

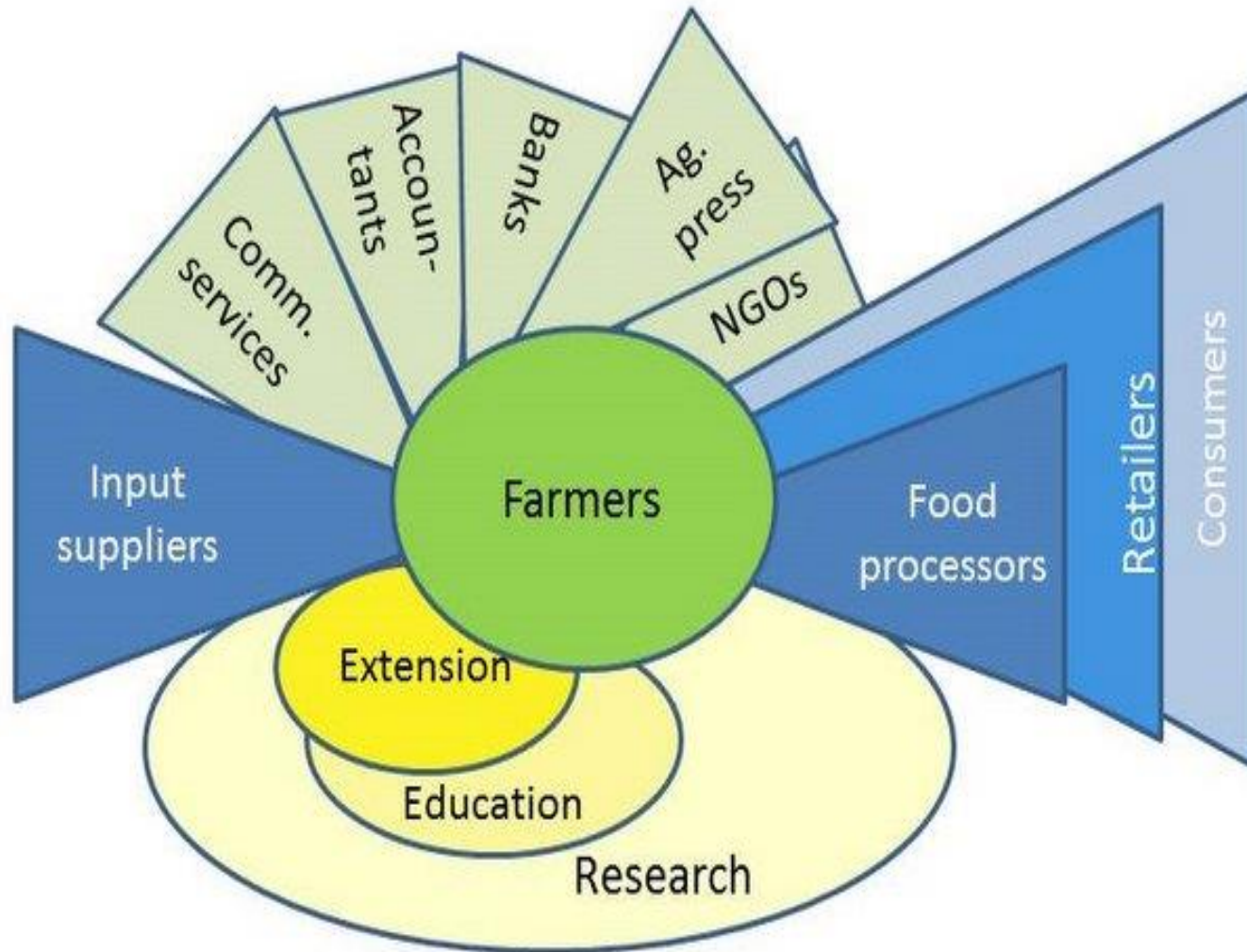
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## **DEVELOPING THE HUMAN AND SOCIAL CAPITAL – PROMOTING INNOVATION THROUGH THE AKIS**

**SCAR-swg Agricultural Knowledge and Innovation  
Systems**

# THE FOOD CHAIN AND AKIS



AKIS ARE QUITE DIFFERENT BETWEEN COUNTRIES  
/ REGIONS / SECTORS – E.G. EXTENSION

SOME COUNTRIES HAVE RESTRUCTURED  
THEIR AKIS CONSIDERABLY

AKIS COMPONENTS ARE GOVERNED BY  
QUITE DIFFERENT INCENTIVES



# INNOVATION BY INTERACTION IN NETWORKS


- Innovation as a process has strong learning aspects: learn how to do new things, bottom-up.
  - Alternative: force (or pay for) quality standards, mandates
- Thematically-focused learning networks of different actors can help.
- Generating learning and innovation through interactions between the involved actors.
- Members can include farmers, extension workers, food industry, researchers, government and ngo representatives and other stakeholders.

