Structural rearrangements as keys towards an integral sustainable pig husbandry

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EAAP, Session 40

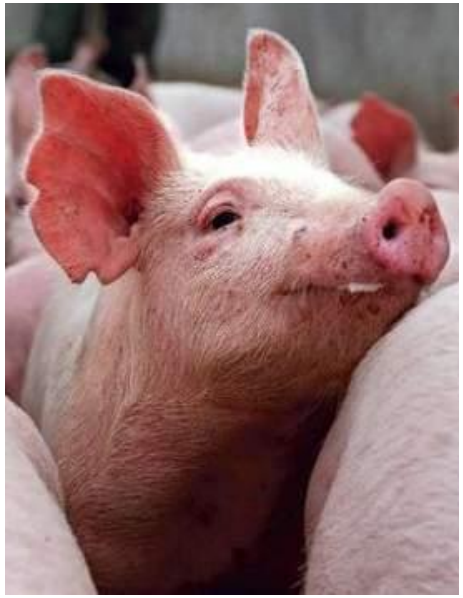
LIVESTOCK RESEARCH
WAGENINGEN UR

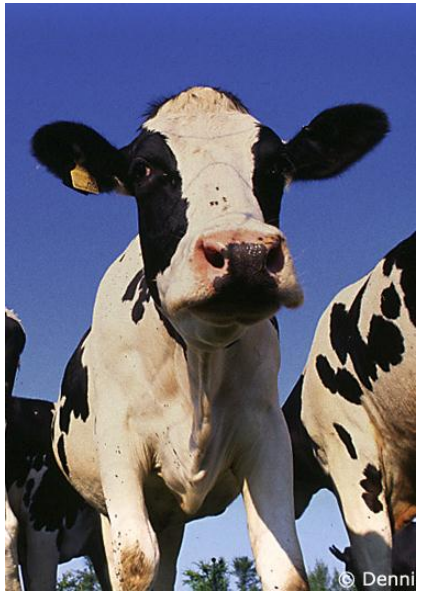
Objective

- Design integral sustainable pig husbandry system (Pork Opportunities)
- RIO methodology for system innovation
- Some concrete applications

Agenda sustainable LFS

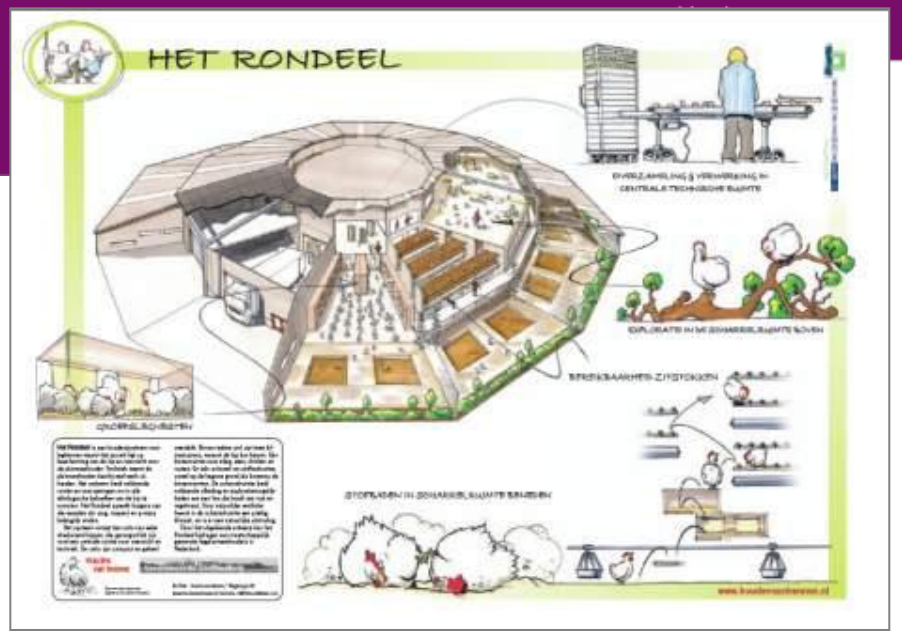
- 2023 an in all aspects sustainable animal production (integral sustainable LFS)
- 2011 5% integral sustainable housing realised





