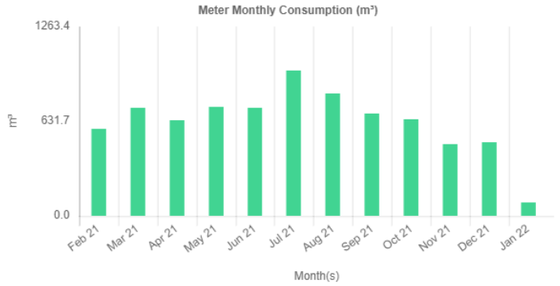
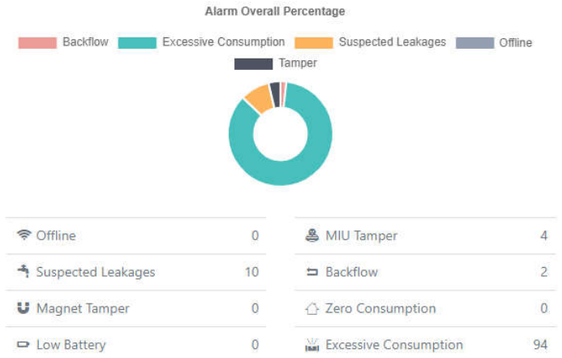
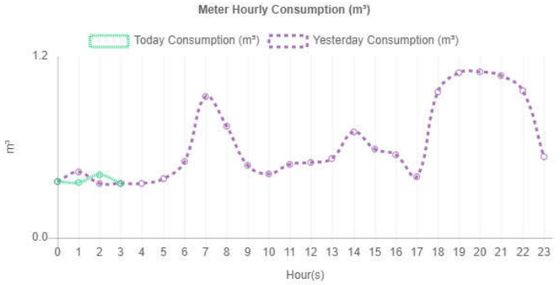
The Meter Data Management System (MDMS) displays the analytical meter reading information and also interface to 3rd party systems like Billing System, Customer Information Portal or Mobile Apps.

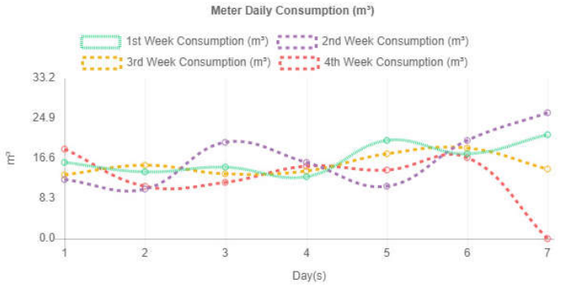


Total	7580.4394	Min	0
Max	971.6943	Average	631.7033



Offline	0	MIU Tamper	4
Suspected Leakages	10	Backflow	2
Magnet Tamper	0	Zero Consumption	0
Low Battery	0	Excessive Consumption	94





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GEORGE KENT
METERING

Delivering new and improved solutions to address the demands of water industry

AMR/AMI SOLUTION

Automated Meter Reading (AMR)
Advance Metering Infrastructure (AMI)

THE TECHNOLOGY

George Kent's Volumetric Cold Water meters, which has been widely used and accepted globally in the water metering market, is designed to be attachable to a Meter Interface Unit (MIU).

The MIU transforms the already AMR-ready mechanical water meters to Smart Meters and enables AMR and AMI functionalities. The innovative design of the MIU enables the existing mechanical water meters already deployed on the field to be AMR / AMI enabled, simply by clipping it on.

The MIU picks up pulses from the attached mechanical water meter and coverts them to water consumption. The pulse sensor employs Tracsens technology, George Kent's own flow sensing technology.

Tracsens enables ultra-low power bidirectional water flow measurements and at the same time tolerates vibration and mechanical jitter of mechanical water meters.

Accurate water flow measurement and the ability to compensate reversed water flow or to be able to trigger a backflow alarm is the key to enable AMR / AMI functionality.

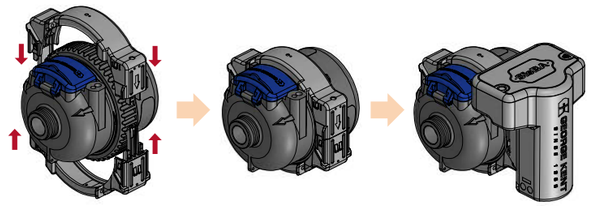


Figure 1: Enabling AMR/AMI for GKMV30P meters

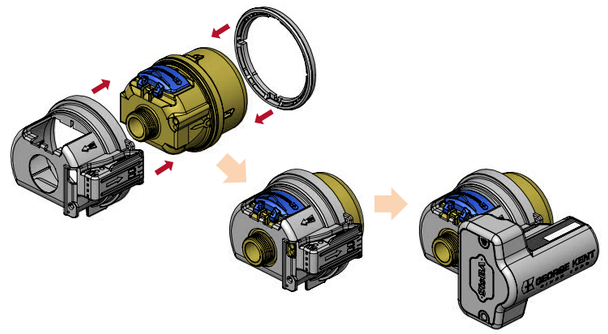
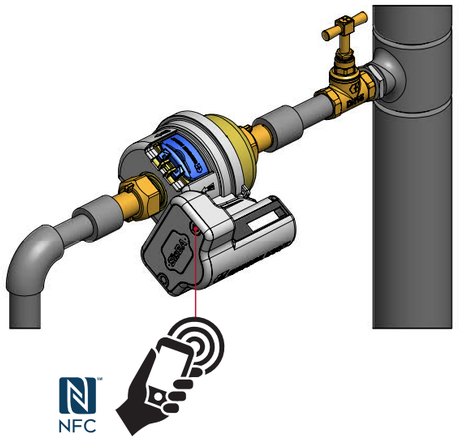


