

## A residential complex in Pune is empowered with a water metering solution (AMR/AMI) from Adept for equitable water distribution and water accountability.



At Scrum Utkarsh Society, flat holders were concerned about reducing water consumption and wastage and wanted to deploy Advanced Metering Infrastructure (AMI).

### Introduction



Scrum Utkarsh Society is a modern apartment complex near Hinjewadi Infotech Park in Pune situated in the lap of nature. Most of the flat owners from this society work in the IT sector or in the nearby companies. When it comes to conserving natural resources and minimising pollution, the Society takes the lead and has implemented several new initiatives. It believes in leveraging the power of IT-enabled solutions to manage the society functions.

The Society receives its water from three main sources viz. the Municipal Corporation, bore wells in the premises and water tankers. It has to pay for

getting water from these sources and the monthly billing runs into a few lakh rupees. At times, the Society also faces scarcity of water.

In order to tackle the situation, the members thought that exercising control on the water consumed by each apartment holder was essential not only to ensure equitable distribution but also to stop wastage and excessive use of water. Knowing the competence of Adept in providing solutions for smart buildings, they approached us.

Automatic Water Reading (AMR) and Automatic Metering Infrastructure (AMI) solutions from Adept helped a residential complex achieve equitable water distribution and water accountability.



## Challenges

Scrum Utkarsh is large society consisting of over 140 apartments situated in 3 numbers of seven-storied buildings and was built around the year 2014. Each apartment is provided with two separate pipelines, which pass via the common duct of each building.

When we visited the site, we realised that at a few places, plumbing work needed to be carried out to rearrange the pipelines. Also, after fitting the water meters at the inlet of each apartment, complete wiring from the water meter up to the Gateway panel was essential. Our project engineering team further conducted a thorough survey of the site and put forward the recommendations.

The Society management was looking for a holistic approach and a turnkey solution. Hence, it demanded that Adept should undertake the complete responsibility including providing and installing water meters, plumbing work, wiring, and installing an IoT Gateway.



## Solution

Our team thoroughly studied the existing piping layout and carefully understood the requirements of the Society. Accordingly, it was recommended to fit two water meters for each apartment, one at each inlet pipe. This was in view of avoiding additional investments in completely new piping work.

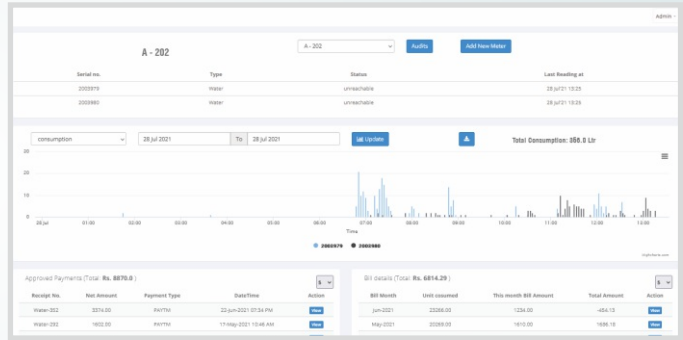
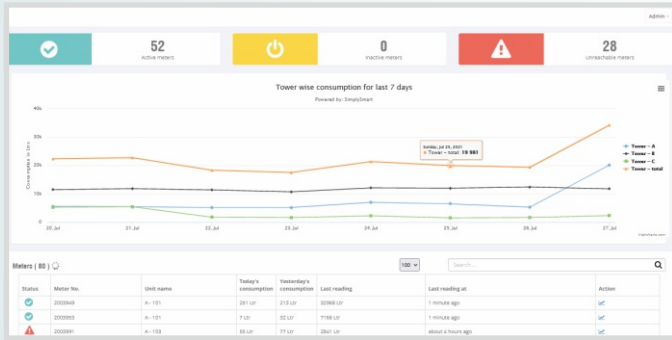
The IoT Gateway panel required sizeable space that would be safe and secure. We identified such a place on the terrace, below the overhead water tanks, which could be fully secured to prevent unauthorised access to the Gateway panel. Once the idea was principally approved by the Society management, our team developed a complete piping and wiring diagram for their perusal.

For the water metering, we recommended using our MWM (Mechanical Water Meter), which has been developed for Smart Metering at smart buildings. Adept-MWM is an impeller (turbine) type water meter with magnetic transmission, dry type register. Adept-MWM is a proven model for such applications and few thousand meters are already operational across India.

We have provided a robust IoT Gateway to connect MWM units with the central server. We have also made a provision for uninterrupted power supply to the IoT Gateway.