*Is reflected in EIP-Agri: Operational Groups, Thematic Networks, Multi-actor projects*

And well summarized in the paper



# EMERGING TOPICS IN HUMAN AND SOCIAL CAPITAL IN RURAL AREAS – SOME COMMENTS

- Demography (smaller workforce, less food demand, urbanisation) needs more attention in the memo
  - No clear assumptions on EU's delivery model to global FNS: export bulk products to MENA, specialties to China or inputs (seeds, IoT-equipped machines, advice) to Africa or all of them at the same time?
  - More attention to relation food – health (life and neuro sciences will learn us more on what food does to our body and how we make food choices, genetics on modifying food, ict on consumer behaviour)
  - Not only attention to the 3<sup>rd</sup> foresight's Productivity Narrative but also its Sufficiency Narrative (that also has implications on production, e.g. radically new farm systems – algae, insects, vertical farming, meatless meat, food printers)
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# EMERGING TOPICS IN HUMAN AND SOCIAL CAPITAL IN RURAL AREAS – SUGGESTIONS

- *How to organise (new) food and bio-economy chains with new demands and technologies?*
    - Cooperatives, contracts, manage price-volatility, (new) business models, E-platforms, ict-virtualisation, logistics, clusters and agglomeration effects, network management; role of social networks in cooperation, resilience of systems, life cycles.
    - farm take-over/young farmers; management of larger, complex farm structures; risk-management, role of taxes in family farm.
  - *How to manage rural areas under future conditions (emptier, less influence of town and city)?*
    - Social innovation, region-branding, multi-level governance (EU-MS-Region-Village / private-public) in organising public services, paying for eco-services
    - How to prevent a-social behaviour, social inequality?
  - *How to keep cities and citizens interested in and well informed on rural areas and (modern) farming?*
    - Citizen-participation in (agri-)policies, co-creation in products and services, role of urban farming, transition “management”
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# 3 SCENARIO'S TO EXPLORE THE AKIS FUTURE

- **HighTech:** strong influence new technology owned by multinationals. Driverless tractors, contract farming and a rural exodus. US of Europe. Rich society with inequality. Sustainability issues solved. Bio-boom scenario.
- **Self-organisation:** Europe of regions where new ICT technologies with disruptive business models lead to self-organisation, bottom-up democracy, short-supply chains, multi-functional agriculture. European institutions are weak, regions and cities rule. Inequalities between regions, depending on endowments.
- **Collapse:** Big climate change effects, mass-migration and political turbulence leads to a collapse of institutions and European integration. Regional and local communities look for self-sufficiency. Bio-scarcity and labour intensive agriculture. Technology development becomes dependent on science in China, India, Brazil.



# AKIS IN THE 3 SCENARIO'S

	HIGH TECH	SELF-ORGANISATION	COLLAPSE
Uni-versity	A few big Life Science Uni's. Intense collaboration with companies. MOOCs and TEDx's (3 <sup>rd</sup> generation model: innovation)	Many regional universities that specialise. 2 <sup>nd</sup> generation (teaching and research).	Reduced public funding, struggle to keep alive and stay relevant. Back to first generation university (teaching).
Applied research	Moves into (applied) universities.	Moves into applied (higher) education.	Relatively important over fundamental research..
Farm research stations	Public and collective funding ends; disappear	More intertwined with applied research and advisory service.	disappear
Advisory service	Service provided by multi-nationals and their computer-generated advice.	Mix of public extension service and commercial advisory organisations.	Disappear, some help from local do-gooders / lead farmers. Big role of donors



# CAN WE MAKE AKIS FUTURE-PROOF ?

- Experiment with public-private partnerships
- Welcome regions, cities and NGO's as partners
- Create links (cross-overs) with other sectors: Bio-economy, energy, ict, food & health, logistics etc.
- Transdisciplinary, Social dialogue, Governance issues
- Create research-infrastructures that foster collaboration (ERA), that support national / regional research and innovation and help to introduce E-Science (and make savings)
- Don't forget ag. education - link it better in AKIS
- Collaborate with international partners (US, China, India) and better integrate AR and ARD



# EU MARKET FOR RESEARCH AND INNOVATION

- Cross-border collaboration in research could benefit from harmonisation of rules and procedures for commissioning research, to help to create to a more integrated 'market' for research.
- Common research-infrastructures could help to reduce costs, introduce E-Science, create markets for research projects.
- That does not mean that national or regional authorities should give up their strategy and agenda setting processes - but they could adopt such procedures that research institutes could easier match national and international funds.



## Role of EU policy

### Science

- Countries are too small, large spill overs: pool funds
- Compete and collaborate with US, China, India, Africa etc.
- Help re-organisation process in Europe (infrastructures)

### Market driven R&D

- Collaborate with business in Food Chain in PPP
- Experiment with cities, civil society
- Manage spill overs between EU regions

### Innovation in partnership

- AKIS are REGIONAL
- Innovation, not dissemination
- Social dialogue, transdisciplinary
- Organise international exchange for spill-overs (farmers, extension)
- Empower innovation groups in CAP
- Don't forget monitoring (learning)

Thanks for your attention

**SEE THE WEBSITE OF THE SCAR:**

[HTTP://EC.EUROPA.EU/RESEARCH/AGRICULTURE/SCAR/INDEX\\_EN.HTML](http://ec.europa.eu/research/agriculture/scar/index_en.html)

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