

# Recovery and utilisation of nutrients for low impact fertiliser



## Deliverable 6.1 – Initial mapping of stakeholders and expectations

### What is the deliverable about?

Public acceptance is a key component in the study of the feasibility of water and nutrient reuse technologies. This deliverable aims to start the process of understanding the social context related to the Run4Life technologies. The analysis has taken place across 4 project demonstration sites (demo-sites) in Europe (i) Ghent, Belgium; (ii) Vigo, Spain; (iii) Helsingborg, Sweden and (iv) Sneek, the Netherlands.

### This factsheet

This factsheet is a summary of the main outputs of deliverable 6.1 which can be found on the Run4Life website.

### Who are the Run4Life Stakeholders?

The Run4Life Stakeholders are defined as those organisations that can show interest in and/or influence the context of nutrient recovery and water reuse technologies, which were developed through the lifetime of the project.

### What is the goal of Run4Life?

The goal of Run4Life is to demonstrate the feasibility of recovering nutrients from domestic waste streams for its subsequent application in agriculture. Run4Life proposes a new technological concept of circularity models for wastewater treatment and nutrient recovery. Success in these new circularity models requires a change in thinking from involved stakeholders and interested groups, regarding the technical, organisational, social and governance dimensions. In order to achieve this, we need to generate an understanding of how stakeholder groups currently view the context of wastewater reuse, how they interact and engage with one another and how this can be improved.

### How was the mapping of stakeholders and expectations undertaken?

Three research phases were implemented:

#### Phase 1

Contextualization; the review of the social and political context at each demo-site, the identification of the stakeholders and a literature review to identify psychosocial factors of wastewater reuse acceptance and effective engagement.

#### Phase 2

Initial approach to the demo-site community; the implementation of questionnaires to key stakeholders at the demo-sites and two focus groups, one held in Vigo and the other in Helsingborg.

#### Phase 3

Processing and visualizing; integration of results into stakeholder maps following the questionnaires.



# Stakeholder analysis aware vs. unaware community

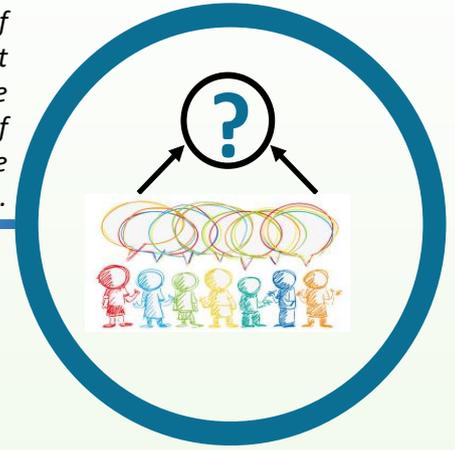
## Unaware community

The community that lacks awareness of nutrients recovery process and/or about Run4Life. This community needs to be made aware of the project to improve awareness of circular economy needs in the area and the environmental and economic benefits.



## Aware community

Actors who are directly involved in the implementation of the Run4Life project, affected by it, or will benefit directly from its results.



## Direct Stakeholders

(Fully engaged in Run4Life)

- Project Partners
- Stakeholder Panel (SEP)
- Advisory Board (SAB)

## Indirect Stakeholders

(Actors that could benefit or gain interest)

- Nutrient recovery community

## Stakeholders

- The general public of each demo-site
- The general public

## Stakeholders at each of the demo-sites

(Actors that could benefit or gain interest)

- Technology users: consumers, fertilisers, inhabitants
- Technology/systems developers – further analysed in WP7
- Media
- Civil society
- Public authorities
- Research
- Funding agencies

## Literature review: psychosocial factors in wastewater reuse

The purpose of this review was to identify the psychosocial factors contributing to the acceptance of wastewater reuse and nutrient recovery and to explore the factors contributing to effective engagement. In conclusion, the public opinion and attitudes with regards to water reuse and nutrient recovery shows higher levels of acceptance when:

- **The degree of human contact is minimal**
- **Protection of public health is clear**
- **Protection of the environment is a clear benefit from water reuse**
- **Promotion of water conservation is a clear benefit from water reuse**
- **The cost of treatment and distribution technologies is reasonable**
- **Awareness of water supply problems in the community is high**
- **Perception of the quality of reclaimed water and nutrient recovery is high**
- **Trust in local management of public utilities and technologies is high**

Effective engagement is influenced by:

- **Interest or willingness from the stakeholders**
- **Power and influence of the stakeholders**
- **The way of interaction (being inclusive and transparent)**
- **The form of communication**
- **Trust between stakeholders**

The factors that make actors show interest, influence and interact on water and climate related issues leading to effective engagement are aimed to be explored further during the course of the project.

# New knowledge created by dynamic stakeholder maps

## Stakeholders map for each demo-site

The results of phase 1 and 2 were analysed and integrated following the questionnaires. The end-result was a first-look stakeholders map for each demo-site and to know the level of risk perception related to nutrient and water reuse. These initial maps will grow throughout the lifetime of the project as further stakeholders are identified and added to the initial maps in a snowball process. The final objective is that the stakeholders from each demo-site are identified and their linkages to and interactions with one another are shown. This allows the stakeholders at each site greater opportunity to interact and collaborate with one another.

Public acceptance has initially been addressed with the community of stakeholders consulted at this stage. Additionally, the social factors perceived by the stakeholders that could potentially undermine the feasibility of the Run4Life project have been identified. Finally, the baseline data to guide the strategies for public acceptance with any future proposal for implementation of the Run4Life technology were provided.

