants can make links between these concepts and identify actions that help LINSAs to achieve their objectives

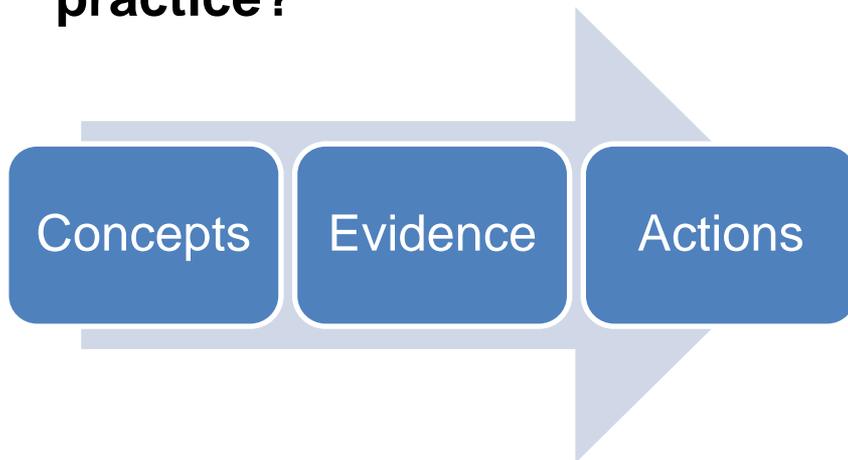
# Method

**1st step: Facilitator's contribution**

**How concepts work in LINSA practice?**

**2nd step: Joint reflection**

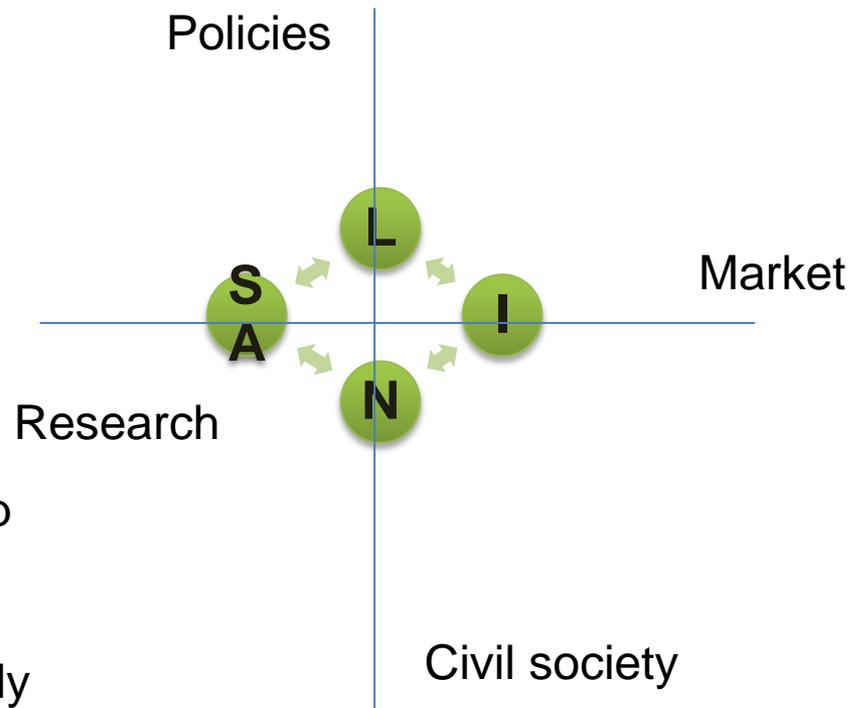
**What an IB can do to help LINSA strategically?**



