

Table 2: Benefits and challenges in ICT enabled water supply services

BENEFITS
What is the specific added value of using ICT as a tool to support the governance of water supply services?
Improved service delivery: New applications provide opportunities to facilitate billing and payment of water services. Mobile phones increase efficiency by reducing the time taken from reporting a faulty water source to have it repaired. New and better data: ICT enables the generation of quick, accurate and standardised data in a user friendly way. The ability to update data in real time and to 'geotag' water infrastructure offers new possibilities for monitoring, as well as to capture trends over time. Location data minimises the risks of forged monitoring and 'double counting' of water sources. By uploading the data into online maps, accountability for project funds is improved as well as coordination between funders who can see each other's contributions. Strengthened consumer voice: ICT empowers water consumers by providing them access to information on their rights and the responsibilities of water providers. Reduced costs: The efficiencies gained through the use of ICT cuts costs and saves scarce sector funds for more productive use.
CHALLENGES
There are also a number of specific challenges faced by water supply services.
Social Lack of incentives to use and contribute to the system: End users tend to be passive receivers of information, and do not have access to the full picture. Too often the "crowd" is relied upon to generate content without proper incentives in place. Gender: Women are traditionally responsible for collecting water, and therefore the first to identify a water problem (mal-functional pumps, worsen quality of water etc.). At the same time, women have less access to ICT. User costs: Although communication costs have gone down, total cost of mobile phone ownership, i.e. cost of device, airtime (for data, voice and SMS), charging, etc., present barriers for participation. Privacy: New possibilities to capture data linked to a specific individual/household (such as customer number, address, GPS coordinates) could raise privacy concerns for water users (particularly related to complaints to service providers). Financial High initial investments: More advanced applications require "smarter" and more expensive phones which can make scaling up and harmonisation with government-led initiatives difficult. Sustainability: Running costs for an ICT-project are constant as there is a continuous need for preventive maintenance, training and awareness raising. Technical Data collection format: The type of data that can be entered into digital forms is limited and cannot always be adapted to the local context. Valuable knowledge that is hard to structure into a form is lost. Absence of basic infrastructure: Electricity, network coverage, technical know how and support. Organisational Lack of responsiveness: If institutions lack capacity to respond to and act on the information generated through ICT solutions, then the information provided will be of no use. Poor marketing: Many ICT projects depend on participation from the "crowd" or users to succeed. Yet, many of the available services never reach out to the intended target group due to non-existing meta-data, insufficient marketing and little effort applied to raise awareness.