Severn Trent Water Resolves Customer Problems with Access to Real-Time Data

UK water company finds faster ways to work by building apps on Heroku

The Challenge: Modernising Their Infrastructure from Pipe to Customer

Some of Severn Trent Water's water and sewer pipes date back to the early 20th century, so have needed significant modernisation in recent years. The water industry was privatised in 1989 and since then water companies have been able to raise revenue to repair and replace ageing pipes, as well as provide new services to services to a

COMPANY BACKGROUND

Severn Trent Water is the UK's second biggest water company. It serves more than 4.2m homes and business customers in England and Wales. Its region stretches from mid-Wales to Rutland and from the Bristol Channel to the Humber. The company delivers almost two

growing population.

With the development of mobile technology, customers are demanding more information and faster solutions for broken water pipes and sewage problems. In addition, the customer service and support organisations require better backend services to speed up reporting and analysis, so that they can not only identify and fix problems more quickly, but be proactive in replacing old pipes before they even break.

Legacy software systems and organisational bottlenecks were holding back the company's software development team, and getting resources for mobile services, including databases, web and application servers, was costly and slow. Employees began creating informal solutions in spreadsheets and local databases to work around the lack of tools to address these business needs, but they were unable to integrate the one-off solutions into the core systems.

The Solution: Managing Peak Demand with Heroku

A team at Severn Trent Water took on the challenge of creating several mobile apps and backend solutions, and chose Heroku to allow them to deliver new, integrated and scalable solutions more quickly.

> At Severn Trent Water we strive to deliver the best quality drinking water and return waste water safely to the

billion litres of water every day through 46,000km of pipes. A further 91,000km of sewer pipes take waste water away to more than 1,000 sewage treatment works.

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> environment every day for our customers. Heroku is enabling us to respond to alarms quickly and efficiently, which is critical when you're dealing with water supply and sewerage issues.
>
> *John Skelton, CTO, Severn Trent Water*

Real-Time Alarms app — one of several they built on Heroku — uses the water loggers to measure pressure and flow and sends real-time data back to technicians to track performance and maintenance. This allows the operations team to investigate what caused the alarm to be triggered, which they can use to identify and fix the underlying problem before it gets worse.

> The increase in real-time data during peak periods can be as much as 300 per cent, which previous systems could not handle. With Heroku, we can increase the Dynos and keep pace with the increased alarm volumes.
>
> *Dane Gross, fast track development and integration specialist working with Severn Trent Water*

By switching to Heroku, the Severn Trent team was able to

modernise not just data gathering, but also notification communications. Previously, they had used an email system to receive notifications from the water loggers — for each alarm, the loggers would send an email to a general email account. Employees would have to monitor the account and identify someone to investigate the issue when they received an alarm. This could take hours, even under low stress conditions. Now, the team has an immediate notification system direct from the loggers that has sped up response and resolution time.

> Our mobile app is used in the field 24/7, so we can't afford any downtime at all. Using Heroku gives us 100% uptime even when deploying a new version. Our users love that!
>
> *Dane Gross, fast track development and integration specialist working with Severn Trent Water*

App Experience: Empowering Technicians To Respond Quickly

The Real-Time Alarms app allows technicians to easily pick an item off the list as alarms come in. This not only shortens handling times, but also provides faster response for our customers. The Severn Trent team can also provide "network visibility" which shows all of the alarms in a map view making it quickly apparent which alarms are related.

They can then assign a set of alarms in the same vicinity to one person, improving field efficiency.

With Heroku powering the back end, Severn Trent has plans to expand their mobile app footprint to modernise its business, including a quote builder app for trench and pipe work, as well as a photo cluster app. The photo cluster app allows engineers to upload incident photos with their location, resulting in a map that helps show the severity of an issue, not only by the cluster of photos, but also in the detail each individual photo provides.

Future plans also include adding more intelligence to the map view. For example, if one logger has a high flow, and the adjacent logger has low pressure, they can assume that in between those two points there is likely to be a broken pipe. This automated data analysis can increase the speed at which a repair is made and make sure the company keeps its customers supplied with water.

Heroku for Enterprise IoT Solutions
Is your company looking to deliver mission critical solutions? Severn Trent Water is a great example of a company using Heroku and real-time data to solve real issues. For more information, contact Heroku today.

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