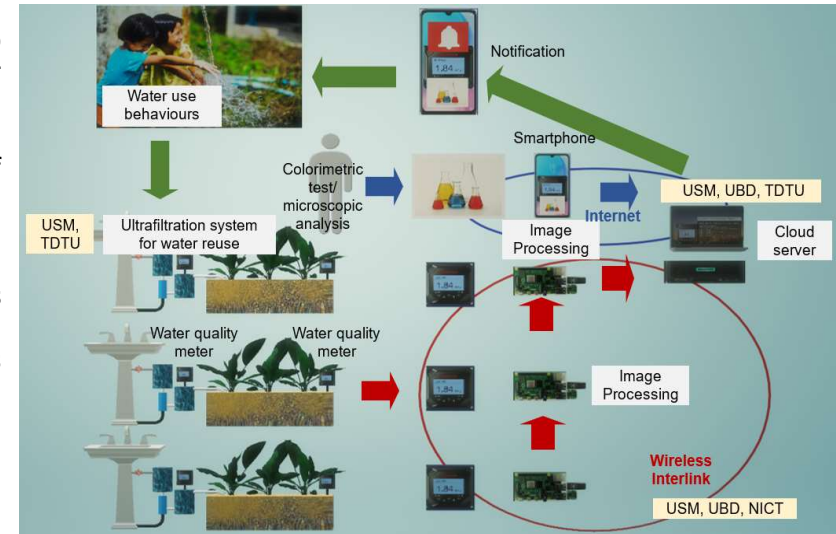


Introduction :

Due to the limited water resources, the increasing urban water demand and the climate change, many urban water systems are facing the ever-increasing pressure to supply potable water. Water reuse technologies has been extensively developed over the years under the promotion of city sustainability. Many water reuse projects failed in the past due to the insufficient monitoring and maintenance. Hence, it should be paired up with ICT technologies which allow the real-time analysis and monitoring of water quality to preserve the water reuse system and the safety of vulnerable citizen. Moreover, big data should be collected through IoT to improve water management in cities. The major aim of this project is to design and develop a system which can perform wastewater treatment, water quality analysis and monitoring, as well as critical water reuse data collection to improve the household water use and conservation pattern. This requires a collaborative framework which orchestrates wireless communication technology and cloud-based technology involving image analysis, multisensory data fusion techniques, cloud computing analytics and system provisioning besides the wastewater treatment technologies. This system will be developed to promote public health and safety in water reuse within ASEAN countries. Hence, the system design must include ASEAN culture, lifestyle, behaviors, and infrastructures.



Project Members :



Ir. Dr. Leo Choe Peng
Universiti Sains
Malaysia



Ir. Dr. Yen Kin Sam
Universiti Sains
Malaysia



**Dr. Senanayake
Mudiyanse
Arosha Senanayake**
Universiti Brunei
Darussalam



Dr. Ho Ngo Anh Dao
Ton Duc Thang
University



Dr. Huan-Bang Li
National Institute of
Information and
Communications
Technology



**Dr. Takeshi
Matsumura**
National Institute of
Information and
Communications
Technology