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Towards a generic adaptation modelling framework to facilitate and accelerate adaptation planning in Destination Earth

Building on an Interactive Decision Support System for Flood Adaptation



FloodAdapt

The approach:

The models:

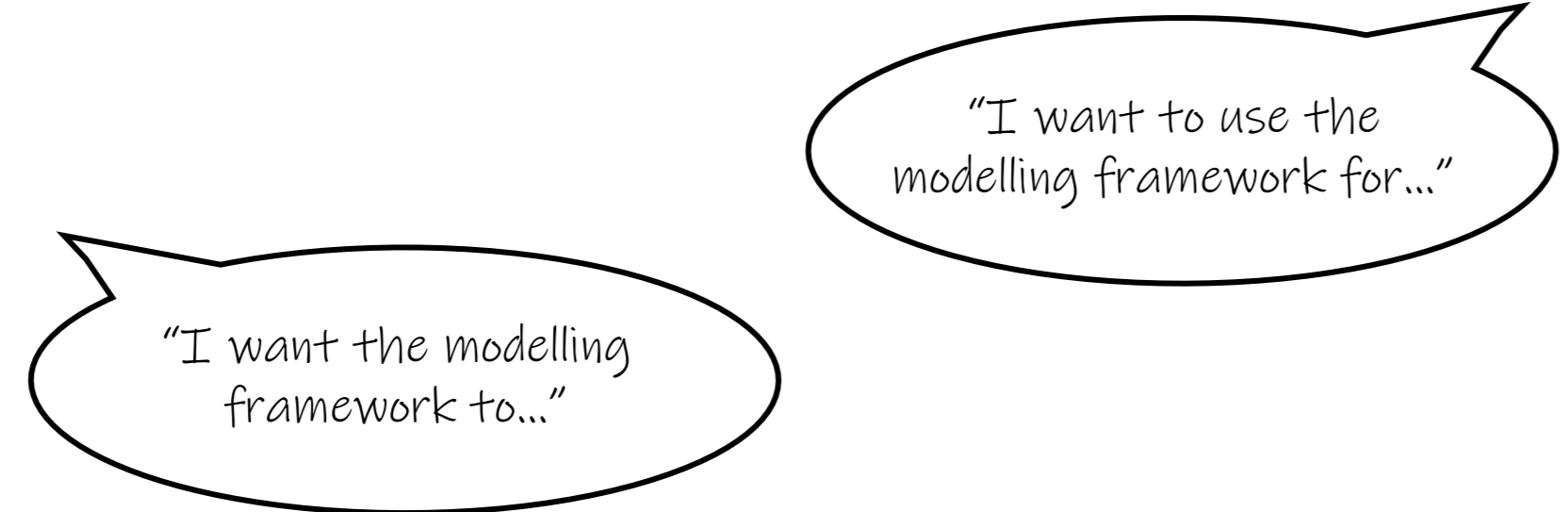
The user experience:

WP1: User community engagement and communication

Already happening:
The development and implementation of FloodAdapt is ongoing in several use cases including Charleston, South Carolina, USA and Cork, Ireland. Co-creation in these cases is informing advancements in model quality, the development of new features, and the exploration of additional applications.

- WP 1 activities:**
1. Collect user experiences and potential use cases to inform the adaptation modelling framework
 2. Elicit user feedback of the framework and demonstrator to support uptake
 3. Disseminate progress and promote collaborations via social media, workshops and other events

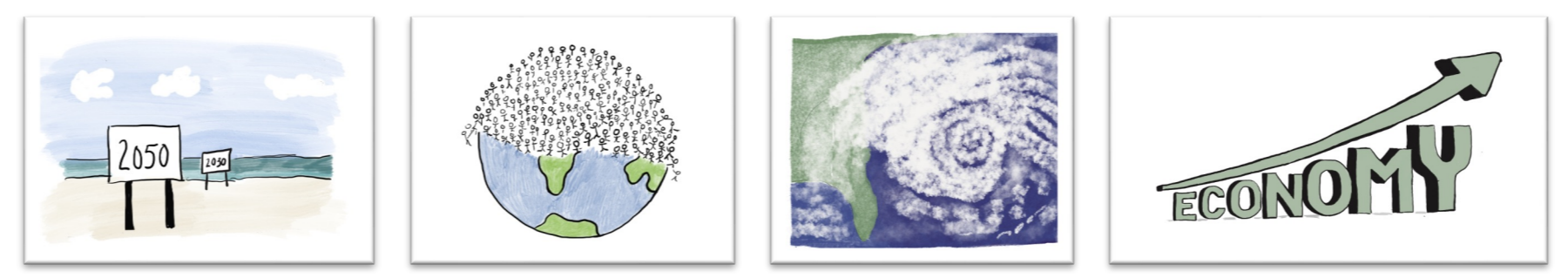
- WP 1 Outcomes:**
- Established network of stakeholders for the framework
 - User stories to guide the development of the modelling framework



WP2: Preparing a generic adaptation modelling framework

Already happening:
The Deltares team is developing a modular and transferable architecture within FloodAdapt that facilitates expansion, for new applications and to meet additional user needs.

- WP 2 activities:**
1. Draft initial design of adaptation modelling framework
 2. Incorporate user needs into the framework design
- WP 2 Outcomes:**
- Conceptual framework design, especially considering:
 - Potential use cases and feedback from end-users in different demographic and physical contexts



- Different physical models, time scales for calculation, and data requirements
- Technical design for the modelling framework
- Mock-ups of fully-developed modelling framework to communicate the anticipated user experience

WP3: Demonstrator

Already happening:
FloodAdapt is an open-source tool which users can set up by leveraging inundation and damage models, the process of which will be detailed in user documentation.

- WP 3 activities:**
1. Articulate functional specifications required of demonstrator based on WP1 and WP2 outputs
 2. Build containers for models and tools integrated with DestinE System components
 3. Develop open-source workflows for data exchange and communication between models and tools integrated with ECMWF's ecflow
 4. Develop an interactive web application demonstrator for flood risk management

- WP 3 Outcomes:**
- Publicly available containers and workflows integrated with DestinE System components and user documentation
 - An interactive web application demonstrator for flood risk management based on reusable UI components from the Solara open-source library

