

What about your wastewater? Thinking and talking about your wastewater.

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Highlights:

- Understand how people think of their wastewater journey is crucial to provide better sanitation services.
- Current Brazilian indexes do not measure efficiently realities with different sanitation modes, especially the coexistence of SS and NSS.
- The debate between centralized and decentralized systems is outdated, and what happens is a complex sanitation ecosystem.

Keywords: Sanitation planning; wastewater management; design thinking on sanitation

INTRODUCTION

It can be an interesting experience make people talk, in a easy way, about their shit, or fecal waste. How did it born? What happens just after flush, if it is flushed? How fast people loose knowledge on their own wastewater.

How we talk about sanitation should be frequently adjusted to the current paradigms and visions on how society walks. It is also relevant establish a language based on the common use of terminologies at local and temporal context. More than semantics, the common use of terms and keywords seems to be a critical path on the planning, design, construction and operation of sanitation solutions, and can promote the understanding for the stakeholders. Rosenqvist (2016) reviewed several documents from different years since 1970's and defined 7 perspectives on sanitation services along the years making a relationship on world economic, political and environmental approaches. In short words, the success of a solution depends on the assertive communication between people in the service chain. So, a fundamental step on the design of a sanitation planning is listen what people think and already know, or think they know, about current services. Establish this dialogue requires a resilient methodology and a human approach. This paper aims to present a design thinking based methodology to make people think and talk about their own wastewater.

METHODOLOGY

The current strategies were developed and applied in a group of 10 post graduate environmental engineering researchers belonging to GESAD group, all with different origin in Santa Catarina

state. The activity staff team worked as a facilitator interacting with all participants making invitations and provoking with some examples and short references before the meeting, for 10 days. During this period people received in their cell phones some topics on what they should think and present to the group about their own wastewater. This phase we named engaging phase.

After this period all involved were inquired to a visual meeting with draw schedule, showed in figure 1 [a]. In this invitation there were some instructions for their presentations. The most important was that they should think about what happens to the wastewater as a journey. In the meeting they should tell this story without technological support. During a 5 minutes explanation people were motivated to draw the mass fluxes and interact with the whole group, creating a catharsis phase, registered in figure 2.

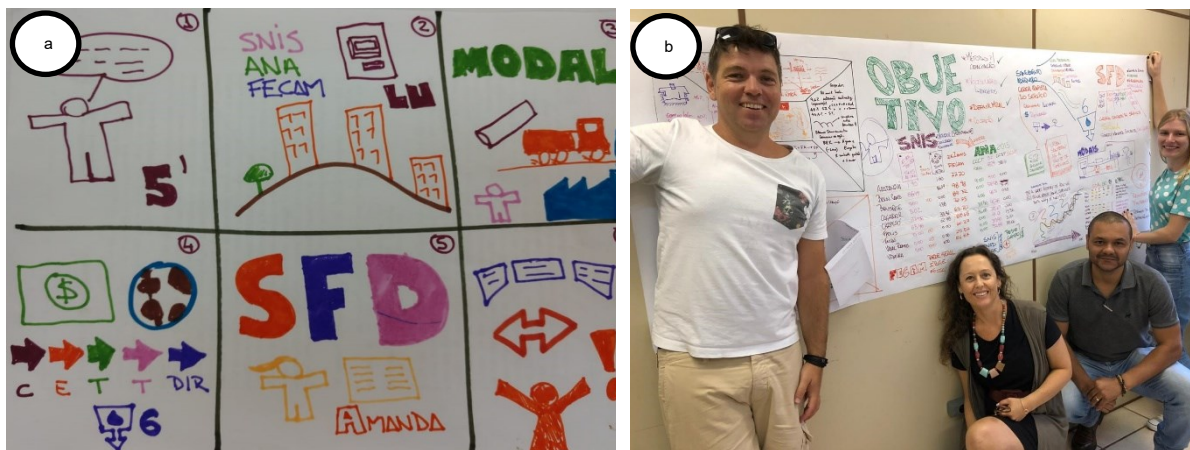


Figure 1 [a] Meeting visual schedule. [b] Staff team with the final activity map.



Figure 2 [a] 5 minutes presentation on catharsis phase. [b] Drawing during joint phase.

Just next the staff team started the joint phase, where the participants were presented to the concepts and values of sanitation indexes of their localities and to a background presentation on the Shit Flow Diagram (SFD) developed by Sustainable Sanitation Alliance – SUSANA. This phase had the goal to set terminologies and improve the understanding of common tools.

RESULTS AND CONCLUSIONS

Even though conducted with sanitation experts, the exercise showed the differences in perspectives and perceptions and a disturbed understanding on sector definitions. To help participants to conduct their thoughts and rethink about their narratives the staff team needed to present the World Bank and SuSanA approach described by Scott (2019) and Peal (2020). Understanding sanitation as a suite of services that consist in a chain of at least 5 elements; (i) containment, (ii) emptying, (iii) transport, (iv) treatment and (v) disposal; made natural to present the sanitation mode concept.

In the group was easy to separate descriptions into two groups: sewerred (SS) and non-sewerred solutions (NSS). Half of the group presented SS for their wastewater and the other half talked NSS even they didn't know these concepts deeply. The better knowledge on sewerred arrangements was observed, but some details during the journey were even mentioned, such as, the presence of pumping stations. Even in centralized solutions the need of satellite services was mentioned, for example cleaning connections and grease removal structures. This can be explained because of the better understanding on technology-based approaches. Nevertheless, the same result should be expected with different target audience, because of most disseminate indexes, that consider mostly wastewater collection coverage in relation to fecal sludge management.

The use of SuSanA (2018) SFD tool make the connection between different realities and sanitation modes. It was showed with the diagram help that, even places with higher sanitation indexes can suffer from bad services provided. Also, SFD can compare different sanitation modes and present a number of safely managed excreta. The activity also showed that the current Brazilian indexes don't measure realities with different sanitation modes, especially the coexistence of SS and NSS. It also faces the debate between centralized and decentralized systems, and notes that what really happens in most cities is a complex sanitation ecosystem, who will need a huge number of associated services.

Understand how people talk about what happens with excreta just after it is generated in real basis is crucial to make the link between what people think of their wastewater journey and what services should be provided, or improved, to achieve a good public perception and offer better sanitation solutions to reach SDG 6 efficiently. And you? What about your wastewater?

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