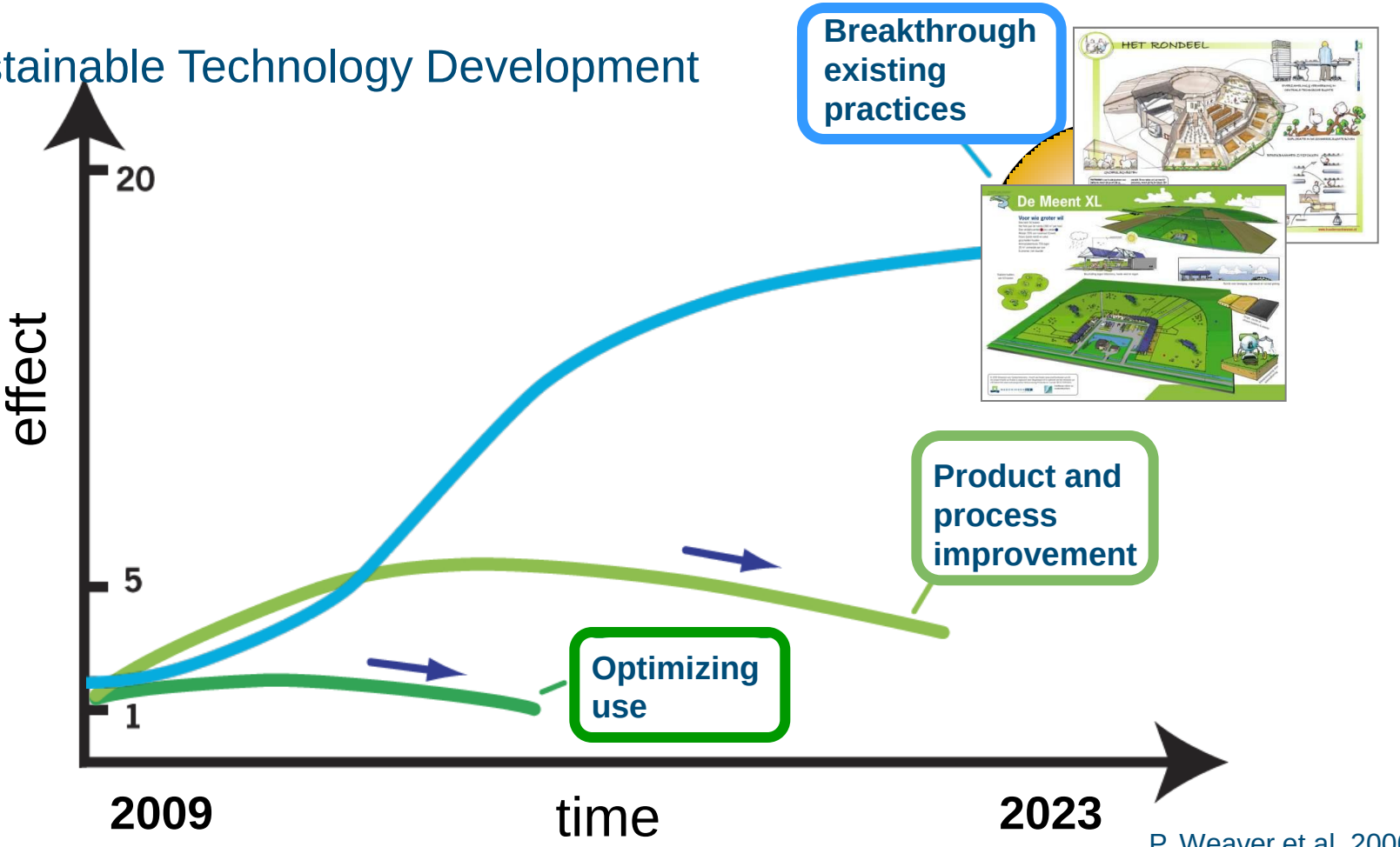
Prelude: System innovation

- Reflexive Interactive Design (RIO) for system innovations
- Designs as images of thinkable and desirable future
- Designs show the breakthroughs needed to work on now



