

Wageningen University & Research Centre: transition to a 3rd generation university*

Laurens Klerkx, Communication and Innovation Studies

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Strengthening Agricultural Innovation Systems



Rationale for reform

- Until 1980 growth agricultural research complex, after that decline
- Until 1994: Wageningen Agricultural University and Agricultural Research Service (under Ministry of Agriculture)
- Loss of connection research institutes with sector
- Public budget cutbacks and privatization called for shift to demand-driven working to access funding
- Dropping student numbers due to bad image agriculture
- Bad links between fundamental and applied research



Main changes from 1990's onwards

- Ministry of Agriculture had an external commission investigate future model for agricultural research
- Merger from Wageningen University and Agricultural Research Service to Wageningen UR
- Later Applied Agricultural Universities joined the merger
- Client/demand-driven research approach and competitive funding mechanisms
- Increased focus on international collaboration (EU and beyond – regional offices) and related funding sources (less dependence on Dutch Ministry of Agriculture)



Shift to 'third generation university'

- 1st generation – medieval university, 2nd generation – Humboldt university
- 3rd generation – 'know how carousel'

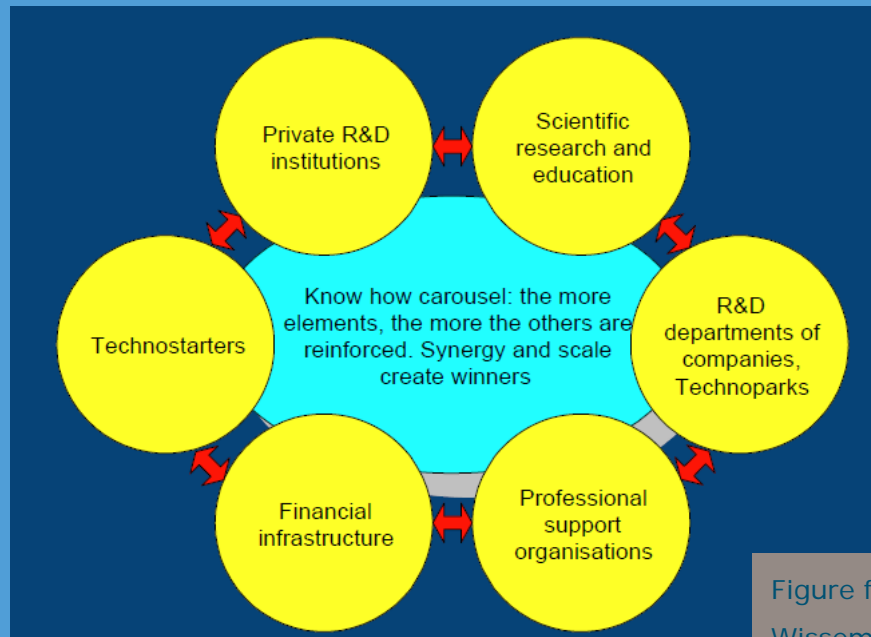


Figure from J.G.
Wissema
Associates



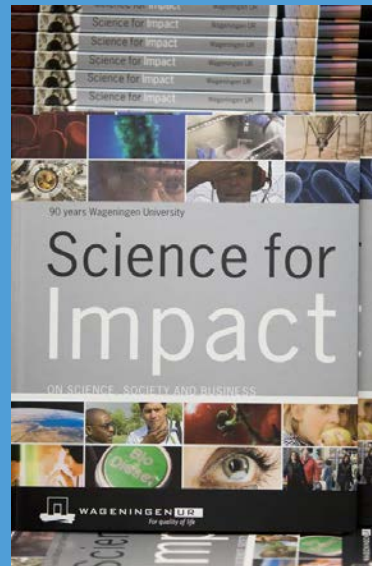
3rd Generation University

- Cooperation: via know how carousel and other ways. The 3rd generation university is a network university
- Addition of know how exploitation (valorization) as objective. Know how exploitation integrated with research and education (e.g. science parks, incubators)
- End of direct government contribution
 - Fundamental research from state grants/donations
 - Applied research from industrial and state grants
 - Education via market mechanism, students pay full fees and get support from state or other grants
- Requires shifts in governance (e.g. theme based), incentives (e.g. for collaboration, valorization), attitudes



