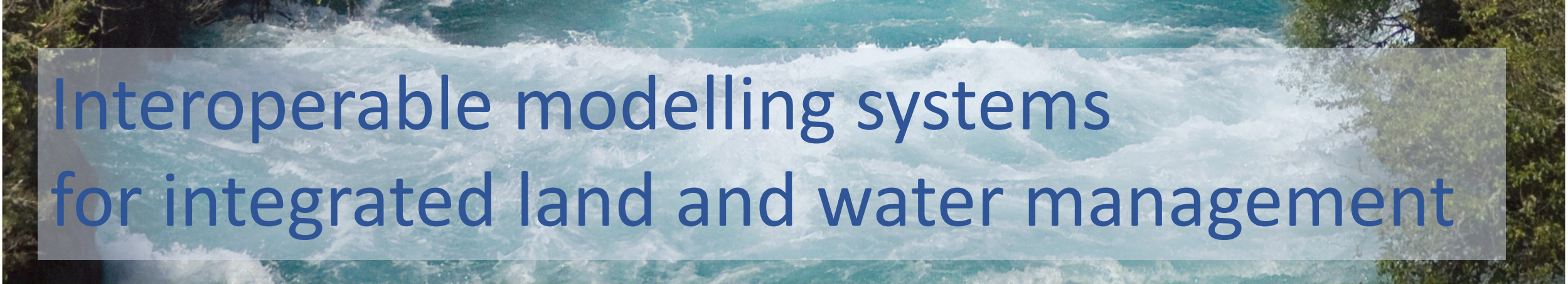




Interoperable modelling systems  
for integrated land and water management



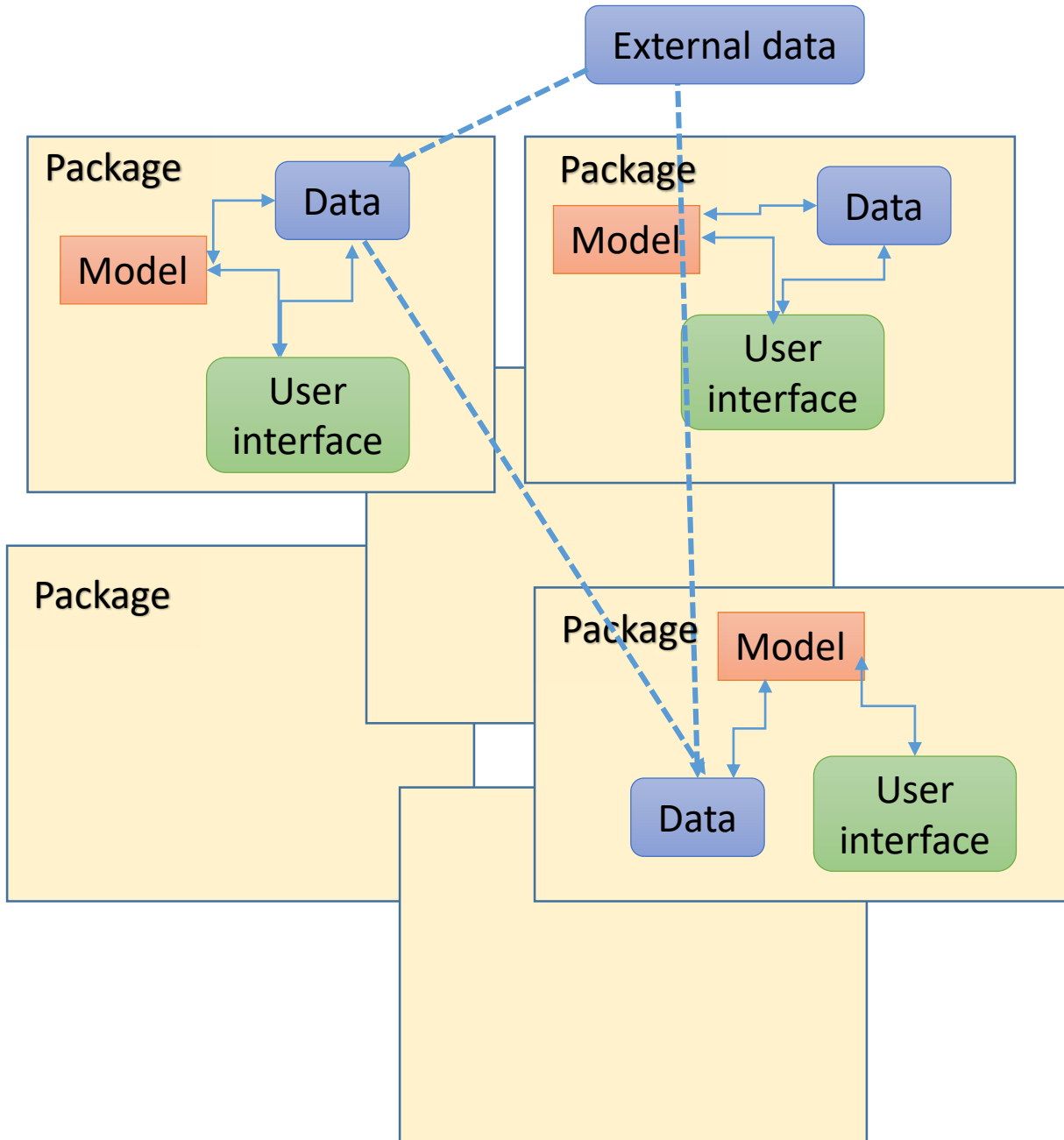
# Aim of the programme

*Develop a nationally recognised modelling platform for assessment of environmental, production and economic implications of land use and land use change.*

*Populate the framework with models and national datasets*

*Uses will include limit setting, land-water management, and contaminant accounting at farm and catchment scales*





# Current problems

Many model packages for separate problems. Closed siloes

Cumbersome to organise models to work together for integrated assessment.