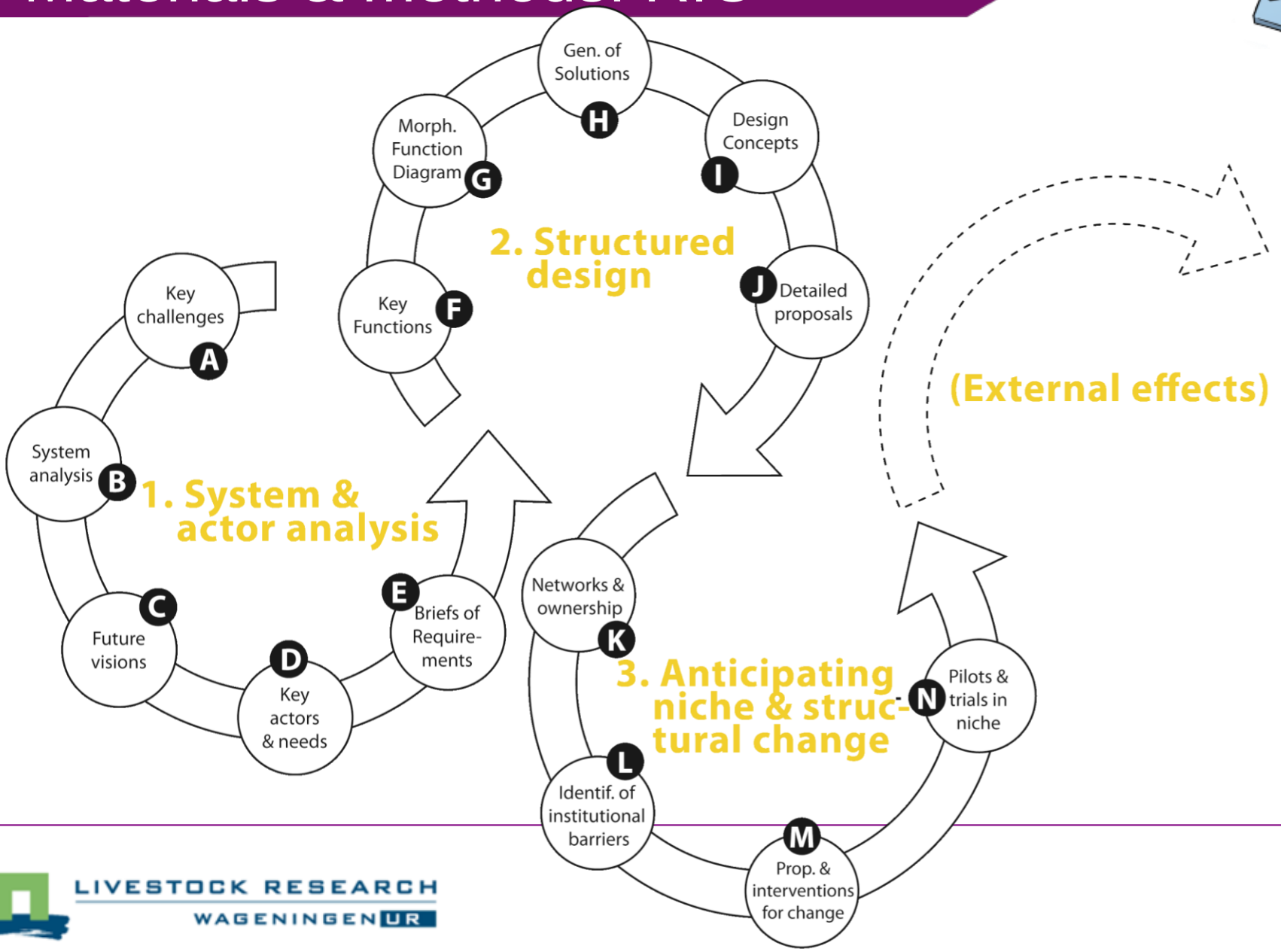
Prelude: System innovation

Sustainable Technology Development



P. Weaver et al, 2000

Materials & methods: RIO

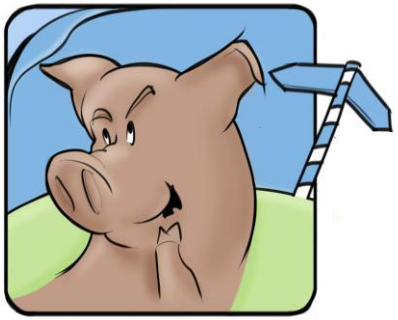


Overall project results

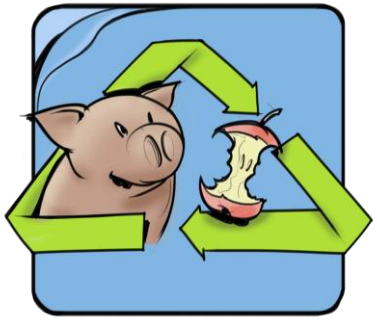
- 3 farm designs
- 4 structural rearrangements
- A design process fit for practical use

