
Agricultural Knowledge Systems in Transition Institutional Reforms in The Netherlands

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OECD Food and Agricultural Reviews



Innovation, Agricultural Productivity and Sustainability in the Netherlands



Message:

Maintain the strength of the agricultural innovation system

Agriculture in The Netherlands

Agricultural area: 2 million ha

No of Farms: 60 thousand

Farm types: Dairy, Horticulture (glasshouse/
open), Arable, Pigs, Poultry, Veal

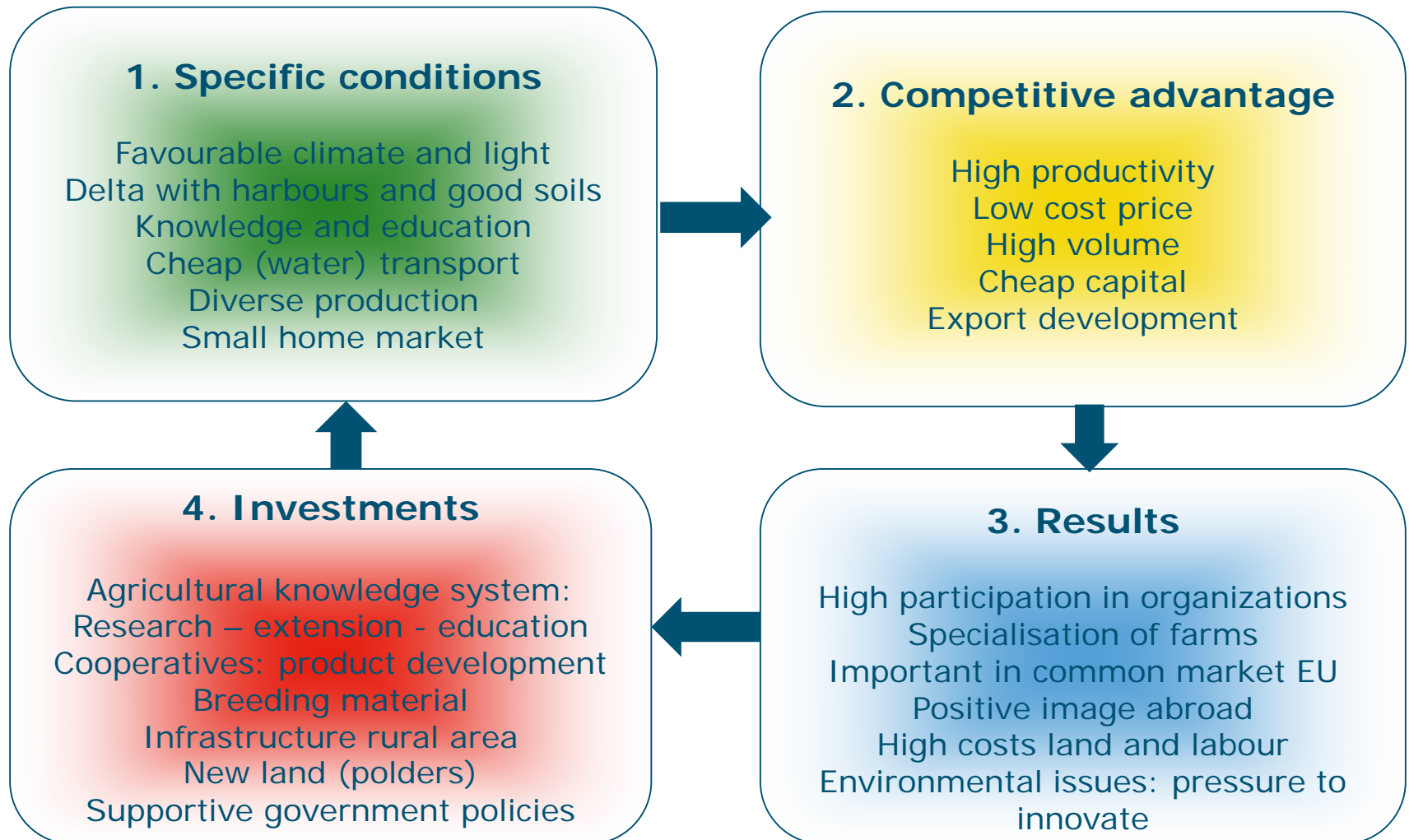
High productivity of land and labour

No 2 in world agricultural exports (after USA)

