## 30 June 2021 (Wednesday)

**4.00pm-5.30pm (SGT) (GMT +8)**
**Session 1.7 – Asset Management for the Distribution Networks**

**Session Chair(s): Albert Cho, Xylem (USA)**

### NETSCAN: Condition-driven Health Diagnosis Of Water Infrastructure For The Optimization Of The Network's Life-cycle

P. Bonardet, T. Van Becelaere, K. Claudio, G. Fay. SUEZ Water Technology & Solutions (France)

For water utilities, the use of either condition-based or asset management desktop models to establish renewal strategies comes with challenges related to the choice of a representative sample and the integration of the current condition of the pipes in the analysis. To tackle this issue, SUEZ launched an R&D project for the construction of a tool to shape and target field condition assessments in order to optimize results and integrate them into the asset management value chain. Several studies were conducted with water system operators and data specialists to develop a method to compile in-depth information on infrastructure conditions and extrapolate the results of the field condition assessment based on a cluster analysis. A tool has been developed to support this methodology and applied to a 435 km cast iron network. Selection of 50 km length pipes was made 4 times more efficient compared to a random selection in term of failure prediction and avoided bursts.

### Failure Risk Analysis For Asset Renewal Prioritisation

M. Nicol, (Mueller Water Products, Singapore), GC. Yong (PUB, Singapore), K. Claudio (SUEZ, Singapore), E. Goh (Mueller Water Products, Singapore)

As water infrastructure ages, utilities face the looming questions of: whether or not to replace pipes, which pipes should be replaced and when to replace the pipes. A combined approach of Condition Driven Asset Management (CDAM) and Asset Management Desktop Models (AMDM) can be utilised to enhance the replacement plan. This approach minimises failure risks whilst optimising the use of limited capital. A project was conducted in Singapore with this approach on approximately 450 kilometres of cast iron water mains. The results of the project included deferred replacement of 161 kilometres of cast iron mains equating to a saving of approximately SGD $72.9 million in capital investment.

### Pipeline Condition Monitoring Using Permanent Acoustic Sensing

M. Stephens. SA Water (Australia)

*Presenter is an invited speaker. No executive summary is available*

## Asset Management Customer Value 2020 Benchmarking Industry Outcomes

F. Ibrahimi, J. Goode. Isle Utilities (Australia)

The Water Services Association of Australia (WSAA) is the peak industry body that supports the Australian Urban Water Industry. In 2020, WSAA conducted a program titled 'Asset Management Customer Value (AMCV) Benchmarking, involving 19 leading water utilities across Australia. The benchmarking was undertaken, using an internationally recognized framework, which comprised use of WSAAs customized assessment toolkit (Upmark and Tableau), aligned to the global forum in maintenance and asset management (GFMAM), principles. With more significant involvement of utility Executive Management, than ever before, the program highlighted a number of themes across the AM lifecycle, important to the sustained performance of businesses, and delivery of higher value to customers. This paper highlights the methods used to carryout this program along with key outcomes that benefits an international AM audience.