

Supply Chain Development in Taiwan

From disconnected towards integrated supply chains

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Contents of presentation

- PPP project activities in supply chain management
- Major observations of Netherlands experts in Taiwan
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- Recommendations on improving Taiwan supply chains
- Case: lettuce industry in the Netherlands

Purpose of the PPP project

The PPP project is focussed on two major challenges of Taiwanese horticulture:

- a. The development of modern sustainable greenhouse production systems, and
- b. The introduction and expansion of modern market and customer orientated supply chains.

PPP Supply Chain Activities

- Visits of NL experts to Taiwan
 - Wageningen UR and companies

- Visits of TW experts to the Netherlands
 - CoA, Research & Extension and companies
 - Study tour vice minister Dr. Wang Cheng-Taung

- Survey of lettuce sector in Taiwan & The Netherlands
(on-going)

Major observations of Netherlands experts

- a. Farmers: often small-scale and not well connected in value chains
- b. Wholesale market: rather product instead of market orientated
- c. Farmers associations: professional, single product and top-market oriented
- d. Supermarkets: more competition on prices instead on quality



Major observations of Taiwan experts

- a. Most important success factor is the cooperation of all stakeholders, i.e. farmers, suppliers, service providers, research institutions and government;
- b. Dutch farmers have a high education and training level;
- c. Dutch farmers are customer, hence, quality oriented;
- d. Innovation is a continuous process in Dutch agriculture.





Major conclusion

- The agro-markets are changing fast
 - Increasing competition on domestic and foreign markets
 - Growing consumer demand for high quality products



- Taiwan agriculture needs to change
 - from traditional farming towards modern farming
 - from production oriented towards market oriented

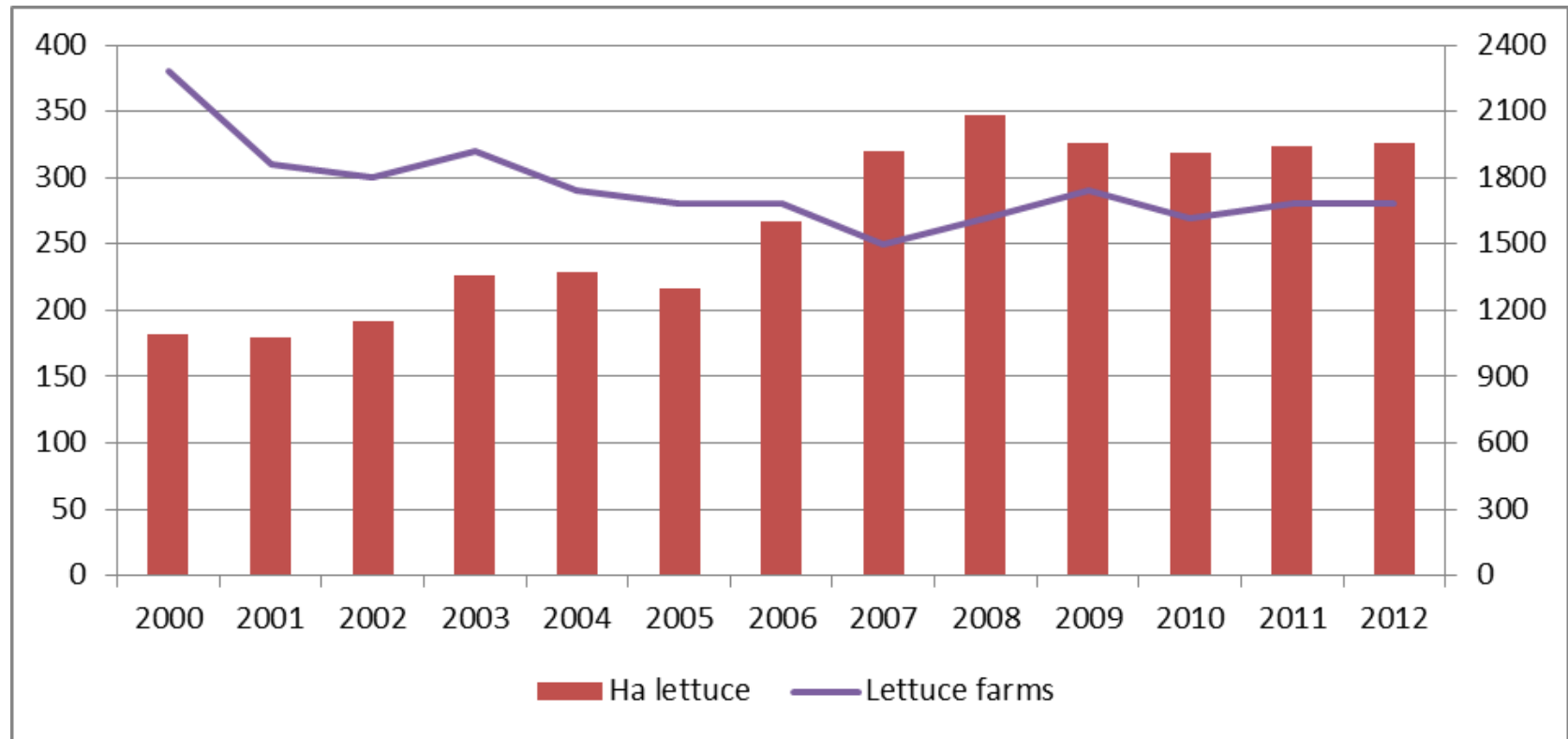
Major challenges with respect to supply chain development in Taiwan