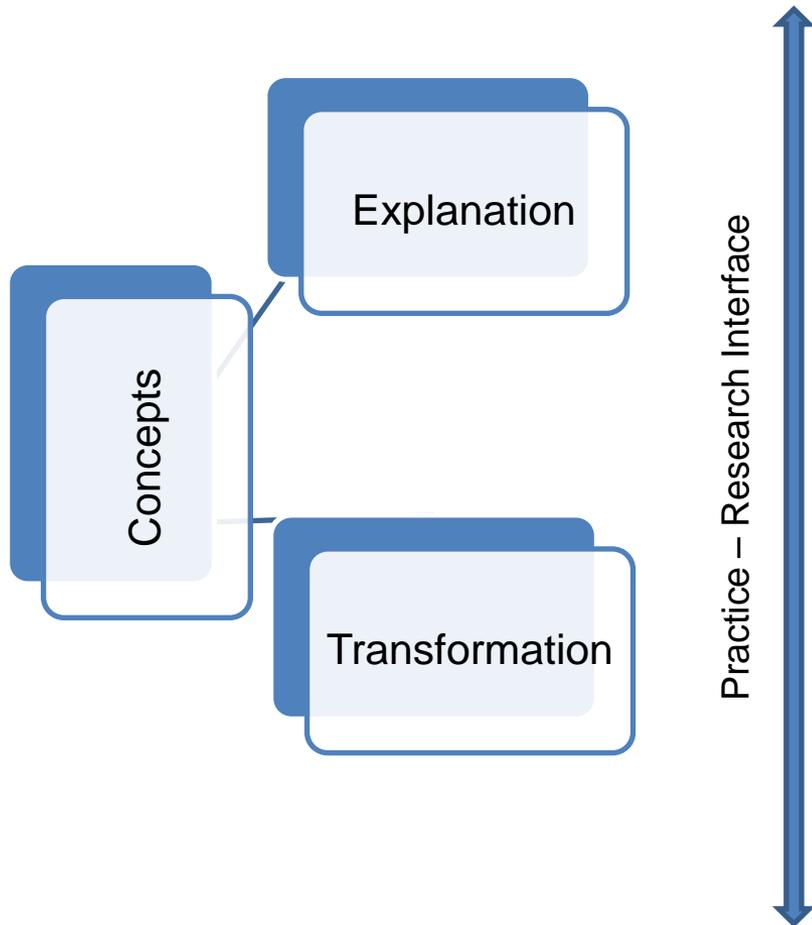
Tools for understanding and action

Tips and examples from SOLINSA cases

What an IB can do to help LINSA? Conceptually and empirically informed IB activities



# How to use concepts?

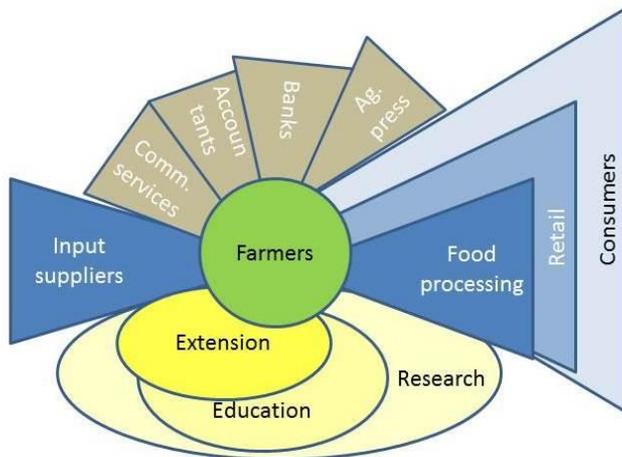


- Concepts are **means for understanding** reality and **tools for changing** this reality.
- Concepts characterise the **main dimensions of LINSIA** agency (composition, participants, interaction, governance, etc.).
- Concepts are **paradigmatic** – they refer to scientific theories (e.g. theories of learning, innovation, etc.), political priorities (e.g. EIP), and social topicalities (e.g. climate change, urbanisation, food security).
- Concepts are **theoretically and empirically informed guidelines** for an innovation broker to orient his/her LINSIA support activities
- Concepts are tools to understand **the object of intervention** (LINSIA, CoP, farmers networks, etc.) and **the subject of interaction** (the same entity). No collective would appreciate a supporter who intervenes offensively.
- Concepts are **praxis oriented** – they project changes and improvements.
- Concepts are **tools for action** – where, why, and how to steward an innovation brokerage activity to support LINSIA capacity to innovate.

# AKIS

## Concepts

- The Agricultural Knowledge and Innovation system (AKIS) is formed by **research**, **education** and **advisory** services, **policy instruments** and **financial** arrangements. AKIS increasingly involves food supply chain actors, input providers and financial institutions (figure from SCAR)



## Examples

The relations between AKIS and LINSAs are varied

Some LINSAs originate from AKIS (F Charter, G Women). Other LINSAs develop outside the traditional AKIS (I Crisp, S Naturlii). Some LINSAs are part of a number of other knowledge systems (health, sustainability, food (HG7, N Care, E B&H)). Other LINSAs set up their own, independent AKIS (E Perm). Older LINSAs tend to be more fully absorbed into the AKIS (G DLG).

L Fruit LINSAs have a strong AKIS relationship, particularly through research and they compensate some deficits of the advisory system.

