

AI Doesn't Fix Organisational Friction in Utilities — It Amplifies Whatever Is Already There



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That's the central finding of the Business Agility Institute's 2025 Business Agility Report, and it lands at an uncomfortable moment for the sector. UK water companies are mid-AMP8, energy networks are spending against RIIO-3's £28.1bn settlement, and AI adoption is accelerating across both at the same time. Meanwhile customer trust in water companies has fallen to 6.07 out of 10, a 13-year low, with only 63% of customers saying their bill is affordable and 60% satisfied with sewerage services — both record lows. Layering AI investment onto an organisation that's already under strain doesn't relieve the strain. It speeds up whatever direction that organisation is already heading in.

The Institute's research describes two patterns. Where business agility is strong, AI accelerates learning, innovation and value creation. Where it's weak, AI exposes structural friction, leadership gaps and brittle decision-making at speed. Under pressure, in the Institute's words, weaknesses don't hide — they accelerate.

Samsung gave a clean example of choosing the first pattern on 9 June, when it ended a three-year, group-wide ban on external generative AI tools and rolled out Gemini, ChatGPT and Claude across all its affiliates at once. The substance of the decision was governance: who's accountable for how the tools are used, what guardrails apply, and how the rollout is managed as an organisational change

rather than a software licence. Most utility AI programmes skip straight past that question to which platform to buy.



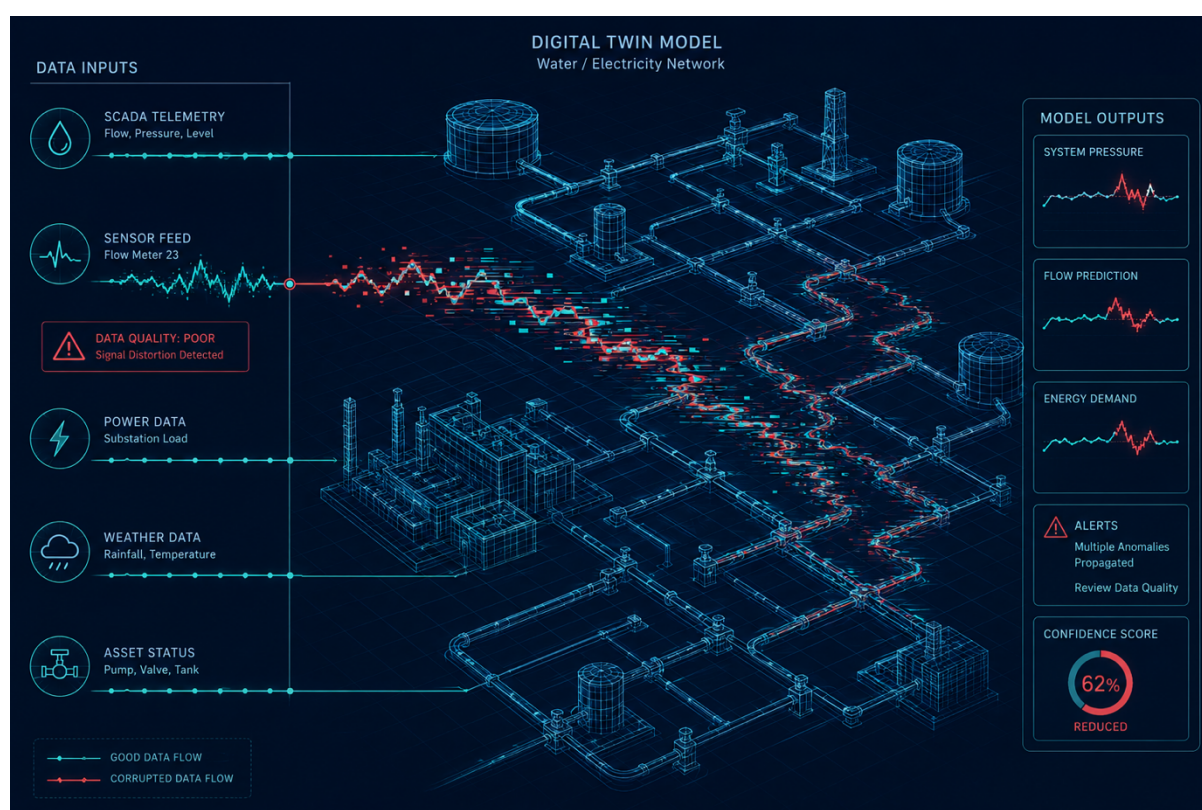
There's a simpler way to put this: people take the path of least resistance. That's a basic description of how behaviour works absent deliberate design, not a complaint about laziness. The UK's Behavioural Insights Team — the so-called Nudge Unit — built an entire framework around this fact. Its EAST model argues that behaviour change happens when the desired action is made Easy, Attractive, Social and Timely. Make the right action the default, the simplest option, the one requiring the least effort, and people take it. Leave it as the harder option, and they won't, however often you ask them to.

Apply that to data capture specifically. Every utility has a process somewhere that depends on a field engineer, a control-room operator or a customer service agent recording information accurately, at the point of use, that they personally don't need but the business does. If that step adds friction to their actual job, it gets skipped, abbreviated or guessed at. The cause is simple: the organisation never made it the easy option and regulatory environments complicate this. However, that's still a design failure. Fix it the way most garbage-in-garbage-out problems get fixed — redesign the path. Another reminder won't do it.

Garbage in, garbage out (GIGO) is one of computing's oldest principles, generally credited to IBM's George Fiechsel in the early 1960s. It used to mean a bad report. Now it means something worse.