Confusion about the role of different models

Duplicated or competing effort to maintain data links, update, and improve models

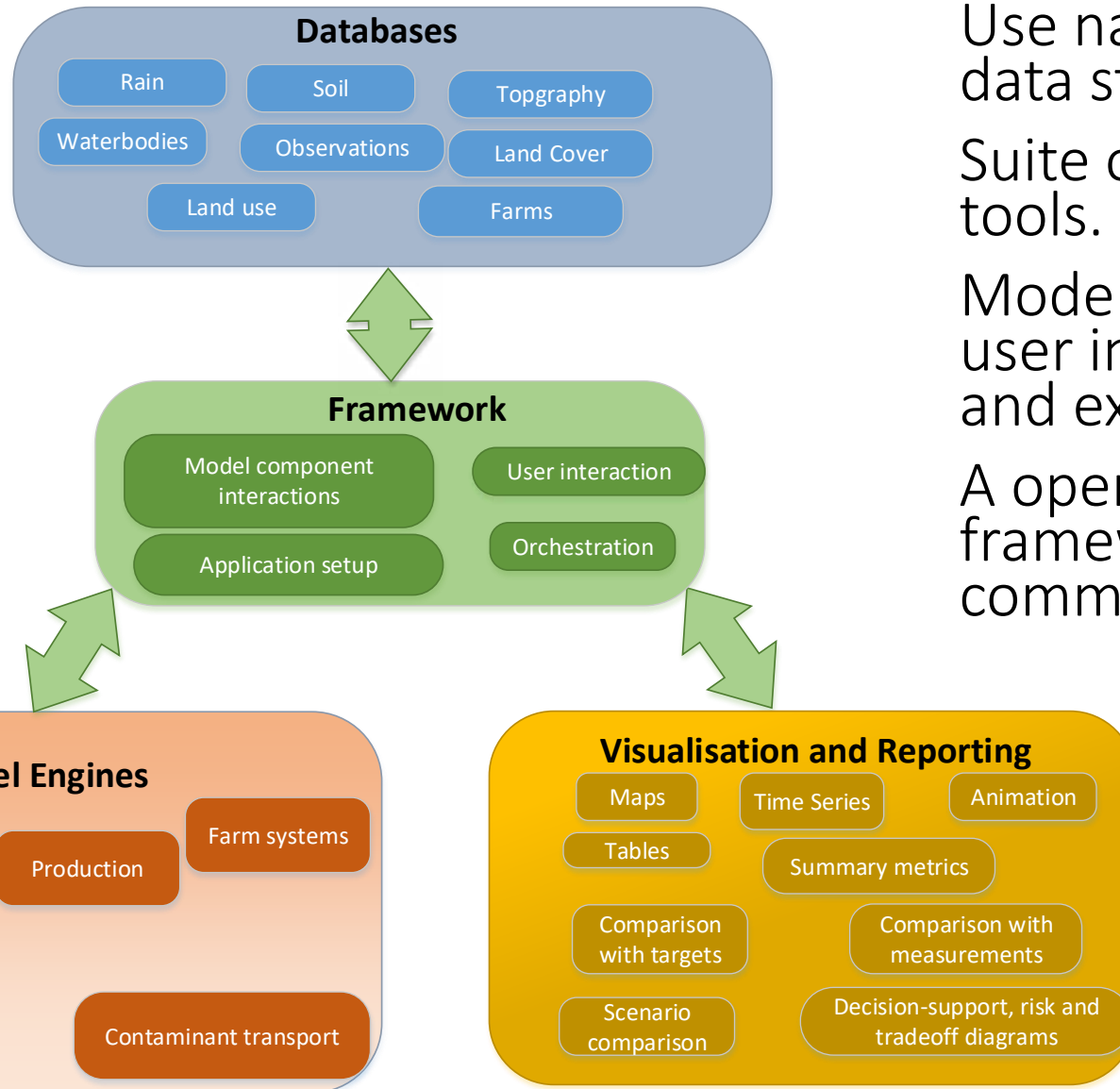
# Vision

Use national datasets with associated data standards and access protocols.

Suite of visualization and reporting tools.

Model engines separated from data and user interface to enable flexible linkage and extension.

An open-source flexible common framework for orchestration and communication.



# Programme funding and structure



NSC provides seed and anchor funding. Strong emphasis on co-funding, with strong governance

**Stage 1 (February to June 2017).** Define objectives, review past interoperability efforts and new technologies, and develop a plan for further work.

**Stage 2(to June 2019).** Dependent on acceptance of Phase 1 and ensuing co-funding. Implement a selected set of models and data in a selected framework, and demonstrate it.

**Stage 3 (to 2024).** Implement a larger set of models and data, trial in case studies.

# Progress and work on the horizon

- Two Governance Group meetings to clarify the objectives of the modelling.  
What do they really want? So far:
  - Link farms to catchments
  - At least seasonal, preferably daily
  - Water quantity and quality
  - Farm and macro-economics (lower priority)
- Review of frameworks underway (what worked and didn't).
  - 13 frameworks, 4 integrated models, plus emerging technologies.  
Summary report due mid May.
- System design workshop and proposal by end June.