Results: Structural rearrangements

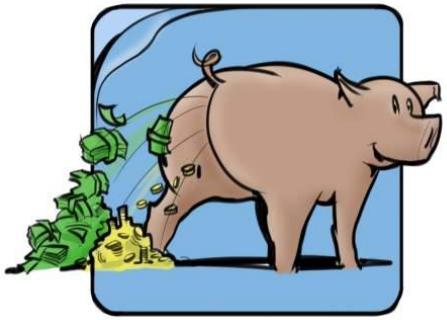
- Pig fulfils own needs



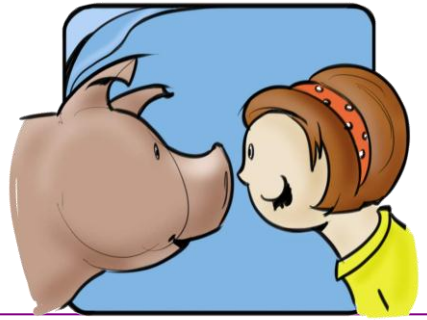
- Recycle human food waste



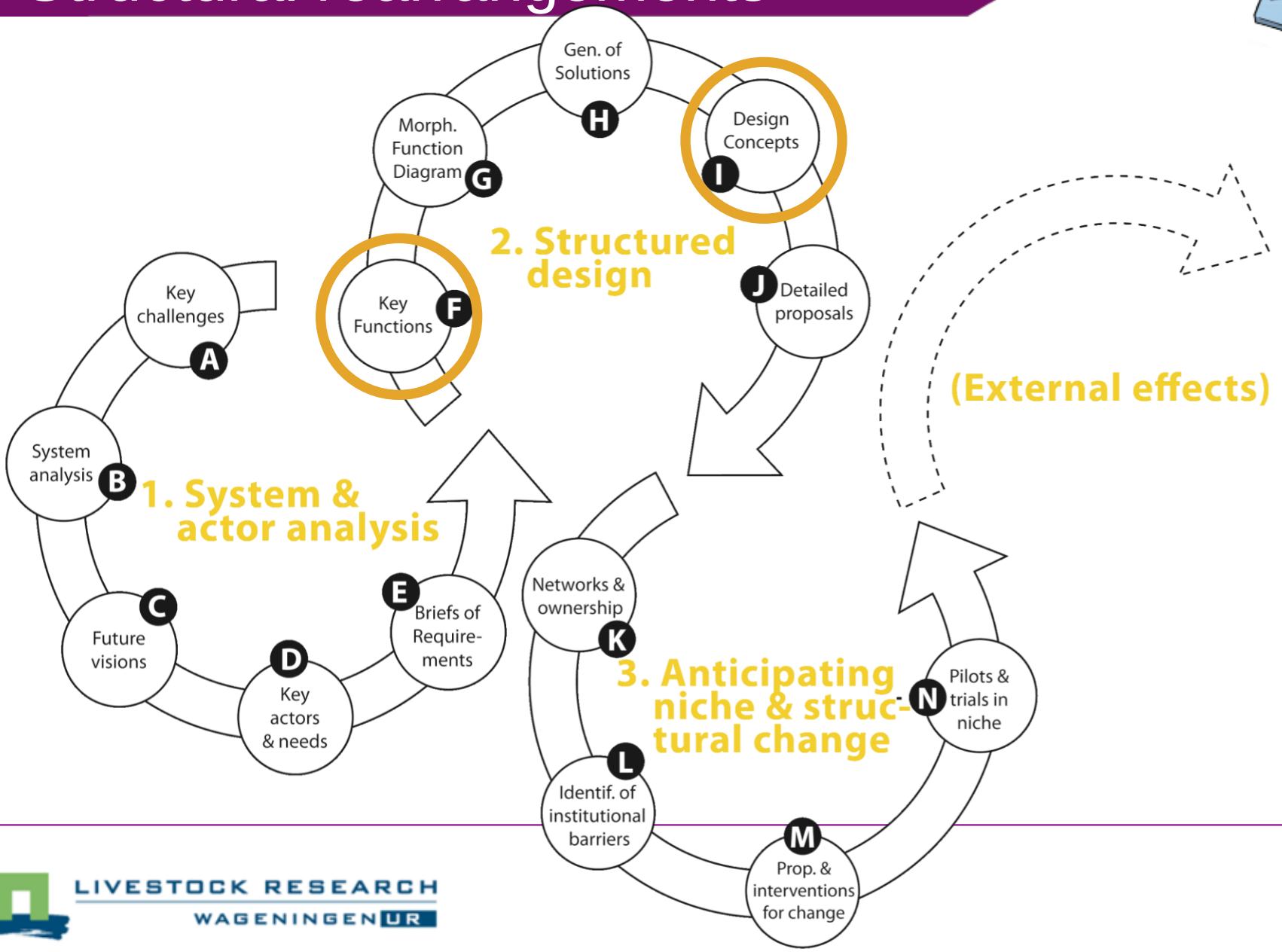
- Harvest minerals and energy



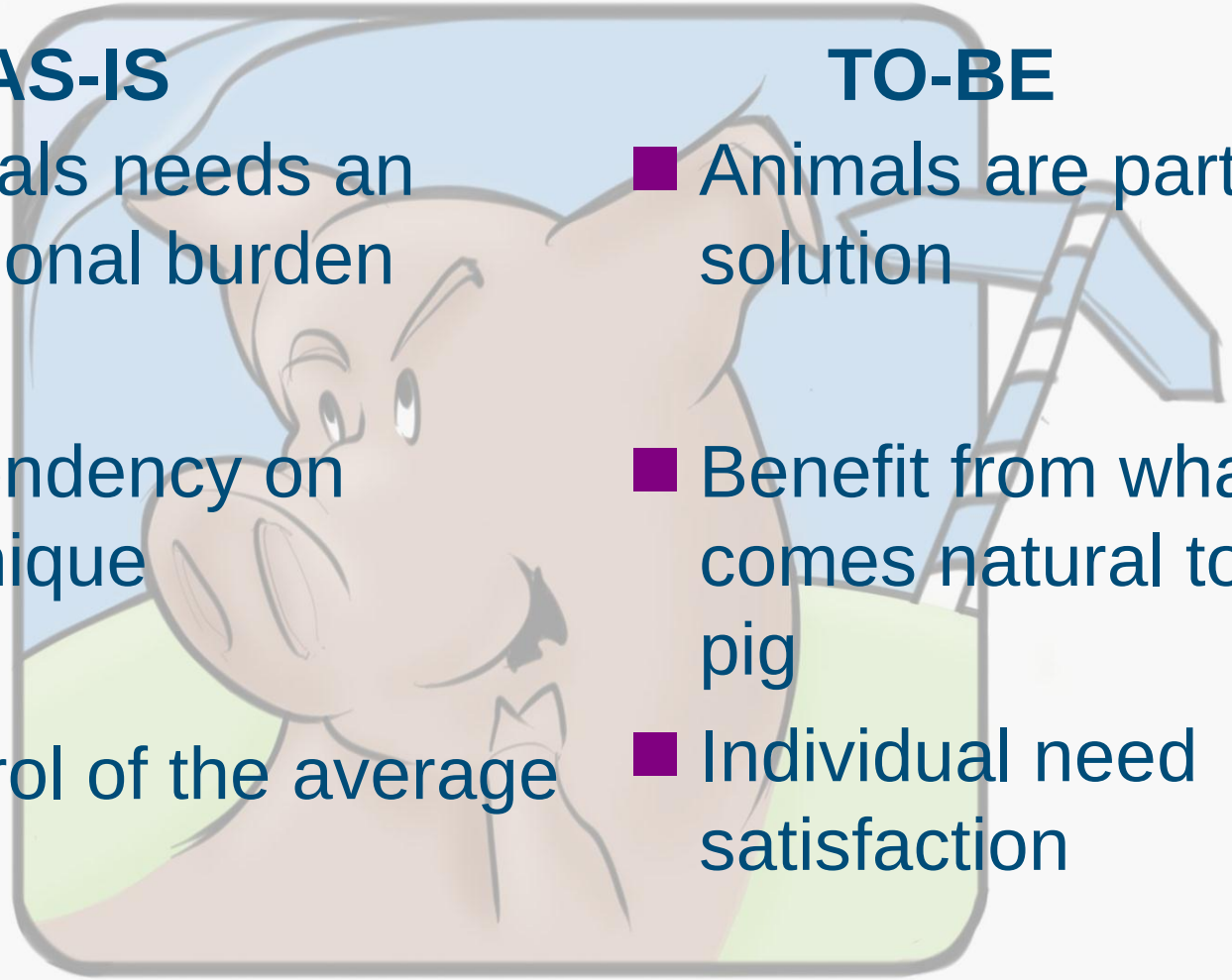