- a. To strengthen cooperation between various parts of the vegetable and flower chains;
- b. To increase knowledge on horticultural in general and on chain management in particular;
- c. To strengthen multi-disciplinary research, technical and economic research as well;
- d. To establish discussion platforms for innovators in agriculture, researchers and government.

Part II

Case study: Lettuce sector in the Netherlands

Lettuce acreage and farms



A steady development towards larger farms,
but in practice a revolutionary structure change is going on!

Major developments in varieties

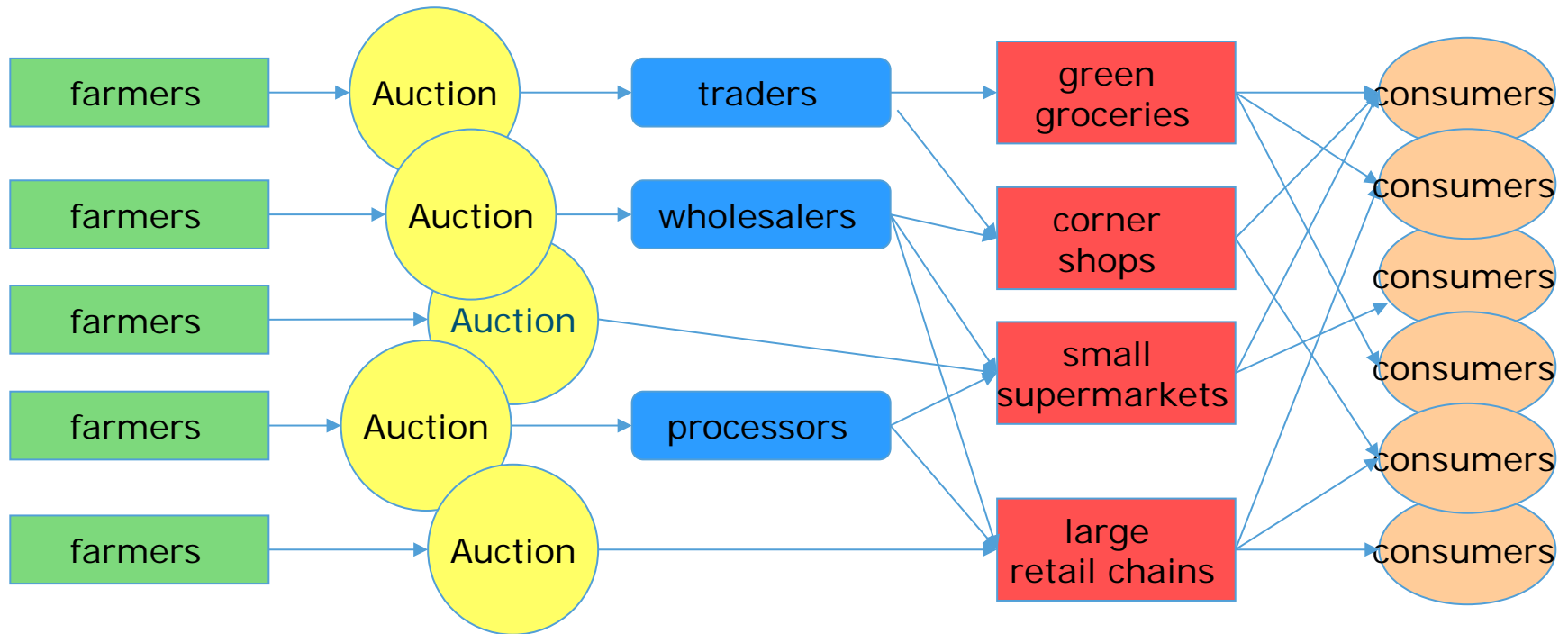
- 1950 - 1980: Mostly loose-leaf butterhead lettuce
- 1980 - 2000: Increasing consumption of Iceberg lettuce
- 2000 - to date: more varieties baby loose-leaf lettuce (red/green/oakleaf)



