Overview

POWER is a Research and Innovation Action project, supporting the EIP Water Action Group, NetwercH2O and City Blueprints. The project's Digital Social Platform (DSP) is the central tool to be made available to cities, utilities or other promoting agencies or entities, aiming at an important contribution to the creation of digital communities around themes specifically related to water and impacting the quality of life of local populations.

Digital social platforms are ICT tools designed to metabolize the digital involvement of communities in the processes of governance, dissemination, planning and decision-making that occur in a wide range of fields, such as water as a public resource and water management in human communities.

This dynamic is achieved by implementing digital interaction mechanisms promoted by local decision-makers and seeking to involve citizens in ongoing projects, decision-making processes, promotion of global awareness and the dissemination and sharing of local knowledge and experiences.

A specific local instance of the POWER Digital Social Platform materializes through a dedicated DSP website and an accompanying mobile app. It is envisioned that it will be typically set up by a city, a utility, a municipal-level agency or a water-related entity, and aimed to be used by community members, activists, volunteers, municipal officials and representatives, water professionals and experts, as well as regional, national or international-level policy-makers, politicians and other stakeholders.

The POWER DSP is centred on creating awareness, offering knowledge, and eliciting participation of citizens and local communities in water-related challenges of relevance. On the one hand, the DSP provides information, advice and the best practice that is specific to each targeted challenge, framed for its local context, and which may otherwise be unavailable or difficult to find in a timely and consolidated manner.

On the other hand, it provides channels for interaction and knowledge-sharing among the participants and local communities, the city and other stakeholders. To support awareness and stimulate engagement, the information provision, user interaction and knowledge sharing channels and functionalities integrate information and knowledge visualisation as well as gamification techniques.
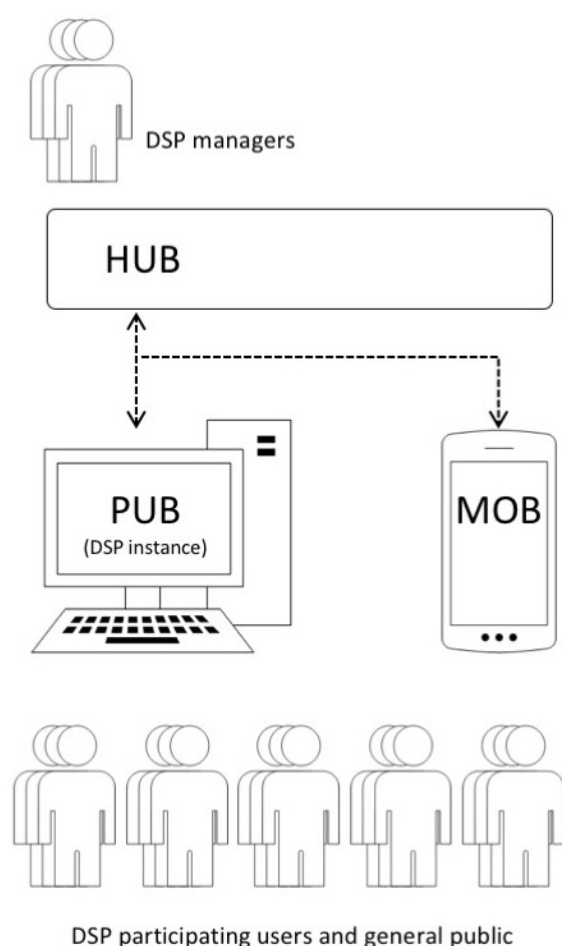
Figure 1 – Schematic representation of a DSP instance, displaying the three main components: the PUB website, the MOB app and the HUB content management back end.

To achieve this, the POWER DSP is designed around an open, modular blueprint, organized in three main tiers, internally designated as the 'HUB' content management backend, the 'PUB' browser-based public front-end and the 'MOB' app for mobile devices (Figure 1).

The information on local needs, the experiences and knowledge created and communicated in bottom-up and P2P exchanges also enable the identification and sharing of community-driven best practices, stemming from local experience and living practice. In the best practice repository, both the knowledge and lessons learned from top-down analysis and expert exchanges about them, and the community-driven exchange and identification of best local practices are connected with each other.

To those involved in providing information, creating and managing content, and running the social participation and gamification functionality of a DSP instance, a backend management system makes available all those functions as well as capabilities to retrieve data and perform analyses that may inform content. This component of the DSP is typically accessible only to the staff in charge of managing each DSPs.

The PUB is the visible face of a DSP instance and provides the various information, communication and interaction capabilities in a user-friendly web portal. The MOB app provides easy-to-use mobile access optimized for mobile interaction with the DSP, while serving the same content and interaction capabilities, and retaining a maximum of commonality in user experience and functionality with the PUB. The MOB also adds extra interaction capabilities made possible by the mobile device, such as location, image capture or NFC communications.

Each DSP is created from a HUB, by generating individual instances of the PUB and MOB. In certain contexts, multiple city DSPs may conceivably be managed from a single instance of the HUB. In the POWER project's piloting program, five DSPs have been generated, one per demonstrator city plus an additional demo city DSP, all managed from the project's single HUB.

The software was also used by the project for the creation of a separate DSP instance with special additional features, designed to support the organized publishing of a Best Practice Repository, feeding from and coordinating with the growing number of individual city DSP instances.