- Active relationship with nature, citizen and consumer



Structural rearrangements



Pig fulfils own needs



AS-IS

- Animals needs an additional burden
- Dependency on technique
- Control of the average pig

TO-BE

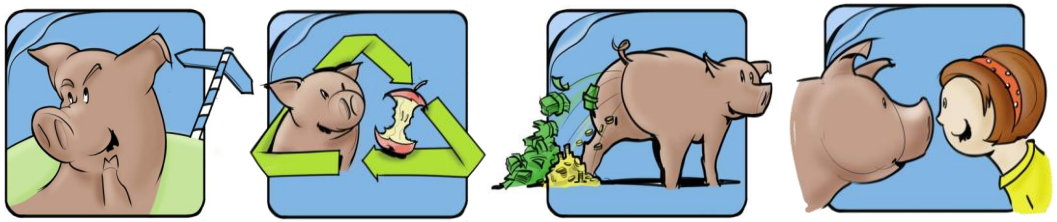
- Animals are part of the solution
- Benefit from what comes natural to the pig
- Individual need satisfaction

Pig fulfils own needs: pig toilet

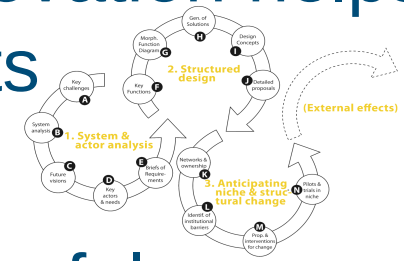
- Excretory behaviour pig in current systems compromised
- Pig is an intelligent, social, hygienic animal
- Animal welfare in relation to integral sustainability
- Creating win-win-win solutions

