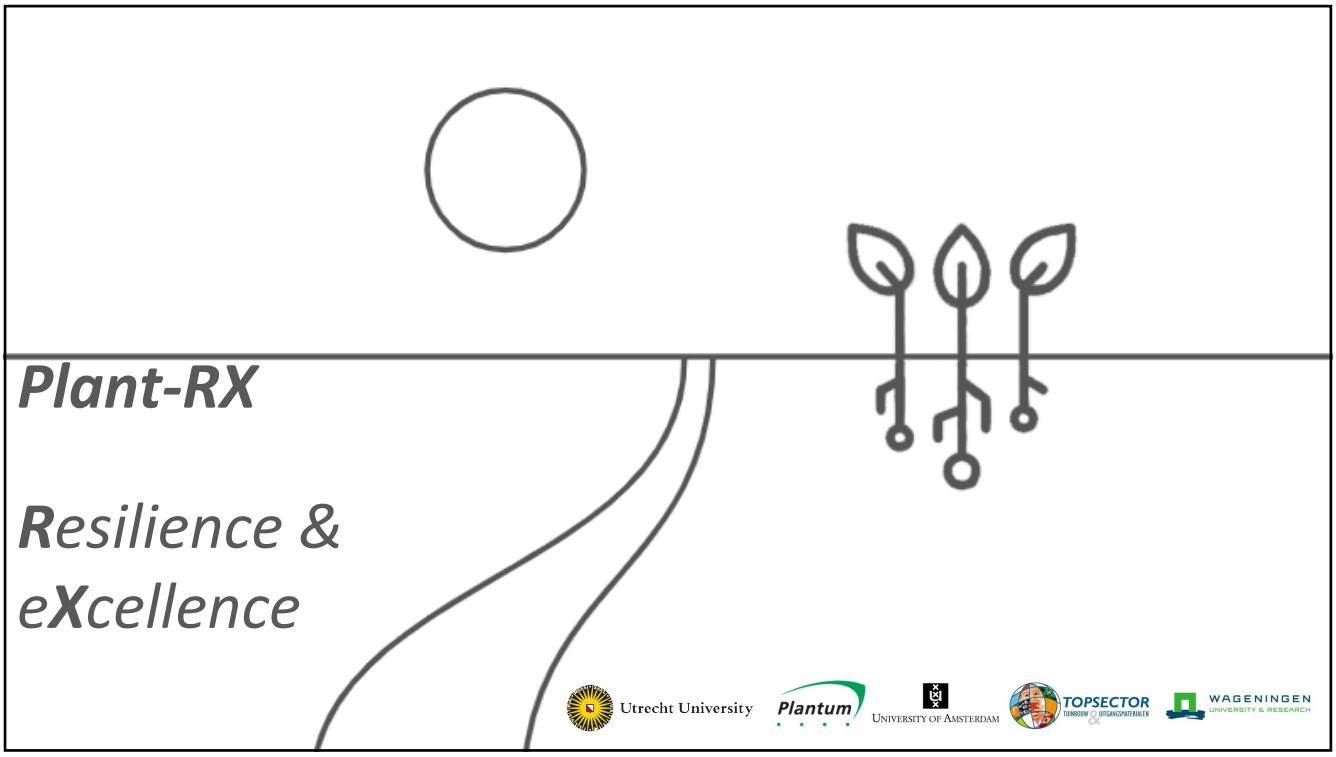
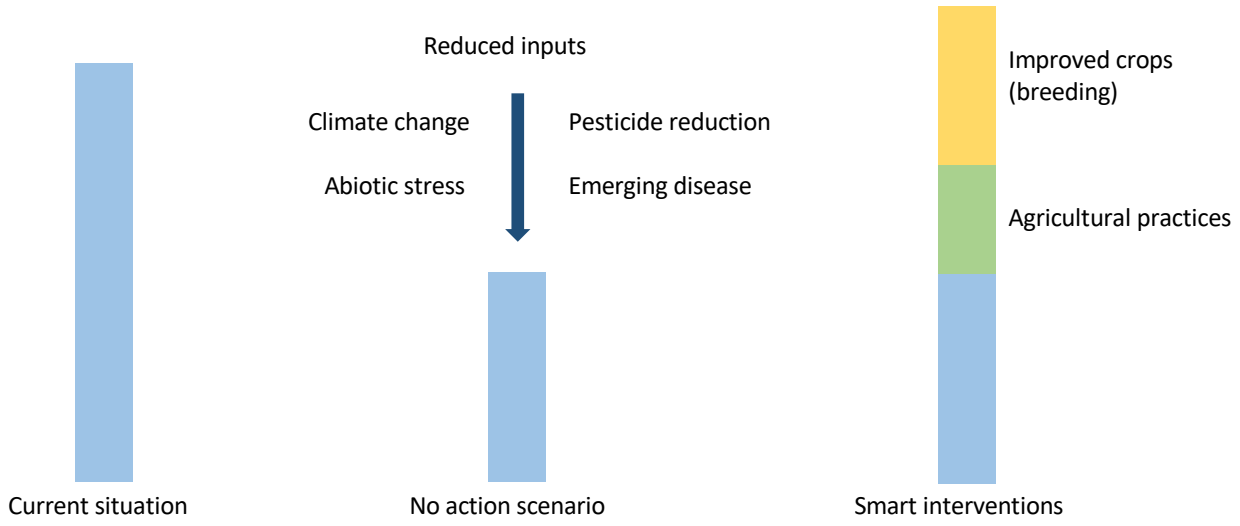


