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By creating a unified framework, the **Water Smart Meter (WSM) Generic Companion Profile (GCP)** not only **streamlines operations and lowers integration costs** but also positions utilities to benefit from the expanding digital water market. It enables **standardized and evolutive data-driven technologies**, supporting the smart water management infrastructures of today and tomorrow, unlocking new capabilities across the water systems such as valve control and prepayment, while taking advantage of the lightest payload to maximize battery lifetime — ultimately delivering **greater value to both utilities and consumers**.

WSM (Water Smart Meter) GCP Overview

The WSM GCP is set to become the first-ever standardized data model and format for water meter data exchange to be adopted by IEC. It defines the technical, functional, and security requirements of water smart meters within the DLMS/COSEM framework and provides clear guidelines for implementation and certification. This enables secure, reliable and compact data exchange, guaranteeing full interoperability and compatibility between devices from different manufacturers.

Addressing Industry Challenges with WSM GCP

The global digital water solutions market is projected to nearly double in size by 2033, driven by increasing adoption of digital technologies by utilities worldwide to optimize operations, enhance energy efficiency, and meet growing regulatory and sustainability demands.

The WSM GCP directly responds to some of the global water industry's most pressing challenges. Utilities often struggle with fragmented communication protocols, lack of interoperability, and the high cost of integrating devices from multiple vendors. The WSM GCP resolves these issues by defining a standardized data exchange model and format, ensuring devices from any manufacturer can communicate seamlessly. It incorporates essential data protection features to safeguard sensitive consumption and operational data. It is also one of the most efficient data models, with push messages, pre-established clients, compact data frames and compression mechanisms all minimizing battery consumption. Finally, it supports a standardized certification process that reduces deployment complexity and risk.

By creating a unified framework, the WSM GCP not only streamlines operations and lowers integration costs but also enables utilities to future-proof their infrastructure, support smart water management, and deliver greater value to consumers.

The integration of more flexible, scalable, and data-driven technologies will be key to unlocking new water system efficiencies and capabilities.

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KEY BENEFITS

Certified Interoperability - All devices implementing the WSM GCP are tested for compatibility, ensuring interoperability within the water smart metering ecosystem simplifying utilities supply chain. DLMS UA's rigorous certification process reduces the need for expensive, bespoke certification platforms.

Legally Relevant Data Sharing – Provides metrology-relevant data, ensuring compliance with legal metrology requirements.

Enhanced Security – Incorporates robust data protection mechanisms under the DLMS/COSEM framework, safeguarding sensitive data and protecting operations against cyber threats.

Telecommunication Agnostic – The WSM GCP operates independently of telecommunication technologies, ensuring secure, reliable, and interoperable data exchange across all current and future networks. It currently supports 4G/LTE-NB, LoRaWAN, LPWAN, Wireless M-Bus and will evolve and integrate additional communication technologies in the future.

Global Standardization – The WSM GCP provides a globally recognized framework, that is set to be the first IEC-adopted standard for water smart meters, helping manufacturers and utilities avoid fragmented national or regional approaches.

Highlighting the Main Use Cases

1 Meter Registration

2 Periodic Data Push

3 On-Demand Meter Reading

4 Remote Tariff Programming

5 Disconnection / Reconnection

6 Clock Synchronization

7 Firmware Updates

8 Prepayment

9 Meter Configuration

10 Alarm / Event Management