Figure 2: Enabling AMR/AMI for GKMV30 meters

CONTACTLESS NFC INTERFACE:



- On-demand (tap) reading
- Device initialisation during meter installation
- Device parameter configuration
- Firmware update

AMR SYSTEMS

There are two types of AMR systems available, namely the Mobile Reading System and Fixed Network System. The Mobile Reading System employs a Walk-By or Drive-By method to collect the meter reading, where a Meter Reader walk passed or drive passed a specific route to collect the meter readings in proximity. The Meter Reader carries a Mobile Reader, collects the meter readings transmitted from the nearby MIUs with an App on his/her Handheld. The meter readings are then being processed and a bill can be issued on the spot. This method increases the meter reading efficiency and removes human error in comparison to manual reading.

Another method is by installing fixed infrastructure (or owned by network operators) to collect the meter readings automatically, without any meter reader.

In a Fixed Network System, meter readings can be taken at any time, or at a scheduled time. The meters readings are uploaded into back-end system automatically where there are being processed. The head-end system receives and puts the meter readings into a database.

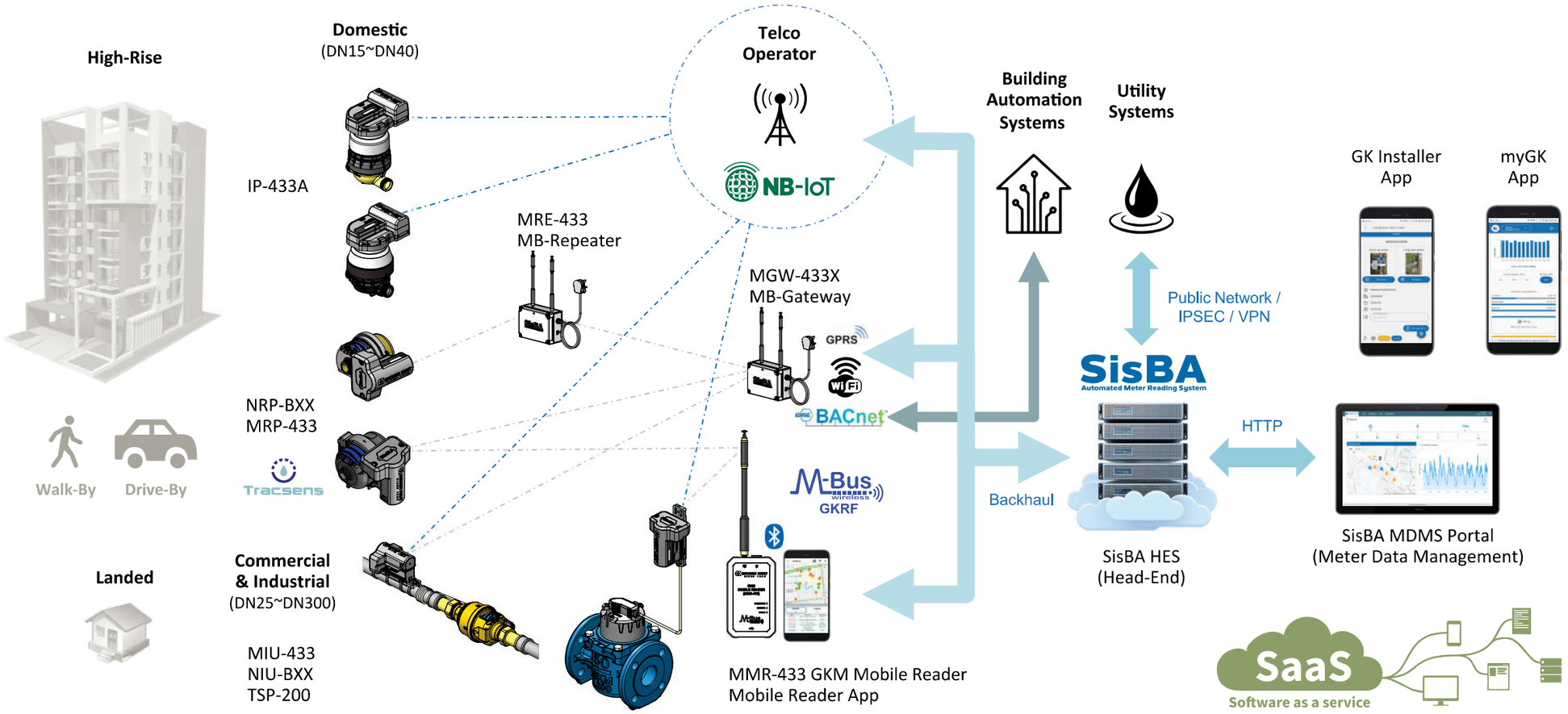


Figure 3: Overview of George Kent's AMR/AMI solution