## What IB can do?

Connect specific parts of AKIS with specific farmers' needs

In L Fruit the research institutes provide technical knowledge; the Association provides information about agricultural policies; LUA and Horticultural College offers courses, etc.

Use appropriate stakeholder-tailored forms of learning

Field days, demonstrations, seminars, consultations, handbooks, learning videos, websites, databases, study tours, Q&A, etc.

Create joint R&D projects between farmers and AKIS institutions

Assume multiple roles and positions

Advisor + coop leader; researcher + consultant. etc

# Innovation

## Concepts

- **Incremental** (first order) innovation is a gradual change where the higher level rules, actors and artefacts remain largely unchallenged. **Radical** (second-order) innovation is concerned with changing these overarching rules. **Social innovation** is equally important as technical and economic ones.

## Example

Latvia Fruit Growing Network displays elements of both incremental and radical innovation

Incremental in the sense of building on historical knowledge; radical in the sense that it creates new economic spaces for smallholders and commercial orchard owners. Also retro-innovation takes place in terms of bringing back traditional methods and varieties sidelined by more intensive methods of production.

Innovation targets change along the development of LINSAs  
Production > marketing > consumer education > public health

## What IB can do?

Support incremental innovation

By activating small CoPs, sharing of knowledge

Support radical innovation

By connecting different partners in a larger LINSAs (farmers, researchers, retailers, policy makers) and connecting LINSAs with more distant actors (e.g. industry)

Support retro innovation

By valorising traditional and local knowledge and skills

Balance social, technical and economic innovations

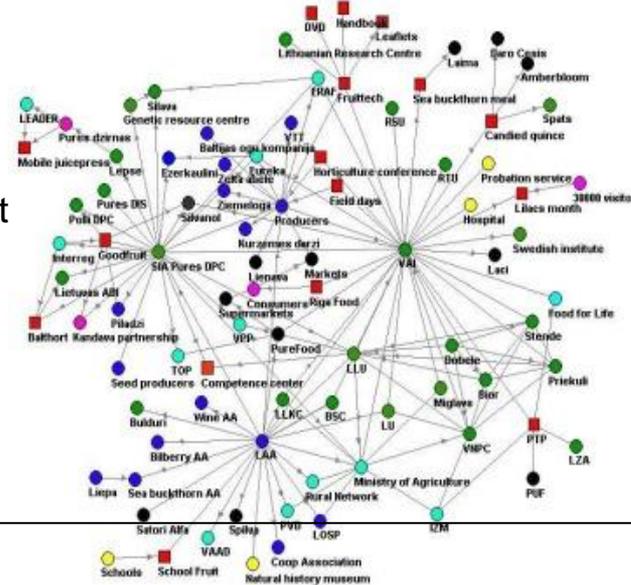


# Network

## L Fruit – example of hybrid, multifunctional network

### Concepts

- Networks connect **individuals** and **organizations** and can be seen as a relational pattern through which flows of **material** and **immaterial** resources occur and innovations happen. (Brunori et al 2013). SOLINSA project demonstrates that agricultural and rural innovations rather happen in **complex network-type interactions** than results from top-down linear knowledge transfer.



- Producers and their organisations
- Research and advisory
- Public sector
- Policies
- Business companies and their organisations
- Broader public and NGOs
- Boundary objects, events

### What IB can do?

#### Understand the network

Study the network, map it with stakeholders, identify key ties, nodal actors, subgroups, etc. Discuss with stakeholders how the network holds together, how parts relate to the whole, what are the mechanisms of integration (shared values, rules, common objectives, joint activities, governance structures, etc.)

#### Manage relationships (managing relationships was identified as key issue in many LINSAs)

L Fruit identified managing relationships with retailers and consumers as important. The F Charter mentioned managing relationships with government and consumers as a priority. I Crisop envisages a need for a trained animator to enable the dialogue among organic producers, consumers, associations, cooperatives

#### Develop network management skills

# LINSA

## Concepts

- **LINSA** are defined as networks of **producers, consumers, experts, NGOs, SMEs, local administrations** and components of the formal **AKS**, that are mutually engaged with common goals for **sustainable agriculture** and rural development - cooperating, sharing resources and **co-producing new knowledge** by creating conditions for communication.