Case: Development of a lettuce farm

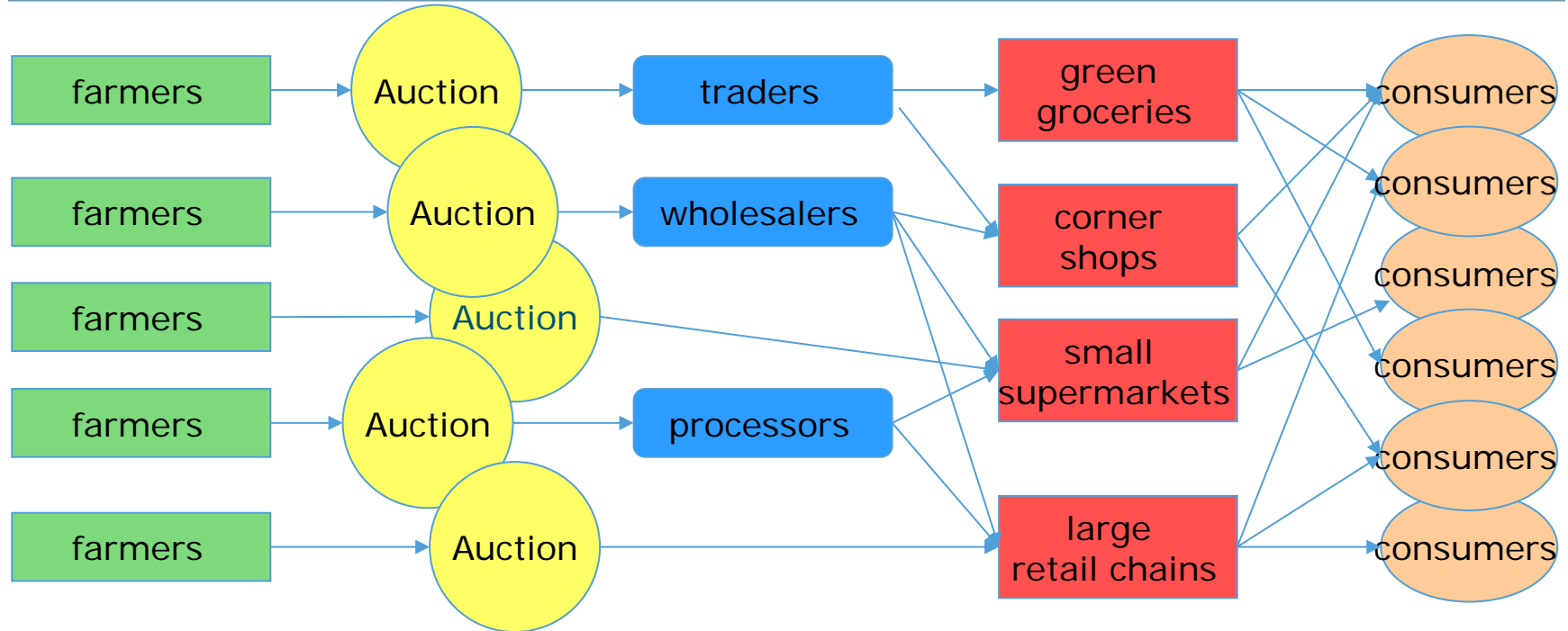
- 1980: Family farm: **3 ha** open field vegetables:
butterhead lettuce (plus cabbage, leek, etc.)
- 1986: Extended family farm: **15 ha** iceberg lettuce
- 1992: Family association: **50 ha** iceberg lettuce
- 2001: Agricultural company : **100 ha** iceberg lettuce
- 2011: Agricultural company: **160 ha** iceberg lettuce
15 ha in France, and
2 ha hydroponic lettuce
(plus 65 ha cabbage)

