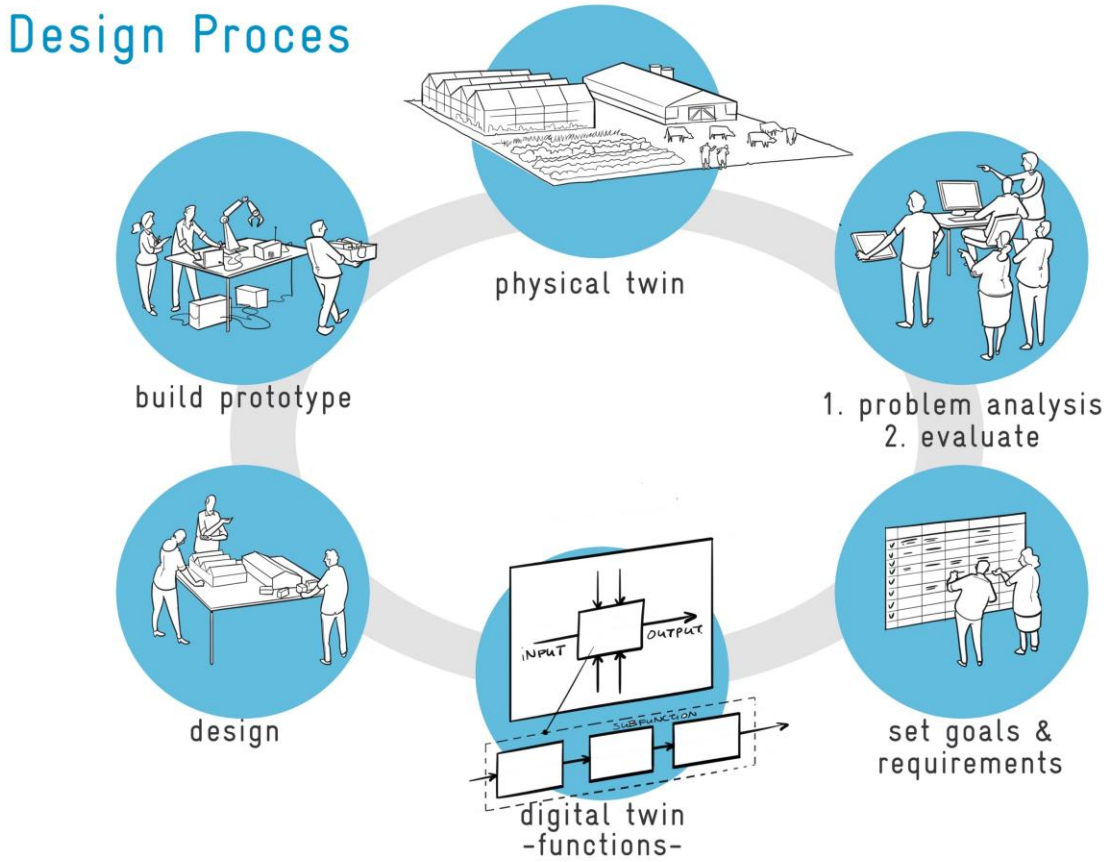
De rol van (agro) technologie in een emissieloze en vitale landbouw

