Minutes from interview Rinze de Vries (27 May 2020)

1. **What kind of data needs to be collected (only the total amount of waste or the amount per type (e.g. plastic bottles, cans, bags etc.)?**

   - ***Addition to what kind of data: Is it also important to know where the plastic was collected?***

Now data is collected with the OSPAR method. LINK OSPAR METHODE

Everything is counted by hand and the data is put into task diagrams. A distinction is now made between bottles and cans, but in the future the distinction between Coca-Cola and Red Bull must also be made.

The location is not important because the Noria is in one place.

The Maas has big peaks in the waste stream from France at the end of the year, when there is a lot of rain and at the beginning of the summer season.

2. Could the counting of the plastic also be used to indicate when the plastic storage is full, or is this already solved by something else at this moment?

Probably not, this becomes very difficult with image recognition. They are now working on a scale at the bottom of the storage container or sensors in the container.

3. Who should the data end up with (e.g. Rijkswaterstaat)?

Rijkswaterstaat has no need for raw data. On the other hand, they are interested in information. So we have to come up with a way of converting data into information. We need to look at the Dikar model, which describes the process of data to information to knowledge to results.

4. Is the Noria used 24/7, or only at certain times of the day and in certain seasons? How long at most?

The Noria is not yet deployed, but it is intended that it will be deployed 24/7 at certain locations. In addition, it will also be deployed in large cities during events such as King's Day.

5. Is it necessary to stabilize the camera, i.e. is the water on which the Noria is used calm or not?

He could not answer that question. What is calm or not? We can look at the flow velocities in the Maas, this information is online.

In addition, we can make a test setup where the camera moves at a certain frequency and see how far we can go.

6. Where could the camera be placed?

Something can be made anywhere on the frame. You just have to watch out for the rotating parts.

7. Are there (3D) drawings of the Noria that we could use to make a design about how to attach the camera?

Yes, but Rinze de Vries is not allowed to share them, as they contain a lot of specialized knowledge and patents.

8. Is there a maximum budget you would like to spend on the image recognition module for the Noria?

He doesn't have a number in his head, but he doesn't like to put a module on every Noria. He would rather make a conveyor belt with an image recognition system at the sorting place to be able to categorize all the waste from each Noria with one camera.

LINK TO VIDEO SORTING PLACE

9. Is there already an energy source on the Noria

At the moment there still is, but in the future the water flow will have to cause a rotational movement that will be transmitted to gears which will make the system rotate.

It is therefore better for us to look at our own energy source