

Minutes of the DigiShape Digitwin North sea work session

22 august 2019

Participants (scored out names: not present with notification):

BUAS: Igor Mayer, Magali Gonçalves, Harald Warmelink, ~~Carlos Santos~~
WMR: Gerjan Piet
Deltares: ~~Fedor Baart, Robyn Gwee, Fine Wilms~~, Willem Stolte
MARIS: ~~Peter Thijssen~~, Jordan Maduro
RWS-datalab: Petra Jeurissen, Joris Bolwerk
RWS: Xander Keijser
Project leaders: Joan Staeb & John Schobben (RWS)

1. Introduction

Joan tells the wishes of the Ministry of Infrastructure and Watermanagement (Leo de Vrees). Joan, Xander and John have spoken on the 21th of august with Leo about these requirements. See the attached PowerPoint presentation. The aim is to make some underpinned spatial scenarios for building 7 Giga Watt of windmill capacity after 2030. We will calculate the effects of these scenarios on:

- Financial consequences for the windmill industry
- The logistical plusses and minuses for the windmill industry
- The consequences for the fishery (distribution pattern, catches and finances)
- The effects on the North sea ecosystem

We will optimize all these interests in the different scenario's. In this meeting we will discuss what we will do in the Hackaton in Gent and what we will do in the rest of this year. Off course these two things are connected to eachother.

2. Focus / actions for this year

- 1) Browser based tool?
 - a. More people (for example policymakers) like a web based tool. It has a lower acceptance treshold
 - b. A webbased tool is logical, but cost some extra time and you loose some functionality, but it is worth to work on it. **Action: We will try to start with this during the hackaton in Gent.**
- 2) Open source?
 - a. It is the ambition of BUAS, but not yet realized. They want to start on a small scale with open source.
 - b. Deltares has an open source policy, but RWS is owner of the schematizations (and has also an open source policy).
 - c. Willem is not sure if the logistic model of Fedor is open source, because he developed this in cooperation with van Oord.
 - d. Gerjan does not known if Wageningen has an open source policy (especially for the fishery distribution model). He will ask it at his institute.
 - e. **Action: The Digitwin project can help to bring this forward (legal advice from Deltares and RWS can be sought)**
- 3) Positioned as a game?
 - a. All participants agree that this tool gives not the 'truth' if random policymakers or stakeholders will use it. But if it is a asset used in a stakeholder meeting or a meeting with researches it is not only a game; the results give in that case the most realistic answers. We will give possible scenarios as input for the 'Milieu Effect Rapportage (MER)'. During the MER other models will be used to calculate the effects in more detail.
 - b. Is it possible to save all the results of the serious users (stakeholders) of the game? This can be used as 'wisdom of the crowd'.
 - c. **Action: We will all explain this to users and stakeholders**
- 4) Also on a maptable?

- a. There are different wishes; mappable, computer with a mouse and a big screen.
Action: We will try to facilitate all these wishes.
- 5) INSPIRE and WMS&WFS Techniques?
 - a. For BUAS this not possible; data must to be 'cleaned' or aggregated. Also the performance could be a problem.
 - b. If the WFS or WMS changed it would be impossible to compare results of different users (although it is possible to track the versions of the datasets used in the metadata) .
 - c. EMODNET would like that we will use (during the hackaton) the different services.
 - d. **Action: We will work on enhancing the use of up to data datasets/layers. And/Or write down the pros and cons**
- 6) Virtual reality (Dolphin) model:
 - a. The RWS Datalab can cooperate with BUAS
 - b. It's important to use (and combine all) the realistic data from the North sea.
 - c. It's interesting to compare different subarea's in the North sea or different situations (for example a soil with or without windmills and fishery).
 - d. Nice to compare with other things, like 'how big is a windmill compared with the Eiffel tower', how many other (classic) fuels do I need for one windmill. How many households receive electricity from the windfarm (This is also a good link between the VR-module and the map/model-module)
 - e. **Action: Ideas will be studied, contacts made, write them down and/or implement them**
- 7) Calculation models:
 - a. The redistribution model ('fleet dynamics') and data of WMR for fishery has much more detail then the Ecopath model.
 - b. It is not sure if someone from WMR will be present in Gent. Gerjan will ask Jacco van Rijssel and Niels Hintzen.
 - c. Gerjan will make the data available from fishery, fish distribution, and other data from WMR.
 - d. **Action: the model from WMR/Gerjan will be implemented as a separate module or as a preset option of the existing module**

3. Doable for Gent Hackaton

- Overall goal: use Emodata on a usefull way
- BUAS has a presentation/workshop on the hackaton about MSP Challenge. They will also introduce Digishape-digitwin NorthSea.
- One of the contributions will be the 'Dolphin model'.
- We will connect the hackaton-challenge with the questions of Leo de Vrees.
- The hackathon ask for 3 subjects a development of the participants. Two of them are relevant for us: 1) Marine environment and protection combined with 2) blue energy.
- Who will be the chairman/projectleader of our team? Harold (not all the three days present) and Joan will act in this role during the hackathon.
- Some people will visit the hackathon and search for teams they can cooperate with. Maybe we could get some help from this people.

4. Suggestions out the 'round question'

- There is a lot of enthusiasm for the DigiShape North sea project and the hackathon
- WMR can give a different kind of data
- We have to make agreements about the distribution of data; standardization, platform, etc.
- During the hackathon we have to focus on one or two goals for developing tools.