We have provided the Society a complete AMR/AMI solution and the scope of work includes

- ▲ **250 units of Adept-MWM**
- ▲ **IoT Gateway**
- ▲ **Complete piping and plumbing services**
- ▲ **Required wiring to the meters and IoT Gateway**
- ▲ **Service for regular monitoring of water consumption through our server**



## Benefits

With the effective use of AMR & AMI technology from Adept, the residents of Scrum Utkarsh Society are experiencing several benefits such as

- ▲ **Availability of real-time information on water consumption for every apartment owner via our smartphone app**
- ▲ **Instant availability of data analysis and periodic reports to take informed decisions on managing water distribution and utilisation**
- ▲ **Better planning and utilisation of available water in the time of crises**
- ▲ **Periodic and accurate billing to each flat owner**
- ▲ **Better & timely revenue generation for the society**
- ▲ **Lesser disputes due to 'Pay as you use' policy**
- ▲ **Higher accountability and awareness towards reducing water consumption**
- ▲ **Instant leakage detection to avoid water wastage**
- ▲ **Quick detection of meter tampering/reverse flow**

## About the AMR/AMI System from Adept

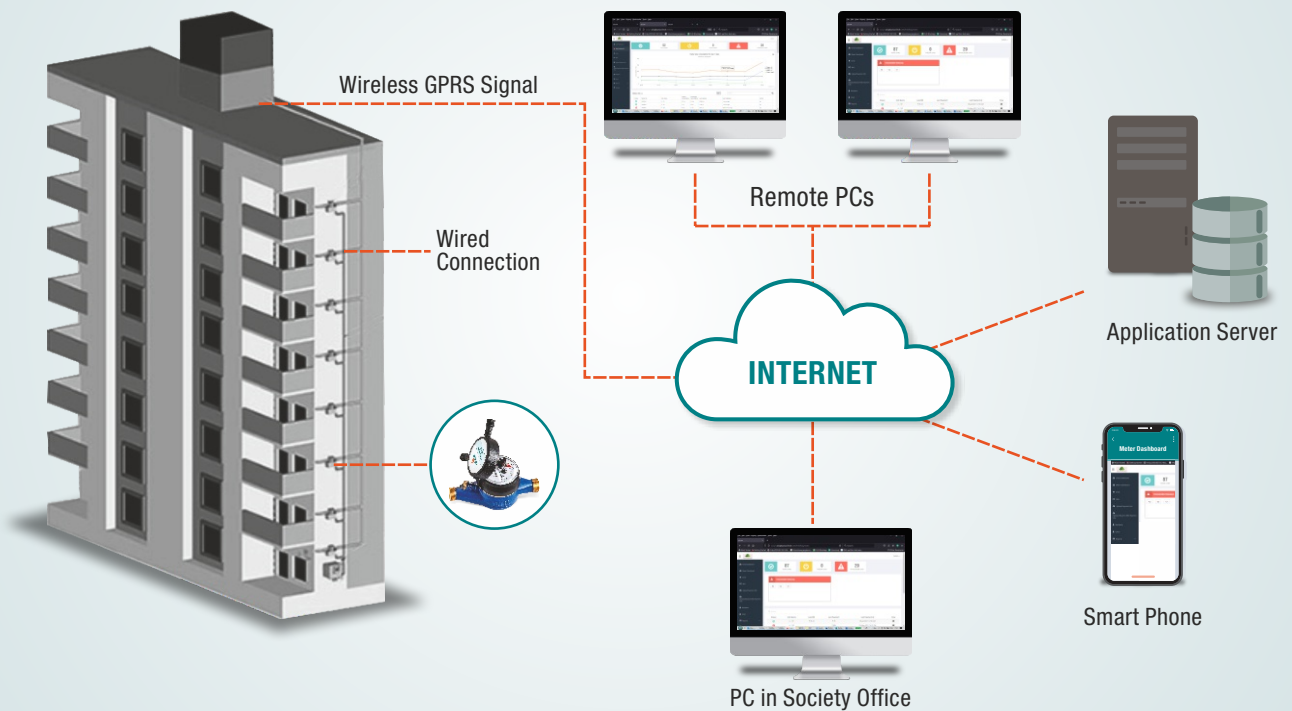
Our advanced real-time Automatic Meter Reading and Advanced Metering Infrastructure (AMR/AMI) systems, along with comprehensive meter data management, provide accurate water measurement. These solutions are tailor-made to meet the specific requirements of each customer.

Advanced Metering Infrastructure (AMI) are systems that measure, collect, and analyse water usage, and communicate with metering devices either on request or on a schedule. These systems include hardware, software, communication modems and Meter Data Management (MDM) software. AMI extends the current Automatic Meter Reading (AMR) technology allowing commands to be sent for multiple purposes, including time-of-use information, demand-response actions, or remote service disconnects if automatic valves are provided in conjunction with meters.

**The Automatic Meter Reading (AMR) technology provides data on consumption, diagnostic and status from water metering devices.** This data is then transferred to a central database for billing, troubleshooting and analysing. This saves utility providers the expense of periodic trips to each location for taking meter readings.



## Adept-MWM (Mechanical Water Meter): Smart Meter for Smart Buildings



This project is a further attestation of our capability to provide solutions to the existing residential buildings to become Smart Buildings.



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