EU Market & Common Agricultural Policy (CAP)



Model of value creation Dutch agriculture

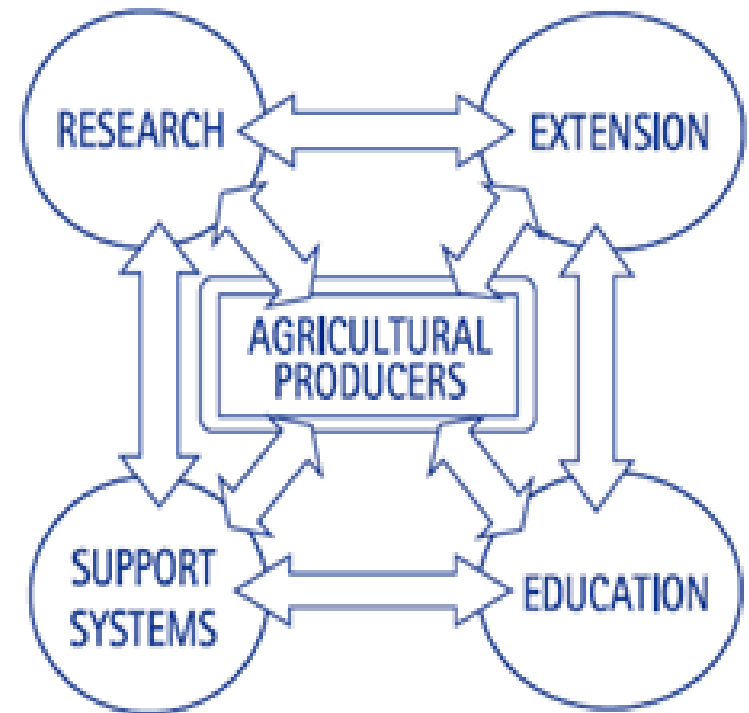


Original model of the Dutch AKS

System for knowledge creation and application

- Research: Fundamental, Application-oriented, Field-based
- Extension: Technical, Socio-economic
- Education: from Lower Professional to Academic

Mainly funded by the ministry of Agriculture



Focus on productivity

Reasons for changes: conflicting interests

With society

- Widening of objectives: public goods, correcting market failure, consumer concerns
- Reduced confidence in technology, social acceptability
- Too expensive for declining sector (GDP, employment)

Within agriculture

- Larger differences between subsectors and enterprises
- Vertical forms of co-operation

