Environment Agency

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>
> **Simon Nebesnuick**
> **Flood Warning System Product Manager**
> **Environment Agency**

The Environment Agency chose Fujitsu to modernise its flood warning service, migrating it to the cloud and optimising it, saving money, while adding new features and flexibility

At a glance

Country: UK
Industry: Public Sector
Founded: 1996
Website: gov.uk/government/organisations/environment-agency

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Challenge

The Environment Agency wanted to improve its flood warning system and make it more cost-effective by changing from licensed to open source software and databases, and moving dedicated hardware to the cloud – thus enabling a more flexible, portable and resilient approach.

Solution

The Agency selected Fujitsu as its strategic partner, based on its experience with the previous flood warning service as well as its ability to utilise an Agile, DevOps and co-creative approach. Together, they built a multi-channel, virtualised flood warning system which integrates seamlessly with mobile operator systems.

Benefit

■ The system delivers flood warning messages to users faster via configurable channels

■ A streamlined and intuitive interface reduces manual input, allowing messages to be issued quickly

■ Fujitsu has added, and continues to add, new features, such as group targeting and universal templates, which speed up the alert process

■ Fujitsu and the Agency are now working together to continuously improve the service using a DevOps team and Agile methods

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Customer

Established in 1996, the Environment Agency is tasked with creating better places for people and wildlife, supporting sustainable development, as well as protecting and improving the environment in England. It has around 10,600 employees responsible for regulating major industry and waste; the treatment of contaminated land; water quality and resources; and fisheries among other areas.

Products and Services

■ FUJITSU Flood Warning System
■ FUJITSU Digital Transformation Center
■ FUJITSU Enterprise Postgres

Modernising critical flood warnings

In a world where extreme weather events are becoming more frequent, governments must implement a robust communications infrastructure to warn citizens about forthcoming hazards. That's why the UK government first invested in a flood warning system back in 2006, however, in the years since, the technology has become outdated.

"We wanted to improve the service and make it more cost-effective by moving it from dedicated hardware to the cloud – a more flexible, portable and resilient approach," explains Simon Nebesnuick, Flood Warning System Product Manager, Environment Agency. "We also wanted to simplify the service and remove little-used elements, such as fax and pager support."

A further objective was to align two disparate systems – developed by JBA and Shoothill – under the same banner as the main flood warning platform. Moreover, the Environment Agency wanted to become more agile by moving from a 'single annual release' model to one that sees several smaller releases per year. A government tender outlining these objectives was issued and the respondents were whittled down to three.

"Fujitsu was the clear leader – not only was it responsible for the design and maintenance of the original flood warning system, it could also provide the fully featured platform we need," adds Nebesnuick. "Fujitsu also demonstrated it could integrate the flood warning system with JBA, a flood management consultant and Shoothill, which provides Facebook warnings."

Co-creation through Agile methods

The new service was built through a rigorous co-creation approach, which involved meticulous planning and testing at every stage of development, in line with DevOps principles. Daily collaboration between the Environment Agency and Fujitsu ensured that issues were addressed immediately, and the new solution was ready in a matter of months.

"We ran the old system in parallel while we tested the new service and then had a crossover day where all the data was copied to the new, almost entirely virtualised platform," continues Nebesnuick. "We also switched from a traditional waterfall approach to Agile methodology during the development phase, which allowed us to embrace continued improvement and reduce waste."

The service now delivers alerts faster via a number of different configurable channels, including social media. Duty Officers can issue flood warning information quickly to citizens and partners, giving people more information and more time to react.

"Fujitsu has been able to add long requested features, such as group targeting and templates, which speed up the message sending process," says Nebesnuick. "If we want to create an entirely new warning, we can do it in 20 minutes rather than half a day."

Overall, the flood warning service hosts over 1,500,000 registered properties, 2,900,000 telephone numbers, 180,000 email addresses and 1,500,000 numbers registered to receive text messages. Since its launch in April 2017, it has sent over 7 million messages to citizens - an average of 11,000 a day.

Faster, multi-channel alerts save lives

Fujitsu's Flood Warning System enables the Environment Agency to alert citizens much more quickly about potential threats, while automatically targeting multiple at-risk groups via familiar channels, which, ultimately, will save lives.

However, Fujitsu has also added value beyond this crucial objective, helping the Environment Agency align itself more closely with wider government initiatives. Supporting their ambition to be to the world's most advanced alerting system, the Environment Agency participated in Fujitsu's co-creation programme using the FUJITSU Digital Transformation Center (DTC) to refine their future strategy and align it to government digital standards.

"We spent two days at the DTC with users, managers, support teams and policy people in an effort to clarify our roadmap and service vision," comments Nebesnuick. "This allowed us to review our internal approach in the wider context of government policy, enabling the development of the plan that will ensure we continue to comply with the Government Digital Service Standard."

Another area where Fujitsu proved invaluable was in managing the relationships with mobile operators, who provide anonymous telephone numbers for unregistered properties. The Fujitsu-designed system is built to integrate with mobile operators, making it simple and secure to onboard them. Without their input, the flood warning service would be much less useful or wide reaching.

"Fujitsu have made sure the system works in a transparent and reliable fashion with monthly reports and 99.999% SLA uptime," concludes Nebesnuick. "It is a professional, collaborative partnership that enables us to solve problems quickly and deliver results."

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