Mission: beyond agriculture & science for impact

Access to high quality food anywhere any time, to promote quality for life and improve livelihoods, everywhere. To explore the potential of nature, to improve the quality of life



Our domain: Healthy Food and Environment

Behaviour and Perception

Food Security

Institutions

Consumer

Citizen

Health
Lifestyle
Livelihood



World Hunger
Campaign
October 2006

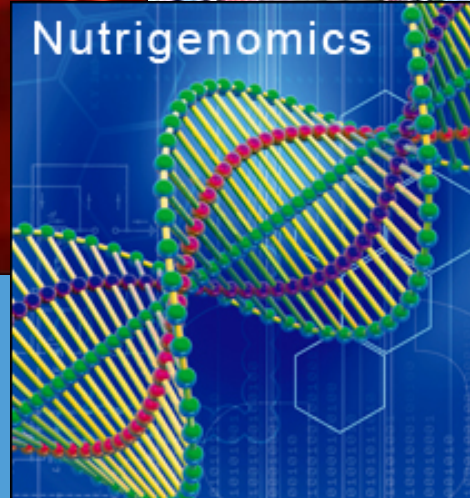


Food
& Food Production

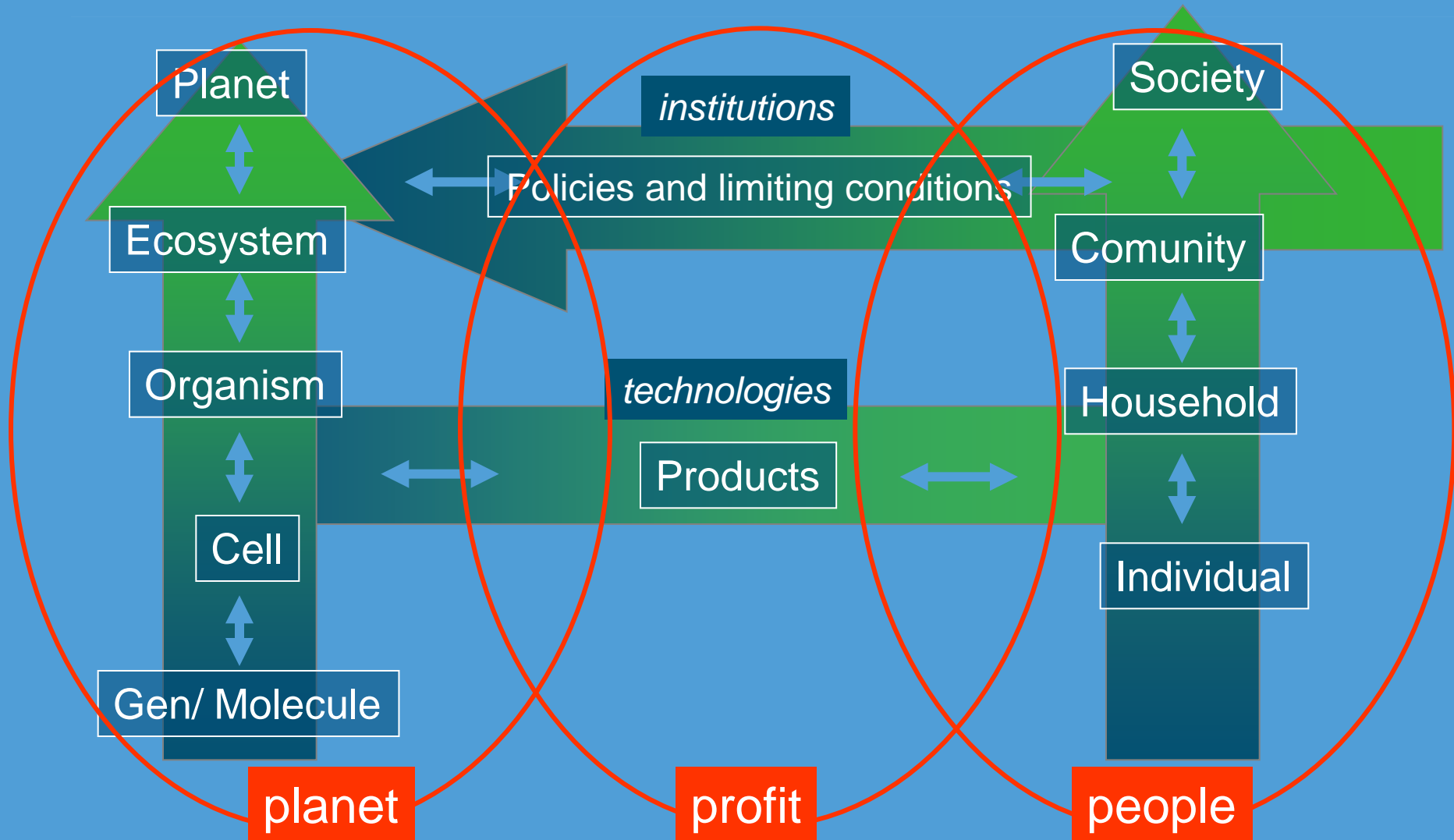
Living
Environment



Examples



The Wageningen Approach: connecting levels



Organization

Supervisory Board

model

Executive Board

Wageningen IMARES

WOT (RIKILT, CIDC a.o.)
Wageningen International
Wageningen Business School,
Wageningen Business Generator

Joint Management Structure

Plant Sciences Group	Animal Sciences Group	Agrotech. & food Sciences Group	Environmental Sciences Group	Social Sciences Group	VHL Prof. Education
16 chairs	10 chairs	18 chairs	17 chairs	20 chairs	
Plant Research International PPO-applied research	Livestock research	Agrotechnology & Food Solutions	Alterra (incl. ILRI & ISRIC)	LEI	

Joint Strategy



Educational approach

- Bachelor (undergraduate) and master (graduate) programmes are interdisciplinary, including both natural and social sciences
- Teaching methods are problem oriented and interactive, lots of groupwork and real-life assignments
- International experience highly stimulated (thesis/internship)
- All master programmes have an Academic Consultancy Training module to prepare students for interdisciplinary and client oriented working