Conclusions

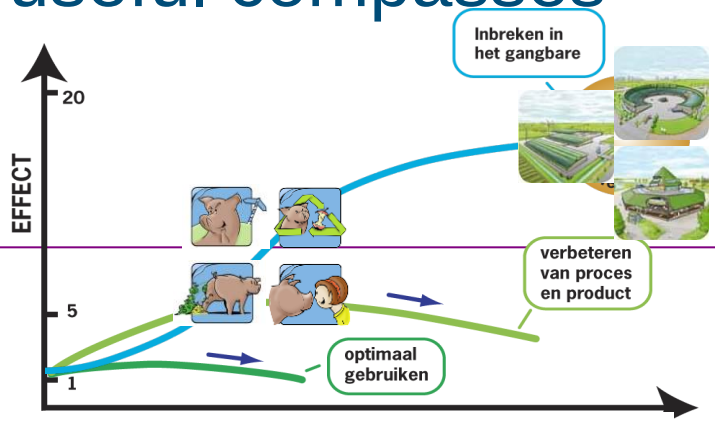
- For the transition towards an integral sustainable pig farming system 4 structural rearrangements are identified



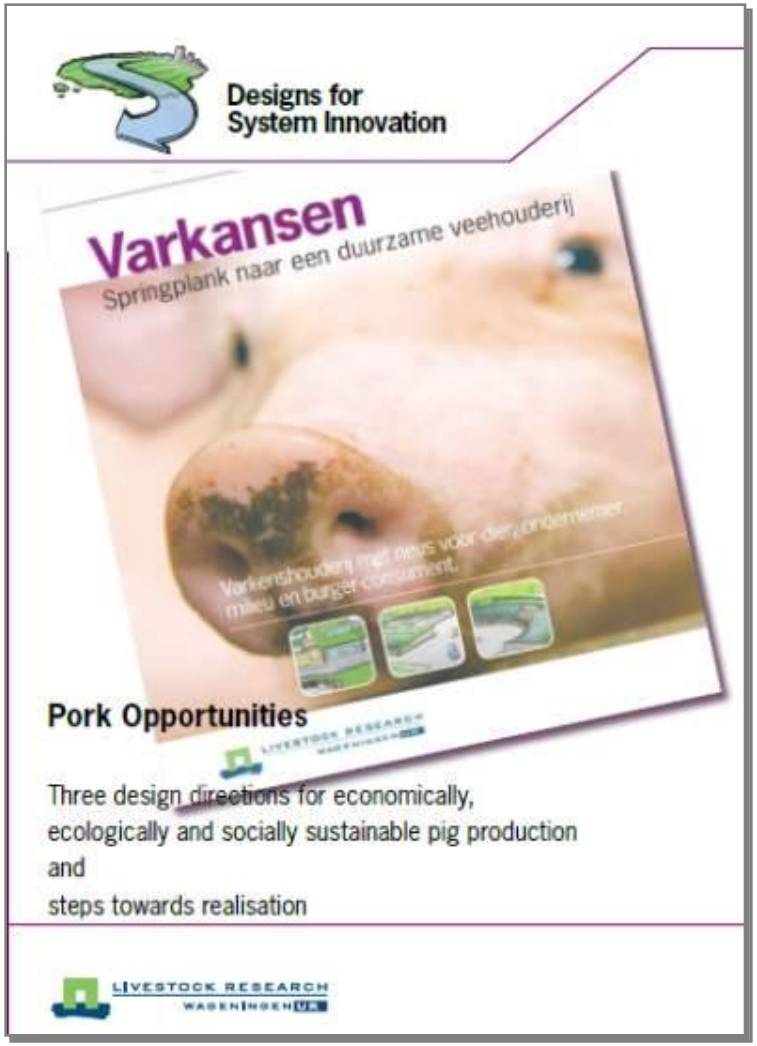
- RIO design steps for system innovation helps to identify structural rearrangements



- Structural rearrangements are useful compasses and solution free



Thank you for your attention



Pork Opportunities

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Ministry of Agriculture, Nature and Food quality

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