## Examples

SOLINSA project reveals a great diversity of LINSA

- Local scale, national and transnational
- Small, simple, homogenous networks and large, complex, diverse networks
- Top-down to bottom-up by origin
- Distant and well connected with AKIS
- Producer and consumer driven
- Engaged with agriculture, services, energy, RD activities

There are some key requirements for a network to become a LINSA

- Diversity of stakeholders
- Commonality of objectives
- Sufficient degree of mutual engagement
- Presence of innovation
- Ongoing reflection and propositions of sustainability

Not all networks are LINSA!

## What IB can do?

- Fulfill 'minimum criteria' for a LINSA
- Enforce integrity mechanisms and procedures (rules, standards, etc.)
- Facilitate stakeholder participation
- Use boundary objects to support joint activities
- Manage network relations internally and externally
- Listen to LINSA needs, organise reflection workshops
- In case of hybrid LINSA collaborate with different management centres



# Niches, regimes, landscape

## Concepts

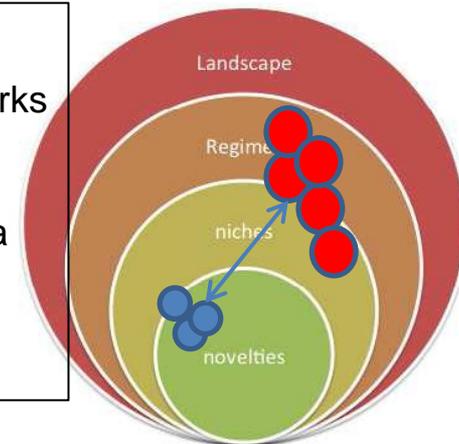
- In transition studies innovation is understood as structuration of socio-technical systems (Geels 2004). Four levels are distinguished: **novelties** are new ways of doing things, experimentation, new framing of issues associated with uncertainty and high risk; **niches** are aggregated and coordinated networks, however limited in size; **regimes** are set of rules within a given system which enable or hamper novelties and niches; **landscape** is macro context for innovation.

## Example

- Some innovations start as novelties and develop into niches
- Other innovations are stimulated by political regime shifts
- Novelty - regime – niche relations can be contradictory  
The Latvian biogas LINSA is an example of such contradiction. It expanded after a political decision in 2009 to provide state support for green energy and distribute quotas to biogas producers at a favourable electricity procurement price. However, permissions were given to operators outside agriculture and most gains were captured by a small number of producers. The impact on the environment and RD was dubious. The political regime, in fact, created an unsustainable business niche and put constraints on grassroots innovations in biogas. The massive state support did not encourage joint interests and did not stimulate LINSA development. A new, more balanced, package of support is therefore now being developed.

## What IB can do?

- Try to be a part in regime formulation, engage in wider policy networks
- Collaborate with transparency organisations to advocate for public interests
- 'Effective reformism' - the idea of melding a range of novelties into a coherent whole, which leads to a system innovation
- Strategic niche management – the idea of aligning niches
- Build relationship between conflicting parties



# Conflict management in Biogas LINSA

## What IB can do?

- SOLINSA researchers together with several Biogas LINSA leaders organised a **workshop** to discuss the controversial developments in the biogas production sector and possible LINSA responses. The workshop provided a **non-partisan platform** for stakeholder exchanges. This enhanced LINSA members' participation, joint problem discussion and identification of solutions.

## Conflict management workshop



## IB activities and methods

- A neutral dialogue platform for conflicting parties
- 'Five good things about biogas'
- Critical friend discussion (listening to each other)
- Formulation of positive statements



## Outcomes

- Improved communication in LINSA
- Participation of different stakeholders
- Improved communication with MoE
- Sharing good practices  
e.g. Collaboration between biogas producers, municipalities and SMEs to develop a market for heat energy

# Learning

## Concepts

- Theory distinguishes **first level** (issue specific) and **second level** (network specific) learning. Learning in LINSAs can be **formal** and **informal**. It needs supportive **infrastructure** (AKIS, professional associations, etc.) and **communication structures** (websites, publications, etc.) for information retrieval. **Social** or **collective learning** occurs within peer-to-peer groups. Social learning interacts with **individual learning**. **Organisational learning** happens between institutions and entities of LINSAs and characterises its development history expressed as events, common principles, rules and charters.

