

Project title:

Circular Toilet

Created by:

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## Partners & Support

Which persons and organizations can support your project and act as intermediaries?

Tourism: Graubünden Tourism, Schweizer Wanderwege;  
Public Sector: Energiestadt, Participating community in e.g. Graubünden, City of Zurich;  
Our Network:  
VaLoo is the Swiss Network for circular sanitation (with e.g. ZHAW and Eawag, Kompotoi and housing cooperatives) and is connected to VSA, SAC, Schweizer Wanderwege, Swiss National Park, Administrations of cantons and cities (e.g. ZüriWC)

Additionally, circular sanitation has received increasing attention in media (SRF, tagesanzeiger, Sonntagsblick and local newspapers)

## Activities

What are the three main activities needed to create/realize your project?

- 1) Merge *Nutrient Harvester* with *Piazza* toilet
- 3) Find community (e.g. touristic rural municipality) to install this 1<sup>st</sup> lighthouse
- 3) Create communication and promote the fertilizer.

## Ressources

Which three skills and resources are central to the implementation of your idea?

- 1) Environmental engineering for process steering and fertilizer production (M. Riechmann)
- 2) production of toilet and logistics for maintenance (J. Casanova-Linder)
- 3) soft-skills for engaging participation and impact communication (L. Carpentier)

## Project

How do you explain your project to a stranger in 1 minute?

Flush and forget was yesterday, we need to rethink our way to deal with water, for that we create a lighthouse toilet showing the public that there are affordable and appealing solutions. The user can have a direct impact on reducing water use while donating resources for environmental friendly fertilizers. Did you know that with the nutrients of 1 pee you can grow 3 carrots?

We build a Circular Toilet that combines an inclusive dry toilet with a built-in fertilizer machine that turns urine into fertilizer and even produces water. Our project is scalable, it suits e.g. frequented hiking paths without sewer connection as well as urban hotspots. The Circular Toilet helps communities to become water-wise.

## Relationship, Community

How do you actively involve your community in your project (beyond just looking/listening)? Users interactively becomes aware of water-wise solutions and the potential in urine; Communities become innovation leaders; Community greeneries can in pilot environmental friendly fertilizer.

## Channels

What channels will you use to reach your community? How will the target group find out about your project?  
The extended VaLoo network, SAC, #ScheissMoment campaign and the climanow sponsors will help us to outreach and find the right community to test the Toilet; Communication channels of team and the community promote the Toilet through, SoMe, newsletter, website and workshops.

## Target Groups

Who do you want to address with your idea or project? Who will jump at it? Name your main target groups.

- 1) Future-oriented communities in touristic rural areas or urban environment: that want to tackle increasing water scarcity by providing circular sanitation in public spaces.
- 2) Toilet users: have a positive impact with each usage.
- 3) Fertilizer users: Community greeneries can pilot the fertilizer, helping to close the nutrient-cycle.

## Budget

What costs do you expect to incur to realize your idea?

What are the costs?

Total cost 80,000 CHF

- 25k Build and integrate *Nutrient Harvester* (Ogmo)
- 10k O&M of fertilizer machine (Ogmo)
- 30k Installation of *Piazza* toilet (Kompotoi)
- 15k Coordination, outreach, & marketing of the fertilizer (VaLoo)

Climanow would accelerate the realization of a first lighthouse together with a partnering community.

## Impact

1. **Impact:** What does your idea do for the climate? How do you measure/verify the impact?

2. **Scaling/Expansion/Unfolding:** How to increase the impact of your project?
- 1 toilet 36'500 uses/yr resulting in 240'000L water saved, 90 kg N, 7 kg P and 45 kg K recovered & 12'400L water produced
  - Reduce energy needed at WWTP & avoid fertilizer import -> CO2 reduction of 700 kg/yr.
  - We measure visits and urine collected which correlates with saved water

Lighthouse provides blueprint -> can be scaled to rural & urban spaces or touristic spots.  
Potential: around 1,000 toilets in CH alone.