Recovery and utilisation of nutrients for low impact fertiliser

Deliverable 6.2 – Report on Social Engagement Actions – Helsingborg

Communication framework and social engagement actions in the Run4Life project. Recommendations for demo-site Oceanhamnen in Helsingborg, Sweden.

Introduction

This factsheet provides an understanding of the social context and social engagement strategies to foster acceptance for the Run4life technology solutions, specially related to Helsingborg, Sweden. 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.

https://run4life-project.eu

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 network of stakeholders to visualise the levels of interaction with regards to the technology at 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 for the project communication, and to create 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:
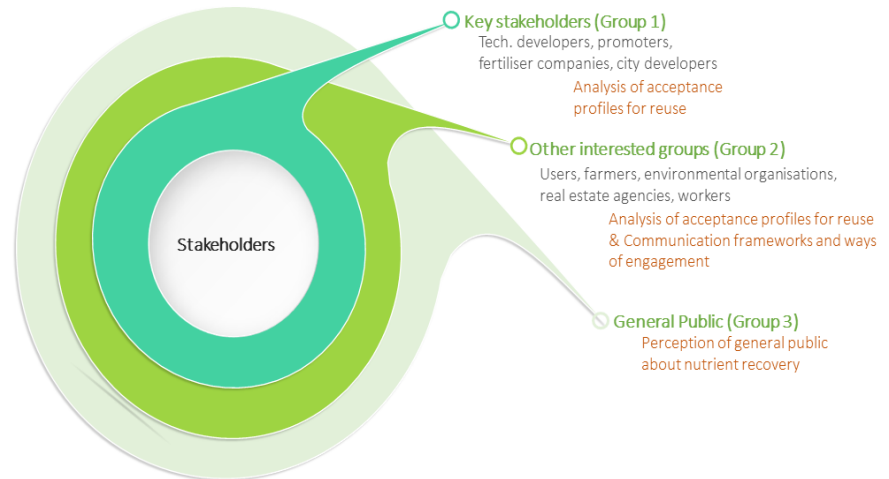

Figure 1: The three stakeholder groups and the respective analyses.

- **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, 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 held to define the best practices for **communication frameworks and ways of engagement**.

For group 3, an online questionnaire was launched around Helsingborg to understand the **perception and acceptance profile 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 up-date the stakeholder maps following the qualitative approach of SNA[1].

[1] *The process of investigating social structures through the use of networks and graph theory*

Key results

Figure 2: Helsingborg stakeholder map, available here.
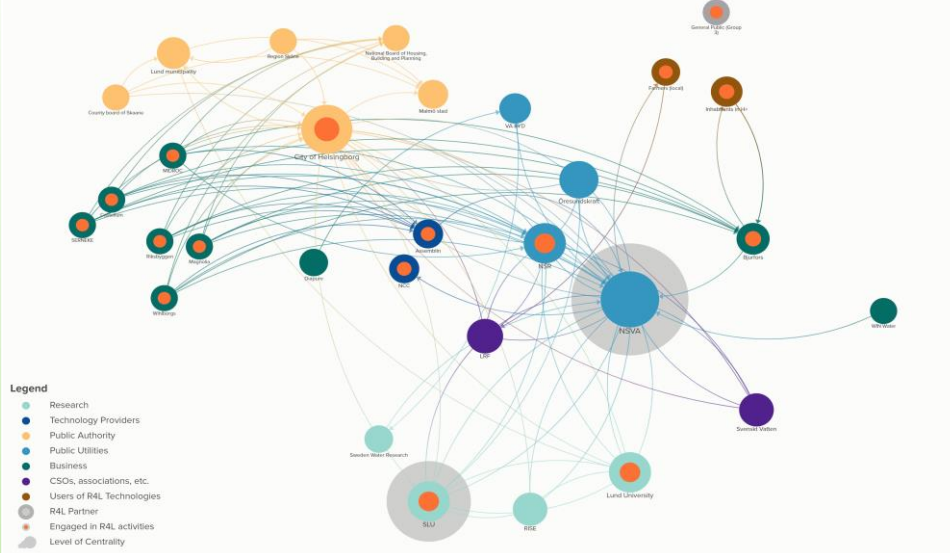
How are the stakeholder connected?

