Accelerating IoT Analytics

Key Trends, Challenges and Opportunities in Water Utilities

There has been a significant growth in connected IoT devices, with almost 3 x growth from 2020 to 2030, with a significant slice of this being driven globally by the water utility and energy sector. Spending on sensor related devices will see at least a 35% growth from 2018 to 2022 worldwide, presenting massive opportunity in leveraging value from these devices!

There are a few key trends which are driving this growth, including:

- A continued drive to automate where possible and remotely manage infrastructure,
- The introduction of agile methods and frameworks, which is reshaping how utilities not only respond to the demands of the business, but how they respond to network infrastructure issues,
- An ongoing drive to integrate data from different sources, including sensor data,
- The remediation of existing data quality issues, and having access to quality data via sensor devices,
- New pressure and leak detection methods,
- The deployment of edge analytics.

Despite this growth, there are still key challenges that the industry faces, including:

- The need to invest in, and build new infrastructure, and make informed investment decisions,
- Continuing workforce deployment issues, demanding workloads of staff and safety issues,
- The fact that customers are now, more than ever, more empowered by digital technologies and have higher service expectations, often resulting in a higher level of customer complaints.

There are significant opportunities though, which the industry needs to embrace in order to drive value for their business and customers These opportunities fall into three broad categories and include technologies that can be leveraged to realise that value:

- **Infrastructure** – Sensors, smart meters, artificial intelligence technologies and robotics can be used to predict and automate, and provide real time pressure readings and mitigate the risk of leakages,
- **Workforce Assets** – Focused resource allocation through locationbased failure detection, and improved safety for inspection teams by being able to identify in advance the nature and type of failures,
- **Customers** – The use of sentiment analysis, segmentation based on consumption patterns, improved customer insight and improving customer complaint resolution times.

The industry is responding to these challenges and opportunities by embracing digital transformation, which is turning the way of doing business on its head. Organisations are having to embrace a new way of working to really drive their business forward and ensure they keep up with industry leaders.

The key aspects of this transformation include:

- Data & Analytics platforms are being deployed and scaled: Analytics is enabling data driven decision making,
- Smart Meters, Sensors and Edge devices: IoT Technology is extremely diverse and differs depending on the application,
- Realtime data collection/actions/triggers: Actions and triggers are being used to predict and prevent problems,
- Data volumes are exponentially increasing: Large realtime data-sets are being ingested.

Vendor technologies are rapidly evolving to support the exponential growth and analysis of real-time data.

So how do organisations continue to move forward and accelerate the digital transformation?

- It's key to have alignment between the business and IT. This has been an ageold challenge within some organisations, but there has never been a more important time to ensure business is taken on the journey with IT and understands the ways of working,
- There is a need for governance across AI and Machine Learning,
- Frameworks, Methods and Accelerators need to be used in a flexible agile way so that cost and time is reduced in order to deliver value and maximise efficiencies,
- New ways of working are being embedded in organisations,
- Proof of Concept innovations are driving quick wins, and create a culture of experimentation and innovation,
- Design for scale, so large, realtime data sets can be ingested, stored, and engineered and analysed to provide new predictive capabilities.

Transforming your business is not just about designing a robust and scalable data and analytics platform, it is also fundamental to uplift operational capability in order to accelerate this digital transformation. Fujitsu Data & AI has been working very closely with key customers in the within the water utilities and energy sectors over many years and, have an in-depth knowledge on how to help organisations not only embrace, but accelerate this digital transformation.

To see how we can help your business accelerate your IOT analytics initiatives, please contact a Fujitsu Data & AI specialist now.

Contact

Fujitsu Data & AI

+61 3 9924 3000