## Examples

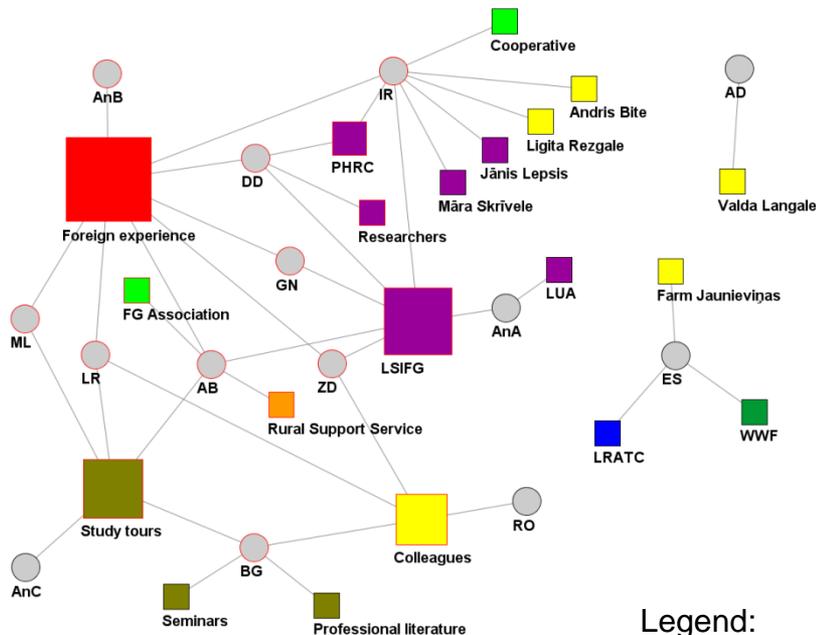
- Learning in small CoPs might be limited
- Wider networks provide access to diverse knowledge
- Knowledge flows in various interactions in L Fruit:
  - Formal:
    - Contract research: Researcher (R)  $\leftrightarrow$  Producer (P)
    - Seminars, dissemination activities: R  $\rightarrow$  P
    - Training courses: R  $\rightarrow$  P
    - Collaborative projects: R  $\leftrightarrow$  R  $\leftrightarrow$  P  $\leftrightarrow$  Industry
  - Informal:
    - Study visits, field days: R  $\leftrightarrow$  P, P  $\leftrightarrow$  P
    - Farmers queries, consultations: P  $\rightarrow$  R, P  $\leftrightarrow$  R
    - Community based learning: P  $\leftrightarrow$  P
    - Public events (Apple day, Strawberry days, farmers' markets, festivals, fairs, excursions etc): R  $\leftrightarrow$  P  $\leftrightarrow$  Consumers
- Learning becomes more difficult when networks enlarge and different worlds interact



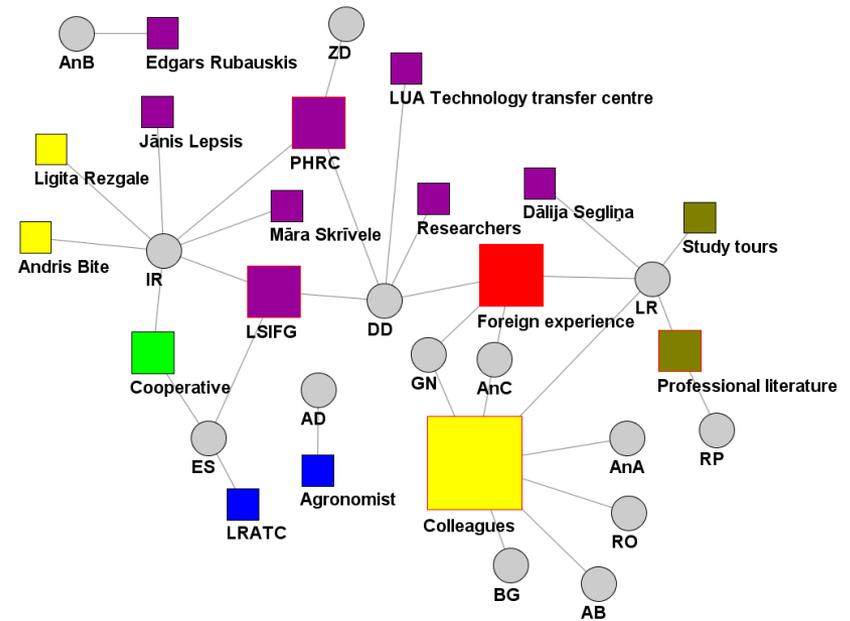
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# Issue learning (L Fruit network)