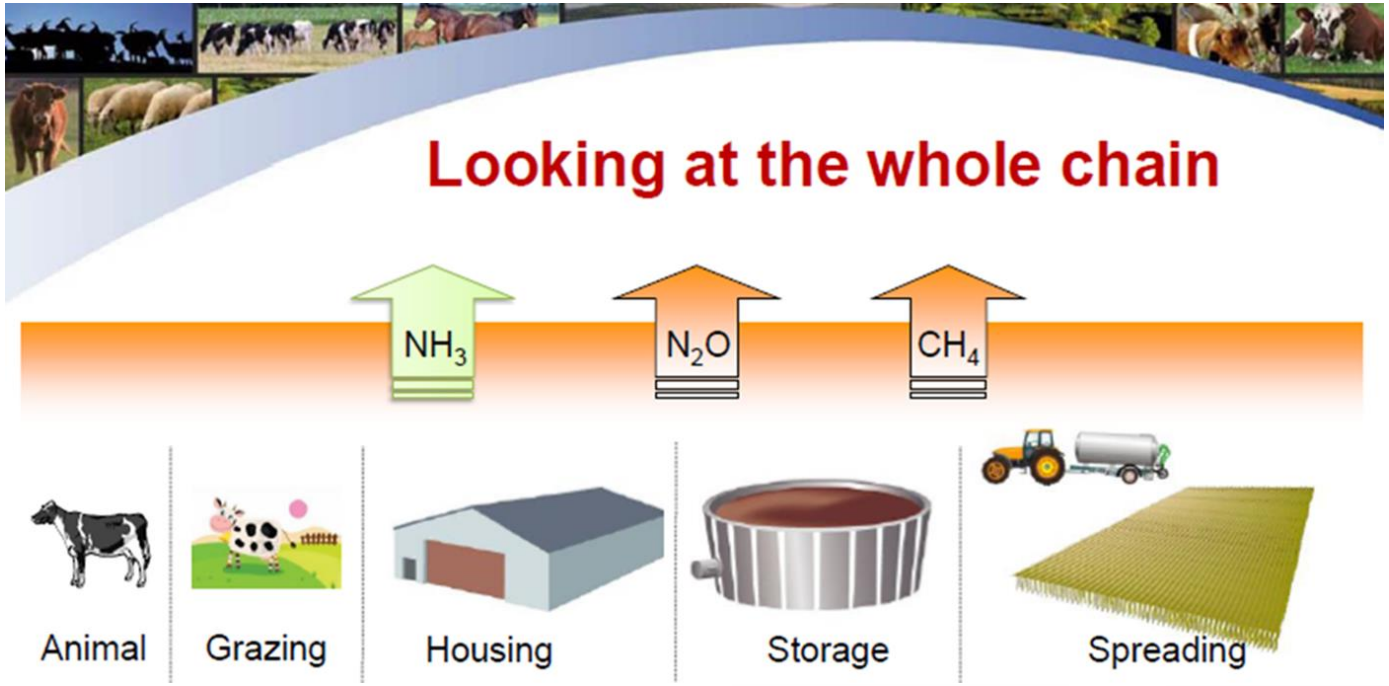
Dag van de precisiebemesting – Afrekenbare StoffenBalans

Dr. Ir. Peter W.G. Groot Koerkamp
Professor Agricultural Biosystems Engineering

All technology starts with ‘DESIGN’



Emissions: many, everywhere, complex processes ….. and details do matter



Design steps

Goals

Functions

Requirements

- Effectiveness / efficiency
- Cost effective / economics
- Regulatory aspects
- Acceptance by farmer & society: welfare, health, labour, emotions, history, ….

Single solutions and integrated concept design

Evaluation & iterations

(Engineering Design, Cross)

The ‘forgotten’ aspects of environmental technologies

1. Adequate maintenance
2. Proper and correct use (as such in a context and in combinations)
3. Regular verification in practice (both means and performance)
4. Alignment of responsibilities (farmer, producer)

See also: Bremmer et al., 2022; Verbetering van effectiviteit emissiearme stalsystemen in de praktijk, WLR report 1380

Solutions and directions

1. Upgrade knowledge and skills of relevant parties
2. Align and use the intention and behaviour of the farmer (attitude!)
3. Give and use autonomy and agency to the farmer (‘doelsturing’)

… and above all:

4. Make the use of ‘technological solutions’ attractive, self-explanatory & intuitive like your cell phone and your tractor ;-)

See also: Bremmer et al., 2022; Verbetering van effectiviteit emissiearme stalsystemen in de praktijk, WLR report 1380

Thanks for your attention!