- 'T-shaped' skills – breadth and depth



Results

- In top 5 worldwide in our subject areas (Times/Shanghai Rankings) and refereed articles and citations increasing
- Increasing international collaboration in research, e.g.
 - Several EU projects
 - Collaboration in China
 - Centre of Excellence in Food in Chile
- Growth student numbers from 1631 in 2006 to 2633 in 2010 – very international student population



Results

- Theme oriented approach and multi level approach enables interdisciplinary and critical mass
- Targeted investments in joint infrastructure enables better facilities
- Interdisciplinarity and competence based education (while not neglecting subject matter knowledge) better prepares students for their careers
- Demand driven orientation enhances impact



Challenges

- Not easy to merge university culture and research institute culture
- New roles for researchers not easy to learn and not always recognized
- Increasingly 'academic' accountability mechanisms re-encourage Ivory Tower behaviour
- Overcome internal competition and duplication
- Cutback in stable government funding for research makes maintenance basic research infrastructure hard



Lessons for other countries

- Think beyond disciplinary fields but in themes
- Adopt a whole systems and multi level approach
- Make connections with sectors and regions through partnerships and alliances
- Gear reward mechanisms and incentives towards interdisciplinary working
- Create incentives for valorisation of knowledge
- Combine knowledge and competences in educational programmes



Thank you for
your attention