1

More with less, maintaining quality & yield



2

The importance of resilient crops

- Resilience can be defined as the intrinsic capacity of plants to effectively withstand adverse conditions and disease threats
- Current crops are not selected/bred for resilience
- Resilient varieties form the basis of robust agricultural systems

Figure adapted from Erisman et al. 2016 AIMS Agriculture and Food

3

What is missing: how to get from data to understanding

- Plant genomes are mostly available
- Genomic/phenomic data production efficient (genetic variation, gene expression, other omics)
- But, there is a major gap to be bridged to understanding function, in particular for complex traits and trade-offs in relation to resilience
- Plant-RX aims to integrate bioinformatics/data analysis/AI with mechanistic modeling → innovation to bridge the gap

4

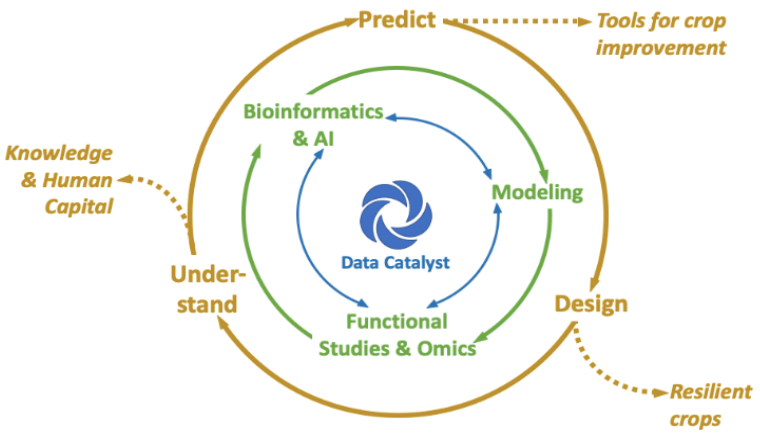
5

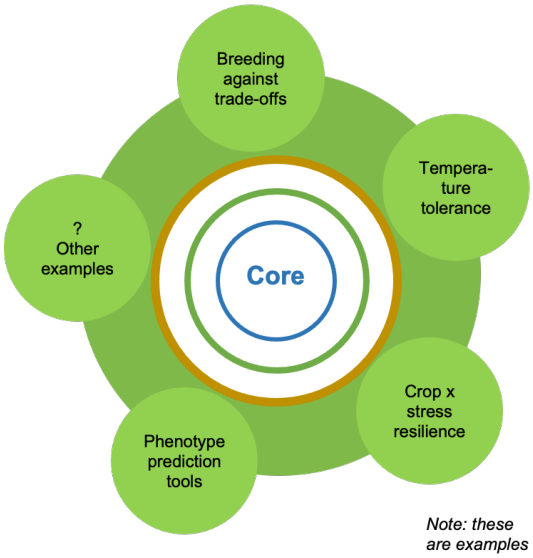
Long-Term Research Program (LTP) Plant Resilience