Dilemmas and challenges

System Involvement <---> Independence

Organisation Specialisation <---> Integration

Researchers Creativity <---> Responsiveness

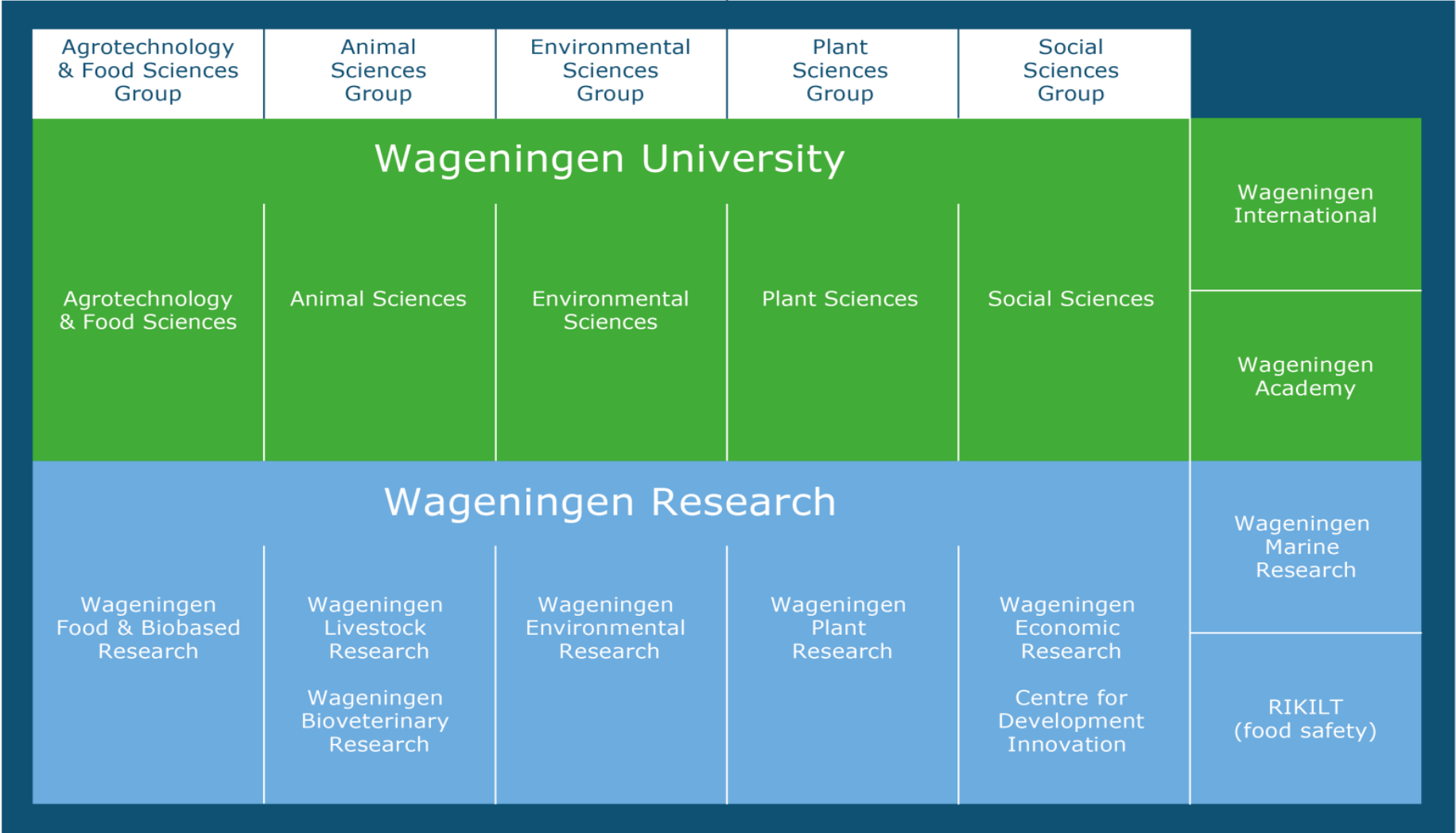
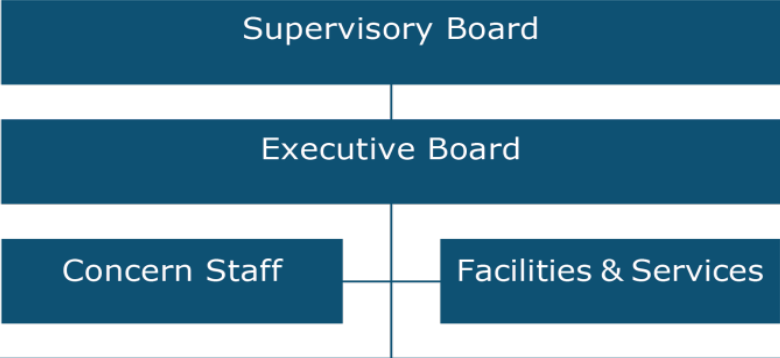
System: towards independence

- Privatization of extension, now privately funded
- Privatization of research institutes
- Merging of ministries of Agriculture and Economic Affairs
- Abolishment of the statutory industrial organizations:
Agriculture board; Commodity boards