## Learning new ideas



## Technical learning

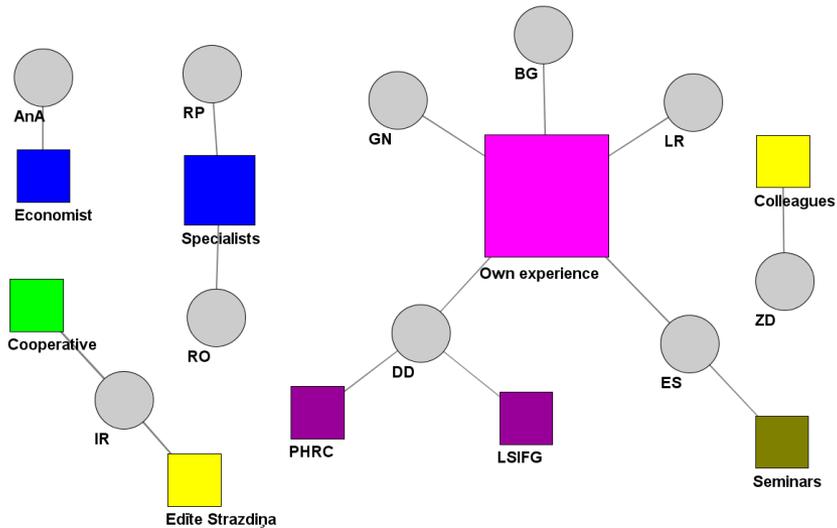


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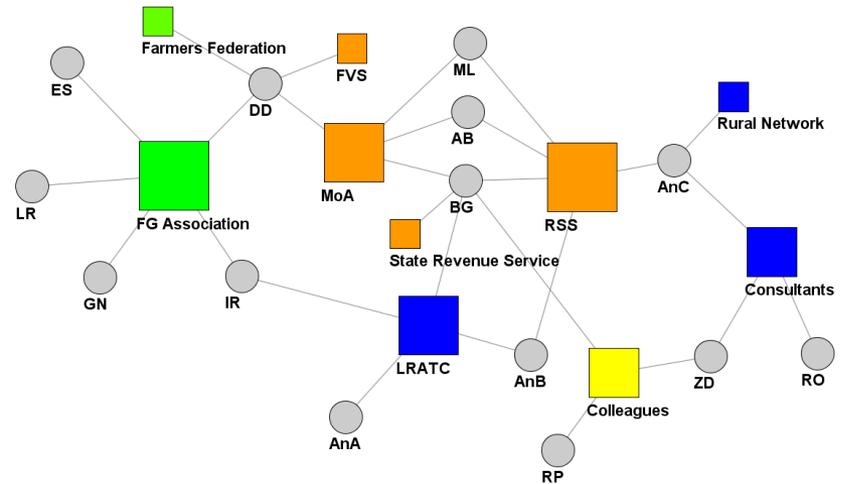
- Yellow – farmers, growers
- Pink – researchers, research institutes
- Blue – extensionists, advisors
- Read – foreign experience
- Green – farmers organisations, cooperatives
- Brown – study tours, training events, seminars, literature, etc.

# Issue learning (L Fruit network)

## Learning about marketing



## Learning about policies



Legend:

- Rose – own experience
- Yellow – farmers, growers
- Pink – researchers, research institutes
- Blue – extensionists, advisors
- Green – farmers organisations, cooperatives
- Orange – policy and state control institutions

# How can IB facilitate learning?

## Findings

- Knowledge flows and learning processes differ by issues of learning
- Learning issues follow different stages of development of the network



## Some tips

- Listen to LINSAs needs
- Conduct a knowledge needs survey
- Organise training activities and knowledge links appropriate to the issue of learning
- Organise study tours, field days



# Facilitation

## Concepts

- Many LINSAs need **facilitation** and **reflection**. Facilitation often is **mediation**. Networked innovations assume **frame alignment**. This process can be facilitated. **Leading personalities** are important. Several facilitation roles can be distinguished, involving “**frame openers**”, “**frame alignment facilitators**” and “**peacemakers**” (Tienkopfs et al 2013).

## Example

In L Fruit a researcher E.K. as an ‘**opener**’ creates learning spaces so that different innovation actors are included (researchers, farmers, consumers, food companies, local administration).

‘Openers’ are usually in top positions in their organisations and sometimes close to decision-makers, they pronounce a public mission of innovation.

‘**Frame alignment facilitator**’ addresses long-term development needs.

The highly visible researcher E.K. framed the need for economic cooperation as a must and related it to strategic development of the whole network.

A role of ‘**peacemaker**’ becomes topical in times of controversy when conflict resolution has to be facilitated.

A trusted biogas producer I.G., recognising that the contradictive issues in biogas network will not disappear by themselves, led a skilful negotiation process.