- These ambitious goals require a long-term investment in research
- Strengthen the plant research ecosystem and collaboration with industry
- Train next generation of scientists with skills in team science, translational research and being data savvy

6

Program approach and setup: core & satelites





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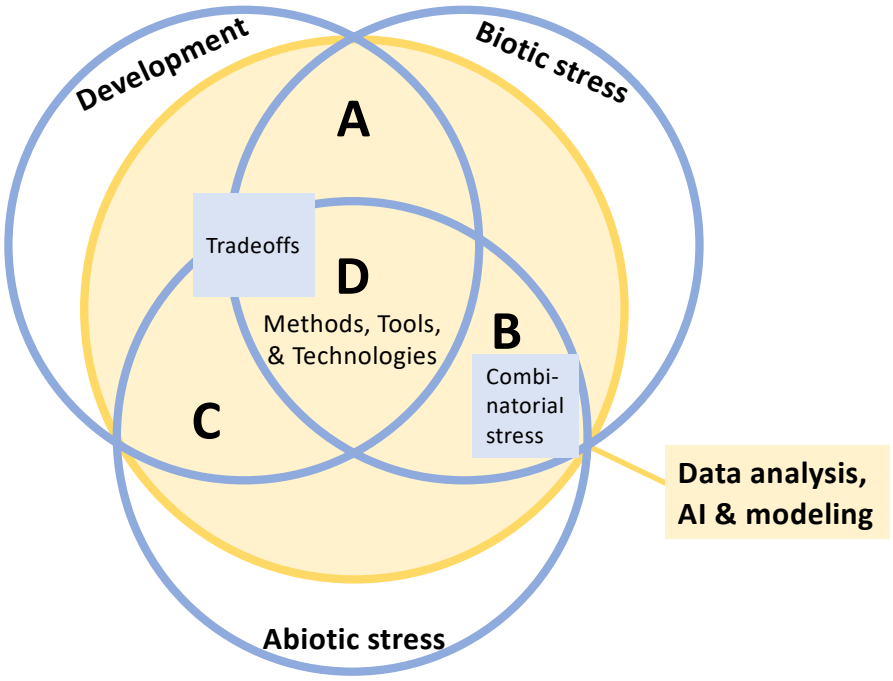
Scientific approach



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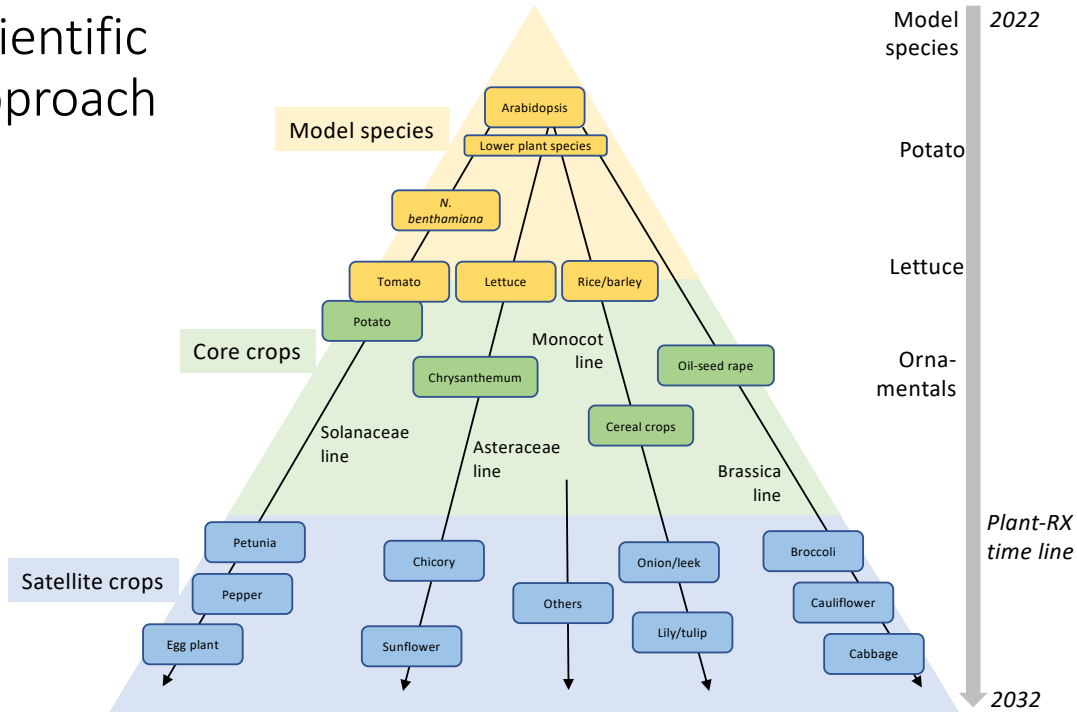
Scientific approach