Until 1985: marketing via auction



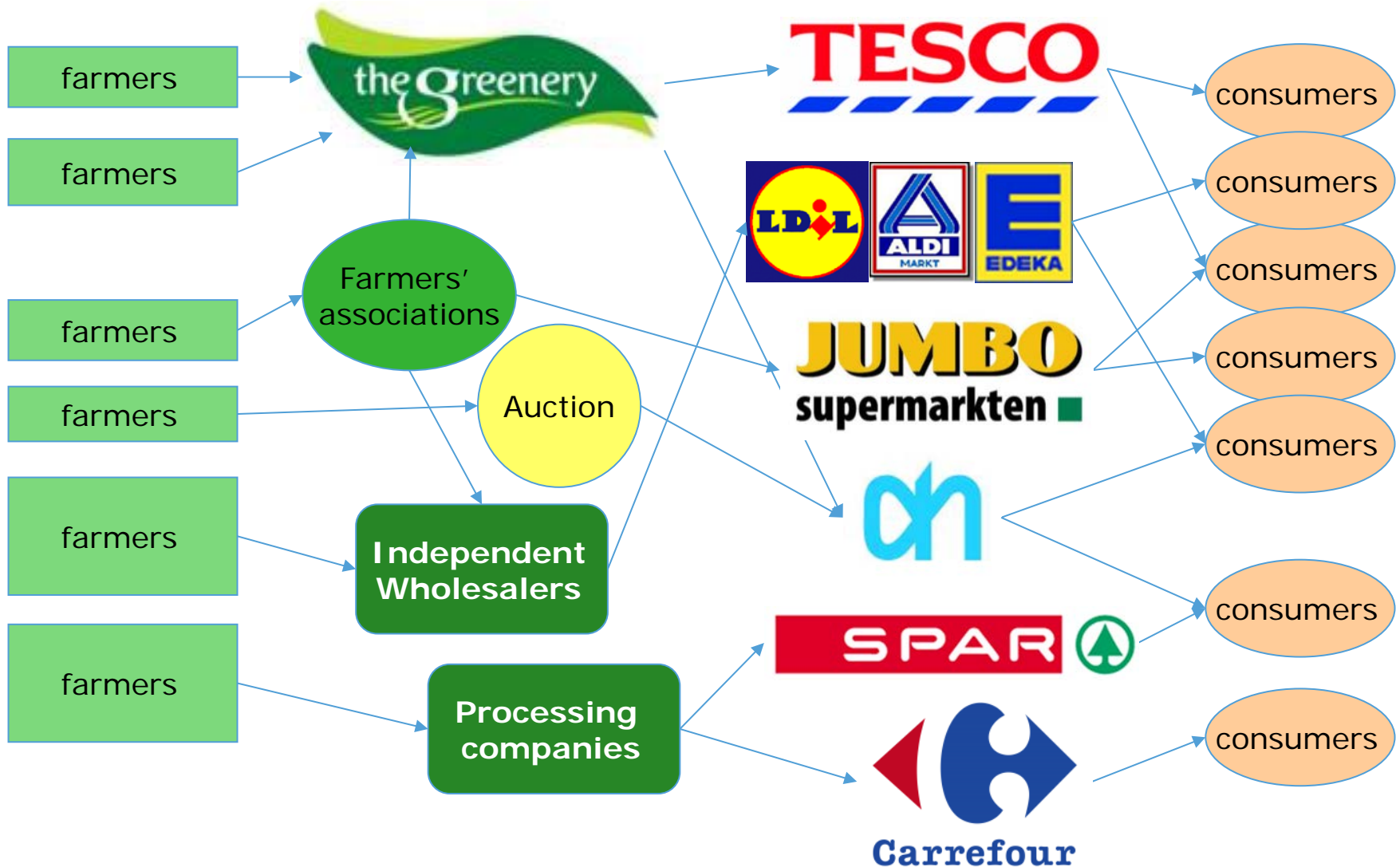
- Power in chain is with regional cooperative auctions
- Farmer (3 ha) delivers produce to auction