**Structurally** those kinds of facilitators often belong to independent research or business organisations, they are trusted researchers or practitioners who interact with a broad range of stakeholders.

## What IB can do?

- Identify leading and trusted personalities in LINSAs and collaborate with them
- Collaborate with young farmers, young researchers, postdocs as potential facilitators
- Invent own facilitation roles and strategies

# Boundary objects

## Concepts

- A boundary object is defined as “an entity **shared by several different communities** but viewed or **used differently** by each of them, being both **plastic** enough to adapt to local needs and the constraints of the several parties employing them, yet **robust** enough to **maintain a common identity across sites**” (Star and Griesemer 1989). Boundary objects act as **vehicles for change** by enabling networks of actors to form around a certain design and the vision it espouses, negotiate a shared direction, and enhance collaboration in innovation processes (Klerkx et al 2012, p. 41).

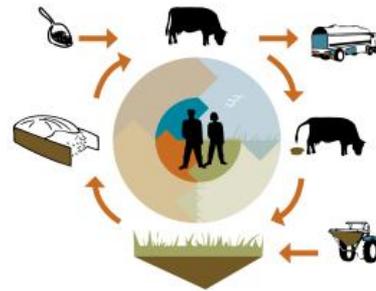
## Classification and examples of BO

Codes of practice  
Strategic papers  
Internal governance rules  
Public events  
Processes of collaboration

Apple day, L Fruit



Production method, N Dairy



Set or requirements



Collaborative meetings, Naturama



Trademark, CH Naturli



# Boundary work

## Concepts

- **Boundary work** connects actors (LINSA and AKIS, producers and consumers, research and practice). Boundary work happens around boundary objects. BW forms **arenas for interaction**. When **engaged** in boundary work, people do not need to share the whole life-world but **achieve common understanding** about particular issues and practices. BW is **collective negotiation** about issues of common interest (plant variety, method of production, etc,) – people have to agree.

## Examples

### In Hungarian Naturama case

boundary work is organised around its members' interest in doing their everyday development work better, to improve institutional and legislative environment in the national rural development arena.

### In Latvian Fruit LINSA

boundary work is developed around such common interests as appropriate varieties, agrotechnology, plant protection, storing and sorting, marketing, consumer/public education. BW drives participants for collaboration.

### In Crisoperla Association (IT)

boundary work links the technicians, consumers and farmers and connects the Association with the National Association of Organic Agriculture. The result of boundary work was a vision document for organic agriculture.

### In Permaculture Association (UK)

the boundary work is mostly internally oriented at accommodating new members; there are boundary spanners who connect to groups with similar ideals like the Transition Movement

## What IB can do?

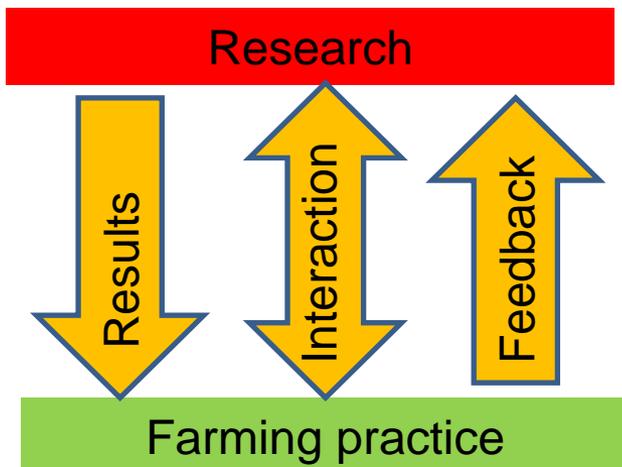
- Design and develop a BO to generate interaction
- Use different roles: 'boundary spanner', 'roamer', 'outpost'
- Change and develop BO over time