## Stakeholder map example Vigo

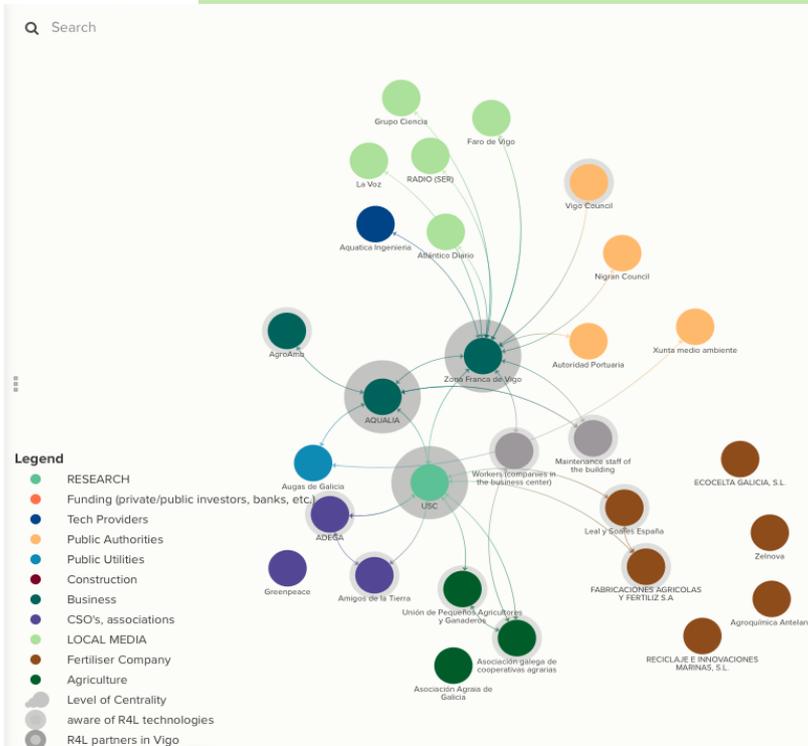
<https://embed.kumu.io/cef90e39ab021b5e13e2b9a2f777b84>

### Run4Life Vigo Stakeholder Map (Porto do Molle Enterprise Park)

This data visualization shows the current connections among the stakeholders in the Vigo site of the Run4Life project. This map represents the most up-to-date network related to the project site in the Porto do Molle Enterprise Park. Updates will be periodically uploaded according to the project progress.

The Run4Life Stakeholders are defined as those organisations that can show interest and/or influence in the context of nutrient recovery and water reuse technologies developed through the lifetime of the project, especially in the nearby communities of the project demo-sites.

[#vigo-stage-1](#) permalink



## Key message 1

Reinforcing the environmental and economic benefits of the treatment systems, as well as the multiple advantages of the circular economy perspective, can make this new technology attractive to potential users, at least from the stakeholders' perspective.

## Key message 2

The general population needs to frame water and nutrient recovery as something that requires change. Therefore, they need to perceive that the current method of waste and water treatment are not optimal or not as optimal as they should be.

## Key messages 3

In terms of the availability and engagement level of the stakeholders in the Run4Life project, the demo-site stakeholders on the whole are keen to be engaged at a fairly high frequency (whenever necessary or at least once every 3 months). They would prefer to be engaged through assisting in interactive processes such as discussion groups and workshops

# Outlook on the next steps in public acceptance

The next steps with regard to the stakeholders are related to the engagement procedure and further analysis of the factors shaping the social attitudes and behaviour with respect to the Run4Life technologies. Specific strategies at demo-site level as well as general strategies are created in WP6 together with WP7 and WP8.

## At demo-site level

Further focus groups aim to delve deeper into the results of the questionnaires, specifically at the remaining demo-sites of Ghent and Sneek. The stakeholders that have not yet been contacted will now be taken into account: local media, and local CSO's. In addition, this activity will aim to further validate the stakeholder maps and to gain further inputs.

## Social engagement interventions

Specific discussion groups (workshops and focus groups) will be organised for each demo-site. These interventions will be held with the involved stakeholders so that they understand the importance of the information that is generated and the messages that are sent to the general population. Furthermore, they will learn how to correctly use of said information to improve the acceptance of the project.

## “unaware community” and “users of technologies”

The following activities have been identified to address these groups:

- Elaboration of a conceptual framework including all relevant variables and other concepts which could potentially better predict public acceptance. For this purpose, a pilot will be designed in order to control the variables that may influence how the message is delivered regarding the benefits of the technology used by the Run4Life project.
- Design a general population questionnaire on the risks and perceived benefits of the demo-site technologies and on the possible acceptance of its use, to compare with the existing results.
- Undertake questionnaires and workshops with fertilizer companies and other users of the Run4life solutions, to get to know their perceptions regarding the reuse of nutrients.

## **Why does this deliverable matter?**

This work and resulting deliverable shines greater light on how progress can be made when it comes to building a network of stakeholders, -partners involved in this project and those that need to be further engaged. Furthermore, a wider understanding of public perception, the barriers and benefits is perceived and how these can be tackled through effective engagement.

The impact pathway and the expected long term results of the activities performed for this deliverable contribute to maximising the engagement and acceptance of the Run4Life stakeholders. Stakeholders are better identified, characterised and engaged thanks to the Stakeholder Mapping and analysis process.

This deliverable relates directly to further activities in WP6 that explores public acceptance and engagement strategies. The results aim at providing insights into the work packages related to exploitation (WP7) and communication (WP8)

