

# Recovery and utilisation of nutrients for low impact fertiliser



## Deliverable 6.2 – Report on Social Engagement Actions – Sneek

Communication framework and social engagement actions in the Run4Life project. Recommendations for demo-site Lemmerweg-oost in Sneek, the Netherlands



### This factsheet

This factsheet provides an understanding of the social context and social engagement strategies to foster acceptance for the Run4life technology solutions, specially related to Sneek, the Netherlands. The social engagement strategies focus on overcoming the social barriers to the technology and the uptake for water and nutrient reuse. The factsheet also provides effective communication and engagement strategies and communication frameworks with a set of recommendations for future engagement with the stakeholder groups in Ghent.



### Goal

The goal of the Run4Life project is to recover nutrients from domestic waste streams for its subsequent application in agriculture as a fertiliser. Run4Life proposes a new technological concept for wastewater and organic kitchen waste treatment and nutrient recovery. Success in these new circularity models requires a change in thinking from the stakeholders involved and those that have interest in the concepts, considering the technical, organisational, social and governance dimensions. To achieve these improved interactions an understanding of how people, groups, organisations, and networks currently interact and perceive nutrient recovery and reuse in the context of wastewater and organic kitchen waste management was required.



## Objectives

To achieve an understanding of the acceptance profiles, the activities were broken down into three main objectives:

1. To identify the key stakeholders' expectations from the project with different roles and different levels of impact (regional, national, global impact) and to map the stakeholders' network to visualise the levels of interaction around the demo-site.
2. To develop the social profiles of the relevant stakeholders based on collected data of the stakeholders' attitudes, opinions, and behaviour in relation to the Run4Life technologies.
3. To provide recommendations on the communication of the risks for the project communication, and to provide recommendations for the creation of engagement and social empowerment strategies.

## Approach

The analysis was undertaken at four demo-sites in Europe, located in Ghent in Belgium, Vigo in Spain, Helsingborg in Sweden, and Sneek in the Netherlands. At each of the four demo-sites, groups of stakeholders have been addressed through interventions and activities (Figure 1). These stakeholders have been divided into three groups to categorise their proximity to and involvement with the Run4Life project and technologies:

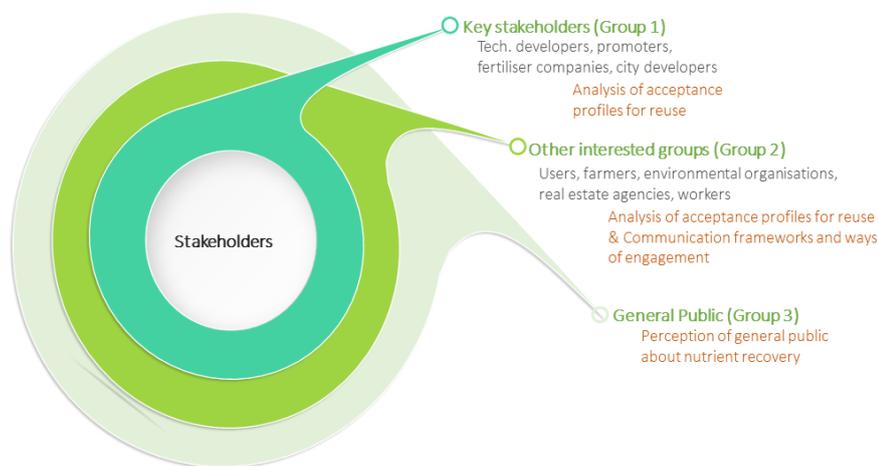


Figure 1: The three stakeholder groups and the respective analyses.

- **Group 1:** The key stakeholders closely associated and directly involved with the project. This group is considered aware of the project.
- **Group 2:** Other interested groups with direct or indirect interest in the project. This group is considered some-what aware of the project.
- **Group 3:** The general public in the immediate regions surrounding the respective demo-sites. This group is considered unaware of the project.

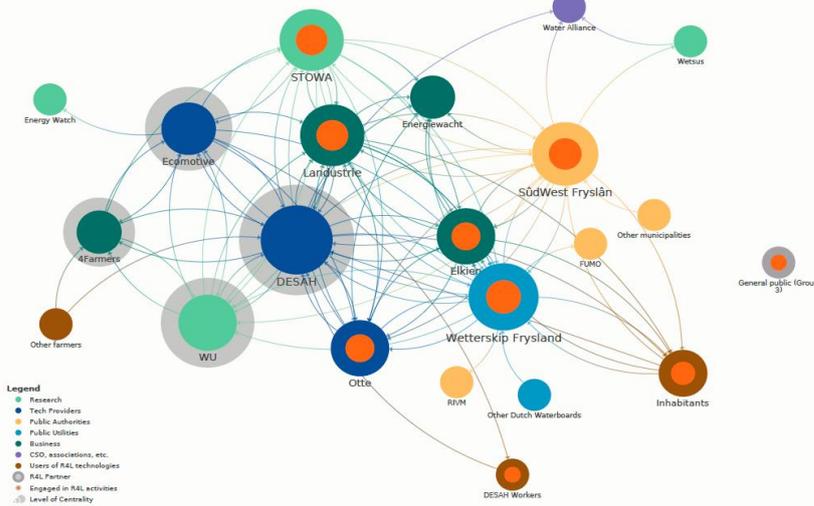
For group 1 and group 2, focus groups were held with the aim to analyse the acceptance profiles for nutrient reuse technologies of the key stakeholders and other interested groups. For group 2, focus groups were also held to define the best practices for **communication frameworks and ways of engagement**.

