Decision tree XBeach

* Decision tree is more extensive than current functionalities supported by XBeach.
* Not all combinations will result in a customized advice due to a lack of data.
* Not all combinations are equally relevant. What combinations are most important?
* Decision tree is going to be too large to print, so it will be some kind of online tool.
* Decision tree also indicates the model complexity and the user skills and required ICT environment.

# Input

## Forcing (and/or)

* Waves
  + Wind waves
  + Swell
  + Tsunami
  + Ship waves
* Water level
  + Tides
  + Surges
* Wind

## Configuration (or)

* Alongshore uniform
* Barrier islands & inlets
* Embayed beach
* Channels and rivers

## Composition (and/or)

* Sand
* Mud
* Clay
* Coral
* Gravel
* Structures
* Vegetation

## Interest (and/or)

* Morphological evolution
  + Storm events
    - Inundation
    - Overwash
    - Collision
  + Long-term development
    - Stability
    - Recovery
* Hydraulic loads
  + Wave loads
    - Run-up
    - Overtopping
    - Energy dissipation
    - Structures
    - Ships
  + Currents
    - Drifters
    - Swimmer safety
  + Ground water

## Scales

* Time
* Space
  + Cross-shore
  + Alongshore
  + Resolution

# Output

## Model setup

* Model settings
  + Suggested defaults
  + Suggested calibration
* Guideline to grid setup
  + Suggested configuration
* Model validity
  + Functionality available
  + Functionality tested
* Model complexity
  + Budget/time
  + Runtime
  + User skills
  + ICT

Knowledge Base

Database with “Twitter messages” tagged with hashtags according to the orthogonal categories “Forcing”, “Composition”, “Configuration” and “Interest”.

# Categories

## Forcing

* Waves
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  + Tsunami
  + Ship waves
* Water level
  + Tides
  + Surges
* Wind

## Configuration

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    - Ships
  + Currents
    - Drifters
    - Swimmer safety
  + Ground water

# Types of data

* Manual
* Journal papers
* Conference papers
* MSc theses
* Dissertations
* Example models
* Tutorials
* Skillbed
* Expert knowledge (do’s and don’ts)
* Validity judgement
* Novelty score

# Database design

* categories
  + id
  + parent\_id
  + type
  + name
  + status
* labels
  + id
  + parent\_id
  + category\_id
  + name
  + status
* knowledge
  + id
  + category\_id
  + title
  + description
  + url
  + file
  + status
* labels2knowledge
  + label\_id
  + knowledge\_id
  + status