After 1985: Power in the chain is shifting towards buyers



- Farmer (15 ha) delivers produce to auction and vegetable cutting company

Current situation: Power in the chain is with the retailers (supermarket-chains)



Slogan of farmer: Follow your customer!

- The main customer is a fresh vegetable cutting company, delivering to a large supermarket chain

- To meet the increasing demand, the farmer
 - a. starts a company with another farm, expanding lettuce production towards 160 ha
 - b. explores the possibilities of hydroponic lettuce production
 - c. searches for expanding the delivery season by production in southern countries

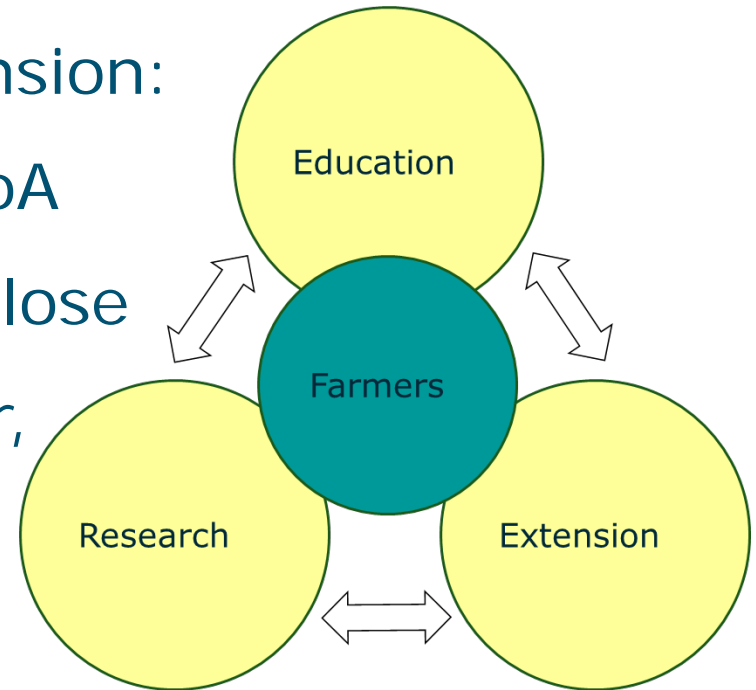
Role of government in farm development

- Starting point is a free market, based on entrepreneurship of private farmers

- Role of government is facilitating private agricultural development:
 - a. Developing a practice oriented knowledge system
 - b. Stimulating efficient land use by adequate land rights, property and lease policies
 - c. Improving land and water infrastructure through public-private projects all over the country

Agricultural Knowledge & Information System

- Education, Research and Extension: one coherent system under MoA
- Developed by government in close cooperation with private sector, in particular after 1950



- However currently:
 - Extension service: completely privatized
 - Education: decreasing focus on practical farming
 - Research: diminishing budget

Agricultural Knowledge & Information System

- Currently the agricultural sector itself has a leading role in the AKIS, i.e. farmers and related companies (suppliers, services, processing, etc.)

