

How to take the first step in your AMI upgrade



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With
Travis Smith
of Kamstrup

How has the influx of AMI data transformed utility operations, and how can utilities better leverage the data they have?

Talking Under Water is the premier podcast for the water industry, including municipal water and wastewater, residential water treatment, storm water management and erosion control. It is produced in coordination between Wastewater Digest (WWD), WaterWorld and Storm Water Solutions (SWS). The podcast covers topics under the One Water movement including the municipal and industrial water and wastewater, residential, storm water and erosion control markets. Talking Under Water highlights news, trends, new stormwater technologies, industry discussions and interviews with experts across the municipal water industry. New episodes of the podcast are released every other week.

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Bob Crossen: I'm here with Travis Smith. He is the Vice President of Sales for Kamstrup, North America. Travis, welcome to Talking Under Water. Thanks for being here with us.

Travis Smith: Oh, pleasure to be here. Happy to share some more insights around water today.

BC: When I think about the water market, there's been a rapid change over the past several decades — from direct and mobile read to AMI. How has that impacted the way utilities conduct operations nowadays?

TS: Some utilities haven't started, others are in the middle of it, and some have completed that journey. Direct read or mobile collection might give you 12 data points per year. But with AMI, even just hourly, you get over 8,700 data points a year. That's more than 700 times the data. You understand diurnal patterns, seasonal usage, weekdays vs. weekends. It drives the need for data handling and software. We're shifting from the meter being the critical aspect to the data being the critical aspect. The classic case is resolving usage disputes. You can point to a specific time and say, "This is when consumption happened," and the customer might say, "Oh yeah, we were doing laundry or washing the car." It turns a contentious call into a satisfying resolution.

BC: When implementing these technologies, what are the critical aspects utilities should review during this transformation?

TS: Make sure you have the right data for the right application. Some things tolerate latency, some don't. It's not just measurement — communication and software matter. If your communications are unreliable, or your software can't integrate metadata or third-party data, it's not effective. Start with the problem you're solving, then determine what data you need, how often, and how critical it is. Also, consider lifecycle alignment. Meters last 20 years, so make sure your communications and software match that.

BC: What other pitfalls or tailwinds should utilities watch for?

TS: They should evaluate not just the technology but also business processes. With new information, your call

center changes, and your reports change. You might capture more data on non-revenue water, leak detection, or mass balancing. There's a lot of opportunity.

BC: You mentioned the explosion in data volume. How has that changed in terms of both volume and the types of parameters being tracked?

TS: Not just consumption anymore — we see parameters like acoustic leak detection, pressure, level, and flow. More volume, more variety. Different parameters require different velocities. Consumption might be hourly, but pressure might need faster sampling. And then there's veracity truth of the data which becomes important depending on the use case.

BC: That could be overwhelming. What are some steppingstones for utilities starting this journey?

TS: First, solidify your metered cash flow. Ensure revenue is coming in and accounts are accurate. Second, enhance customer service. Third, focus on operations and maintenance; use data for leak detection, pressure monitoring, water quality, etc. Fourth, apply the data to engineering and long-term planning. Each step takes time usually a year to get fully implemented because it's not just data; you have to change how you handle people, trucks, communication, and processes.

BC: On the data side, what's the role of veracity in this process? Any anecdotes on how data analysis has delivered outcomes?

TS: Data alone isn't always useful — you need analytics. There's descriptive analytics: what's happening, where, and how much. Then prescriptive: can I control this? Predictive analytics is the next frontier. Combining data types like weather with consumption gives new use cases. For example, acoustic leak signatures plus flow data can indicate if a leak is upstream or downstream of a meter. The combination gives more confidence in your actions.

BC: Kamstrup is proud of its histogram data. Can you explain how that helps utilities?

TS: A histogram shows flow rate patterns — how much water went through at specific flow rates. It helps validate increased revenue capture when moving from mechanical to static meters. You get long-life accuracy and more low-flow capture. When customers see higher bills, the histogram explains why — providing transparency and justification.

BC: Back to veracity — what if the data is wrong or unavailable?

TS: If data's inaccurate, everything falls apart — financial decisions, asset planning, work orders. You might shorten asset life or make poor decisions. If you have alarms based on that data and it's not there, you create false expectations. Historically, data gaps were tolerated. But now, with more use cases and connectivity, reliability and accuracy are critical to ROI.

BC: What causes bad or missing data?

TS: Mechanical wear, device failure, water intrusion in electronics — it's ironic, but water is the enemy of meters. Before total failure, you might get false readings. Communication issues are another problem — cut wires, radio signal issues, battery failures. Plus, who maintains the communication infrastructure? If it's a third party, and they shut it off, you're out of luck.

BC: What does the ideal digital utility look like to you?

TS: It starts with solving the right problems — having the right data, at the right speed, and right accuracy. Structure and organize your data so it works across utility departments. AMI alone doesn't solve anything. It needs follow-up: a wrench, a truck, a phone call. And make sure your devices in the field are high quality, available, and accurate. Lastly, support two-way communication for updates. You can't afford to visit every device multiple times over its life. Technology will change — so your system needs to adapt.

BC: That's a very agile and nimble opportunity, right?

TS: Exactly — agile and nimble are good words.

BC: So how do we get there? What's the path?

TS: It's a journey, not a destination. Like education, you can stop or continue at your pace. The biggest challenge is the economics of hardware. The fastest way to start the financial cycle is to replace mechanical meters with static ones and get regular data. Then build from there — sustainability, leakage, efficiency. Go in phases — it's a lot to absorb.

BC: Thank you so much, Travis. This was great.

TS: Enjoyed it, Bob. Thanks for having me on the show.

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