For group 3, an online questionnaire was launched around Friesland to understand the **perception and acceptance profiles of the general public**. This was in relation to nutrient recovery technologies and nutrients extracted from wastewater with the aim to reuse these for fertilisers in agriculture to produce crops for human consumption. The analyses from all groups provided the data necessary to update the **stakeholder maps** following the qualitative approach of SNA<sup>1</sup>.

<sup>1</sup> The process of investigating social structures through the use of networks and graph theory

# Key results

Figure 2: Sneek stakeholder map, available [here](#).



## How are the stakeholder connected?

Figure 2 demonstrates that the group 1 stakeholders with the largest number of connections are **Desah** (main technology pro-vider), **Watterskip Fryslân** (water board), and **SûdWest Fryslân** (municipality) and as such are the organisations that are the main connectors to the rest of the network. Most stakeholders are connected to each other across the network, indicating a well-connected

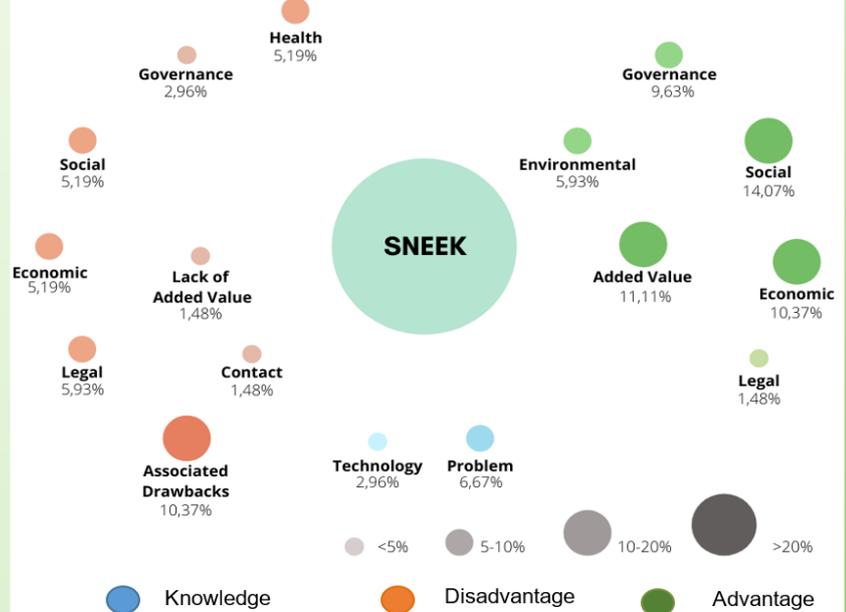
network. There are only a few outliers (Energy Watch, Water Alliance, Wetsus, General Public, Desah workers, and other farmers) which are not as well connected to the network.

## What are the perceptions of the stakeholders in relation to the technology systems?

Group 1 and 2 stakeholders made many references to the advantages of the Run4Life technologies (green spheres in Figure 3). The participants frequently highlighted the social and economic advantages of this technology and its added value. They also frequently referred to the political will to implement this type of solution.

As for the disadvantages (orange spheres), the largest number of references were related to the associated drawbacks of the systems - especially the noise of the

Figure 3: percentage of mentions of the codes in the Sneek focus group.



vacuum toilets. Disadvantages related to legal, economic, and social issues received a similar number of mentions, though their frequency was significantly lower when compared to the number of mentions of the same aspects as advantages.

For the general public (group 3), a correlation analysis of the questionnaire found that a greater willingness to use the Run4Life technology is related to a positive attitude towards fertilisers produced with this technology, as well as positive emotions, the perceived benefit of the technology, and trust in those involved in the process of making fertilisers. However, the higher the perception of risk and negative emotions, the lower the intention is to use technology was observed.

## The Run4Life consortium

The stakeholder maps were created with input from all the partners of the Run4Life consortium.



## Additional perception analyses

- The **stakeholder analyses should be elaborated** towards a more comprehensive SNA **through a questionnaire** to all actors who have not yet participated in the Run4Life activities to create a high-level overview of the network and also to know the extent of the connections outside the demo-site.
- The perception of farmers on using fertilisers from nutrient recovery at local/regional level should be further explored.
- A mechanism to allow a systematic gathering of user perceptions from the inhabitants to feed into future communications actions and dialogue should be established.
- Costs should be further explained as they have been perceived as an issue of concern for the implementation of the Run4Life technology.

## Effective communication and engagement strategies

- A **communication strategy** with group 1 and group 2 stakeholders should address:
  - The **relevance and added value** contributing to a green transition of the Sneek demo-site.
  - **Two-way communication actions** based on a proposed timeframe for implementation.
- Reliable **goals** for this communication strategy should be based on the following two main objectives:
  - **Objective 1:** Establish a communication channel for expressing and responding to stakeholder concerns.
  - **Objective 2:** Provide periodic information regarding the use and maintenance of the system and elaborate some “stories” for greater familiarity with the reader regarding the technology use.
- **Communication should be targeted** based on the relationship between the stakeholder and the technology.
- Users and stakeholders with high community involvement should be **involved from the beginning to provide impetus for acceptance**.
- **Information should be more digestible and visual** especially for the users of the technologies, i.e., graphical material, educational videos, and infographics.
- Information sessions and social and technical gatherings should be held at the plants.
- **The associated drawbacks** of the technology, i.e., odours, noise, leakages, and **the need for circularity should be clearly acknowledged and communicated** to the users of the technologies.
- **The quality of the end-product fertilisers** should be effectively communicated to the farmers and the fertiliser companies, emphasizing the environmental benefits of the product. These messages should come from a **reliable source** such as an academic organisation (e.g., WU and/or LEAF).
- **Messages for group 3** should emphasize the quantifiable benefits of the products and aim to generate a positive attitude towards the Run4Life technology. These messages should come from a **reliable source** such as an academic organisation.