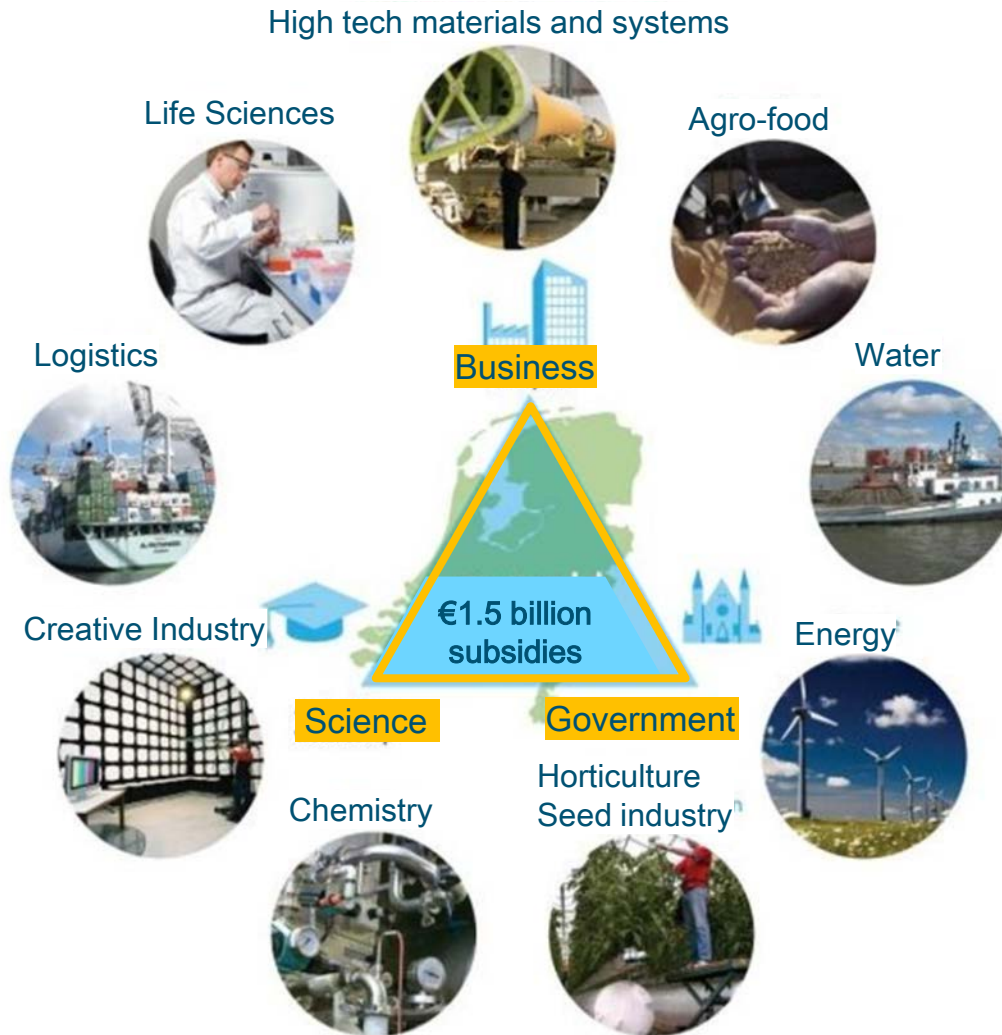
- This development is possible because of
 - high education and knowledge level of farmers
 - open mind for new developments/innovation
 - intensive cooperation in the supply chains
 - customer orientation of supermarkets