# EIP

## Concepts

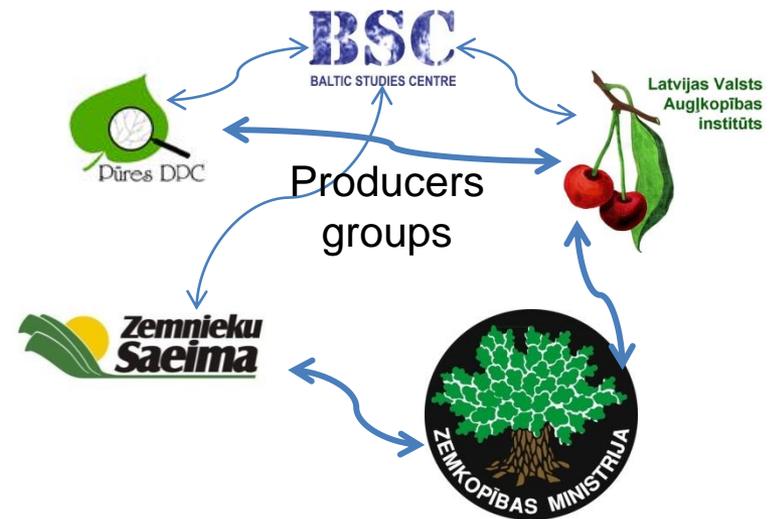
- European Innovation Partnership (EIP) “Agricultural Productivity and Sustainability”** adheres to the **interactive innovation** model which focuses on forming partnerships - using bottom-up approaches and **linking** farmers, advisors, researchers, businesses, and other actors in **Operational Groups**.

Closing innovation gap (Canjels 2012)



## Example

An idea of an OG resulting from Solinsa and LINSa collaboration

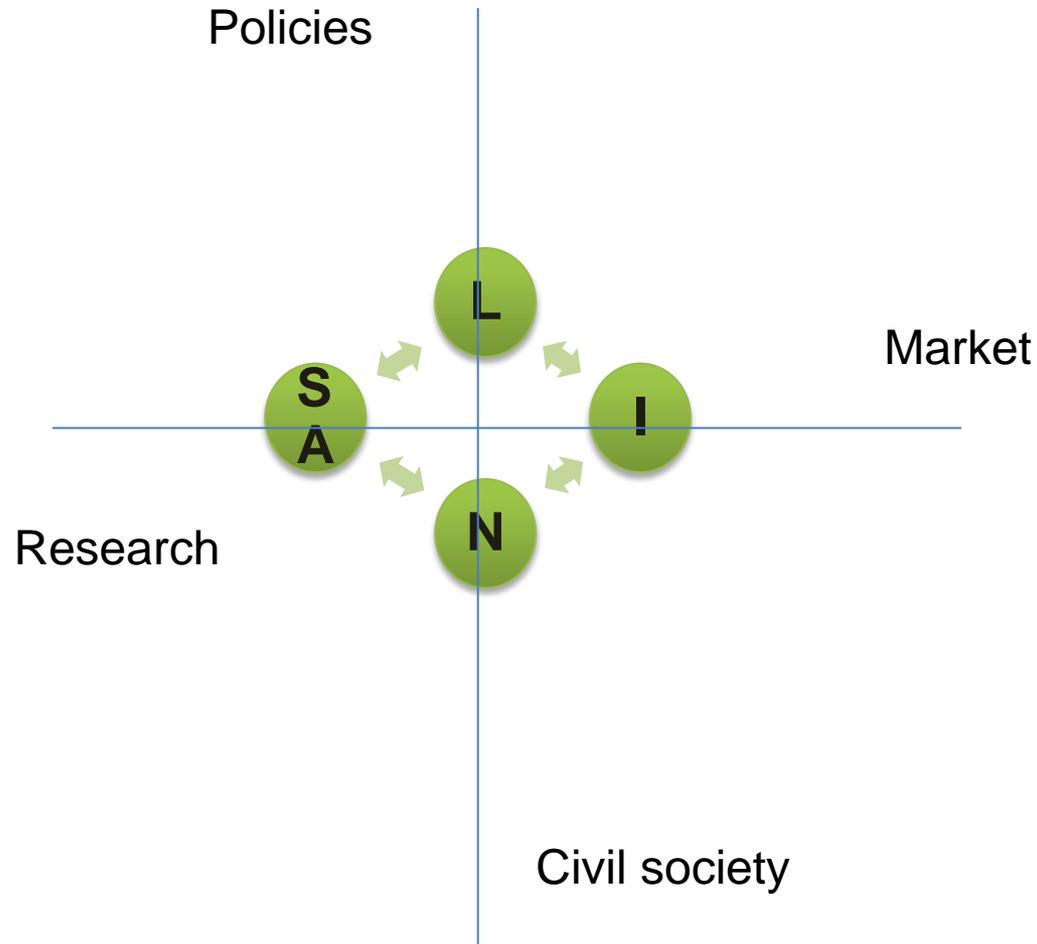


### What IB can do?

Innovation broker is a connector between the managing authorities and possible partners of the OG.

# Joint reflection

## What an IB can do to help LINSAs strategically?





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