Organisation: towards integration



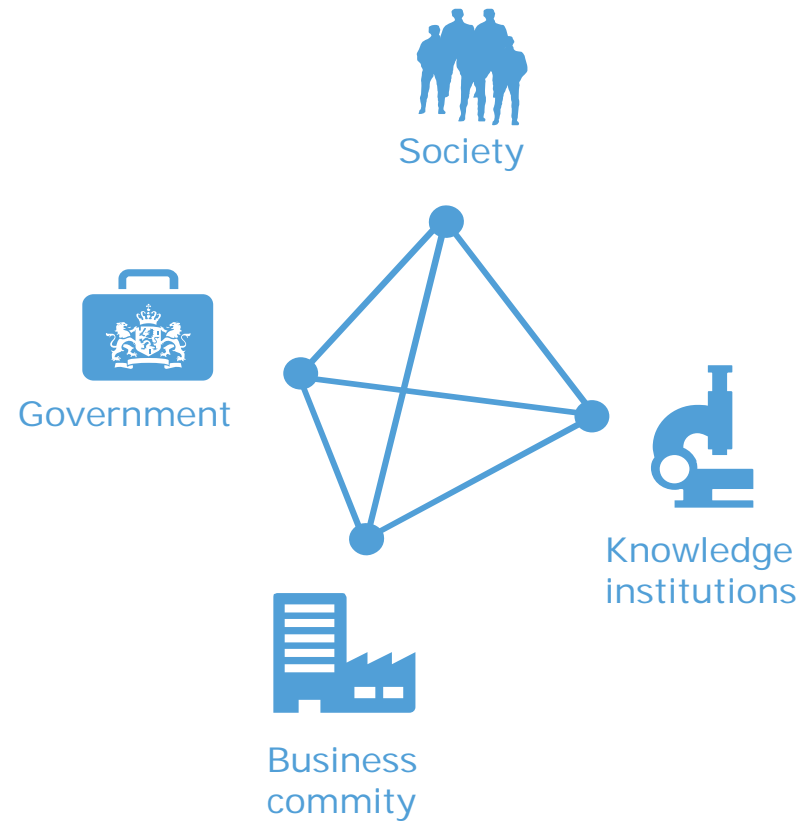
To explore the potential of nature to improve the quality of life



Strategic Investment Themes of WUR

- Global One Health
- Resource Use Efficiency
- Resilience
- Metropolitan Solutions
- Synthetic Biology

Stakeholders



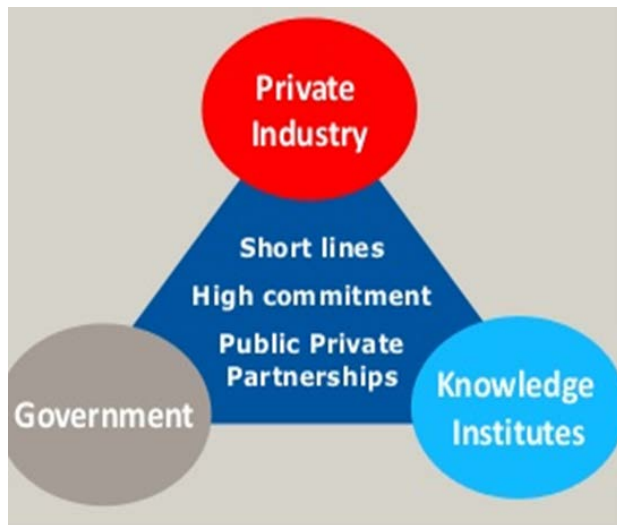
Researchers: responsiveness required

- Input funding
 - Output funding
 - Tendering (beauty contest)
 - Public Private Partnerships



Top sector policy

'Golden triangle':
productive
relationships to
stimulate innovation



Reflections of the OECD

- Performance AKIS very good, based on long term investments
- Institutional changes towards collaborative and demand-driven system
- Sources of R&D funding are uncertain
- Tax incentives provide majority of support to innovation in private sector
- Sustainability of the system's performance questionable: top sector policy driven by industry interests (shorter term)
- Further changes foreseen: education – application-or. research
- Longer term impact needs to be evaluated

Response of Dutch government (i)

Support for innovation

- Seed capital for innovative start-ups: Future Food Fund and Shift Seed Fund
- Cross-overs between top sectors: High Tech to Feed the World: new PP-projects: robots, early-warning in meat processing, smart glasshouse materials, supply chain of cool-fresh products, crop production, climate smart glasshouses, sensors in the field, poultry chain
- Start-up accelerators: support for business plans and marketing

Response of Dutch government (ii)

Strategic Knowledge and Innovation Programs

- Sustainable and robust food supply
- Sustainable supply chains
- Sustainable use of natural capital

Thank you for
your attention

Any questions?

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