Feed bad data into a forecasting model or a digital twin and the error doesn't sit quietly in a spreadsheet waiting for someone to query it. It gets trained into the model, repeated at scale, and

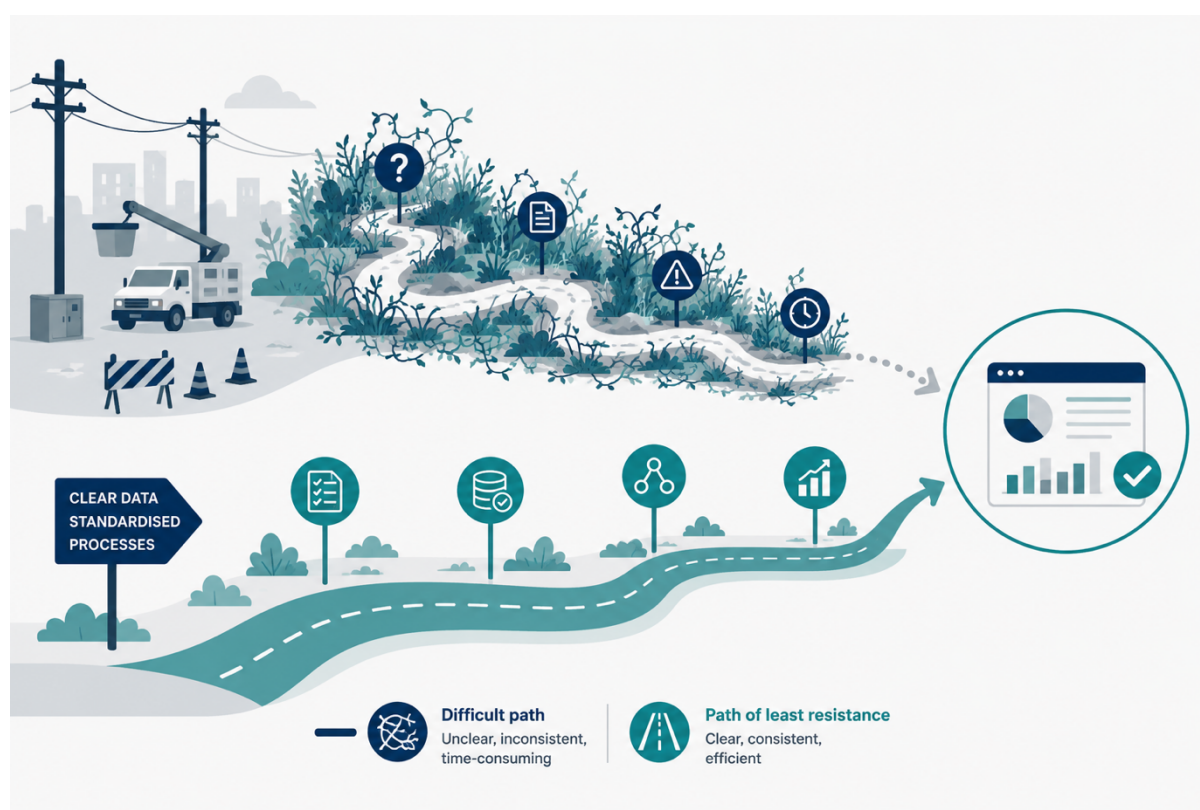
acted on automatically and continuously, not once. The Gemini Principles, the foundational framework behind the UK's National Digital Twin programme, name "Quality" as one of nine core principles for exactly this reason: data has to be good enough to be relied upon, or the twin built on it stops being trustworthy. A 2024 arXiv study of a digital twin platform for water distribution systems makes the point concrete. Its best six-month consumption-forecasting model returned a mean absolute error of 5.76 — the average gap between predicted and actual consumption, in the same units as the underlying meter readings — equivalent to a mean absolute percentage error of 18.61%. That accuracy is only as good as the meteorological, IoT and metering data feeding the model.



This isn't news to the people who write data quality frameworks. The UK Government's own Data Quality Framework, published by the Central Digital and Data Office and the ONS in 2020, exists because a 2019 Public Accounts Committee report found government had not been treating data as an asset. The UK Statistics Authority's parallel framework for administrative data treats "input quality" as one of its core assessment stages, for the same reason: nothing downstream is more reliable than what went in. BCG's 2025 research into enterprise AI adoption found this exact gap — poor data quality and fragmented architecture — is the single most-cited barrier to AI value at scale, and flagged it as directly applicable to energy and water utilities operating under Ofgem and Ofwat's digital requirements. SWAN, the water sector's own digital twin body, puts it plainly: technology alone is insufficient. Organisational readiness and disciplined data management have to come first.

None of this gets solved by buying a better model or a flashier twin. The Business Agility Institute's amplification effect and the EAST framework's "easy" principle describe the same mechanism from two different angles: an organisation's existing design decides whether AI and digital twins make

things better or worse, more than any feature of the technology itself. If the path of least resistance for capturing good data hasn't been deliberately built, AI won't build it for you. It will amplify whichever path already exists, including the bad one.



For utility boards weighing AMP8 and RIIO-3 investment alongside AI and digital twin business cases, that's the question worth asking before the technology question: has anyone deliberately redesigned the path so that capturing the data this decision depends on is the easy option? If you're not sure how to answer that for your organisation, that's exactly the kind of change design and benefits work I help utility clients with. Get in touch if you'd like to talk through what shaping and delivering that change would look like for yours.

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