Figure 2 shows the top five connectors are **NSVA, the city of Helsingborg**, and **NSR** (waste management public authority), and as such are the organisations that are the main connectors to the rest of the network. The rest of the elements are generally well connected, with only two organisations (Diapure and WIN water) with one connection each. The users of the Run4Life technologies also have two connections each but are generally well-connected to the largest network connector, **NSVA**. The social structure is well interrelated as it does not show elements with predominant level of centrality in 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 added value, the social willingness for implementation and the environmental benefits of using the technology.

As for the disadvantages (orange spheres), the largest number of references were related to the inconveniences associated with the use, such as the need to train users in the correct use of the technology and how the information gets relayed to new tenants. Disadvantages related to economic
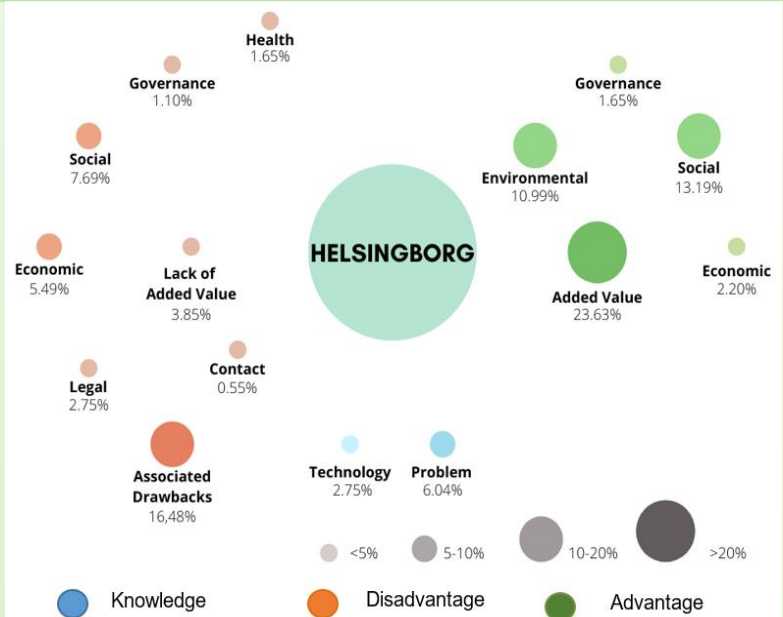

Figure 3: percentage of mentions of the codes in the Sneek focus group.

aspects and price of the technology were also, albeit to a lesser extent, mentioned. 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. Further, there were positive emotions, perceived benefits 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 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.
- The stakeholder map should be enlarged to include the nearby regions with a focus on sustainability and the activities of the partner Recolab.
- More information should be gathered on the use of the technologies from the **perspective of users and related behaviour from the inhabitants**, with a focus on group activities.
- 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 explained as they have been perceived as 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 the added value** contributing to a green transition of the Helsingborg demo-site.
  - **A two-way engagement process** with the inhabitants based on a proposed timeframe.
  - **A training procedure** with the inhabitants initially upon moving in and continuously with periodic activities.
- **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 concerns.
  - **Objective 2**: Provide periodic information about the use and maintenance of the system and elaborate "stories" for greater familiarity with the reader regarding its use.
- **Communication should be targeted** based on the relationship between stakeholder and technology.
- Users and stakeholders with high community involvement should be **involved from the beginning**.
- **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** with the users of the technologies.
- The **quality of the end-product fertilisers** should be effectively communicated to the farmers, emphasizing the environmental benefits of the product. These messages should come from a **reliable source** academic organisation (e.g., WU and/or LEAF).
- **International discussion groups** should be organised for the farmers and the fertiliser companies to facilitate dialogue.
- **Messages for group 3** should emphasize the benefits of the products and aim to generate a positive attitude to-wards the Run4Life technology and to minimise the risk perception. These messages should come from a reliable source such as an academic organisation.
- The messages should stress the **positive emotions** related to the use of these products, such as pride and satisfaction.

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