Partners in Innovation and Development

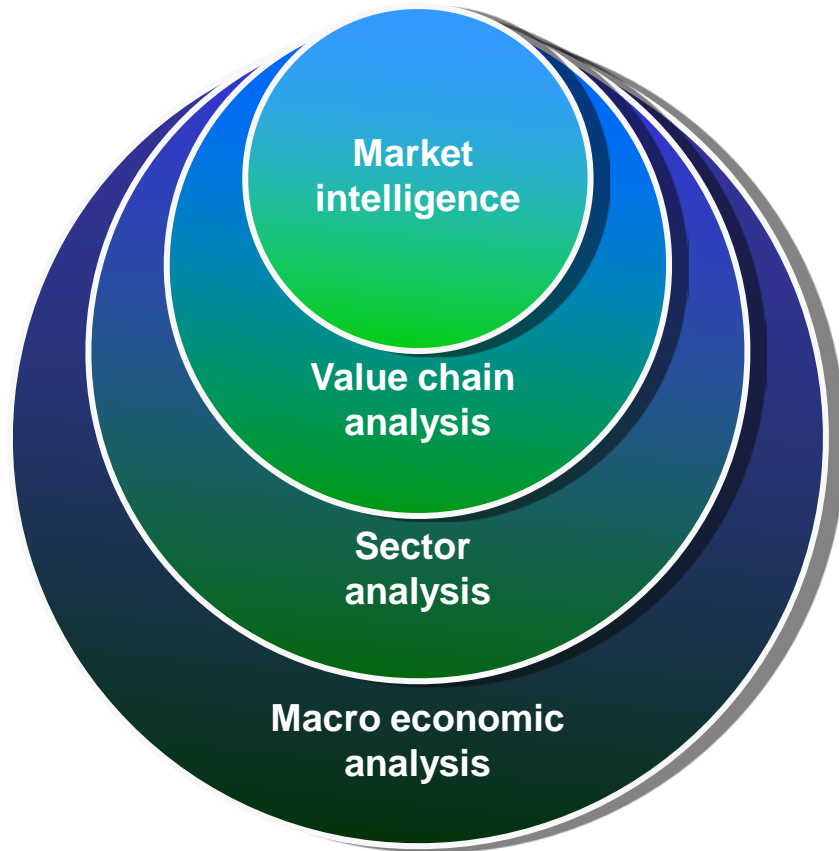


The Netherlands: Economic Top Sectors

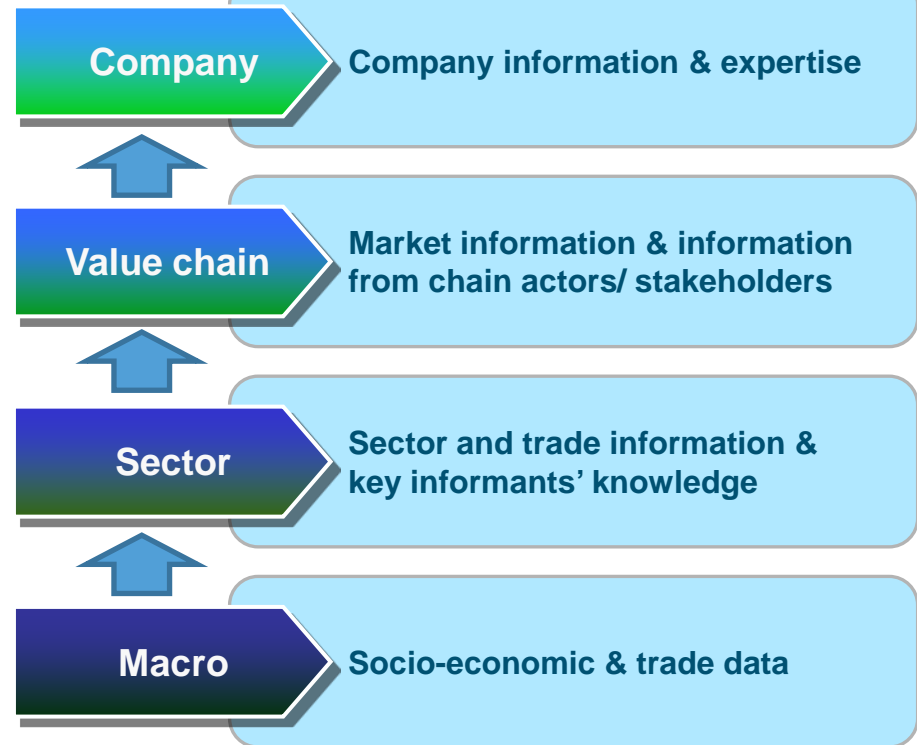


LEI research from global to local

Type of Research



Research Base



Wageningen University and Research Centre

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