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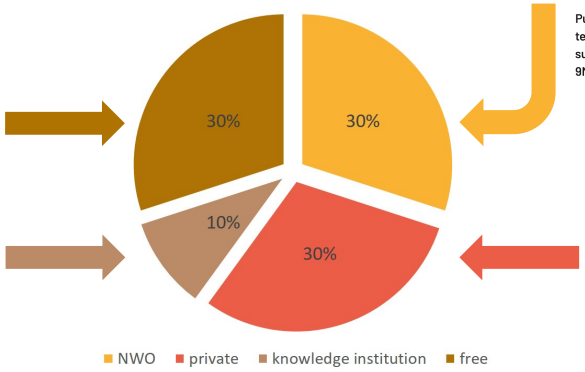
LTPs: 30-85 M€ (Plant-RX ambition 50 M€)

Government, National Growth Fund, provinces

Universities
5 M€ in kind, personnel, facilities

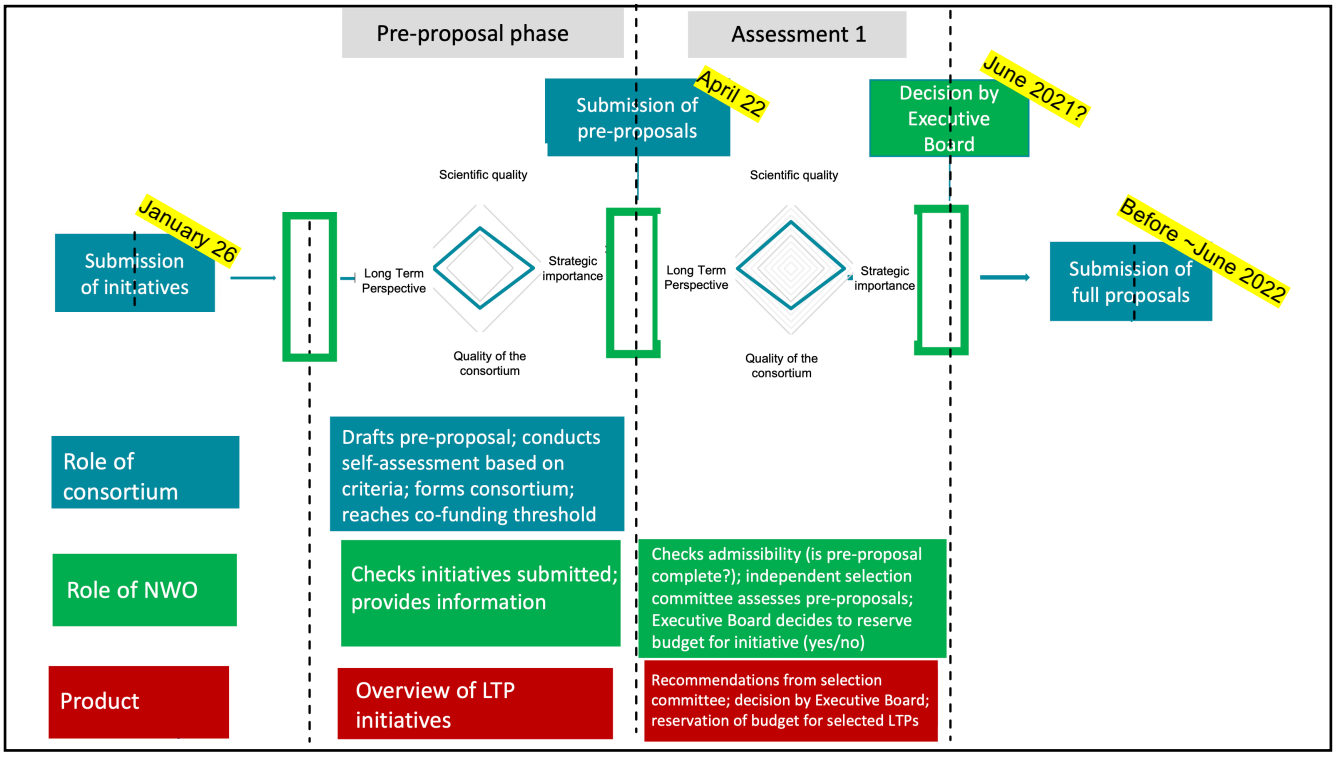


Companies
15 M€ in cash over 10 yrs
Commitment of 1.5 M€ by April 22

Long Term Programs Strategy driven consortia with impact

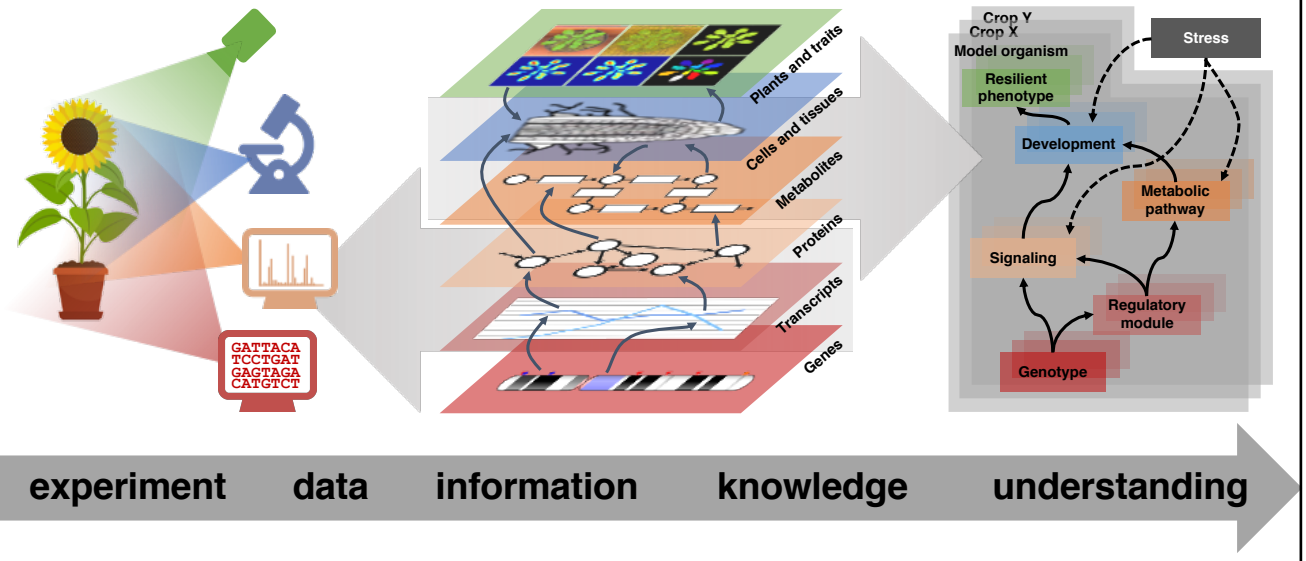
Public-private consortia can apply for funding for a Long Term Program (LTP) with a term of ten years. An LTP aims to structurally stimulate the development of a scientific field on subjects from the mission-driven top sectors and innovation policy. NWO funding is min. € 9M and max. € 25M, and a maximum of 30% of the total LTP budget.

10



11

Plant-RX: towards predictable breeding for resilience



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