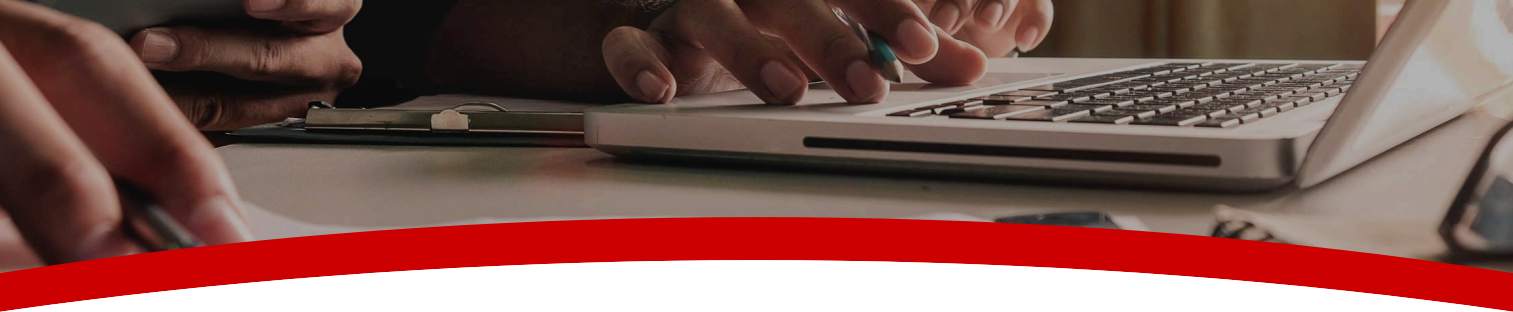




CASE STUDY

Improved quality of database deployments and increased efficiency with Redgate Flyway Enterprise



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The Customer

This emergency rescue charity runs 24 hours a day, 365 days a year, across the UK and Republic of Ireland. Powered by donations, all 2,300 employees and over 40,000 volunteers are dedicated to achieving their mission.

The Challenge

As a charity, they face strict budget control and strive to get the most from its donations. With increasing head count not an option, the team had to find ways to evolve in order to increase process efficiencies.

The Solution

Redgate Flyway Enterprise helped the team build on their application delivery processes to introduce automated database development. SQL Prompt standardized formatting, enabling faster, reliable code analysis.

The Results

The implementation of Redgate Flyway Enterprise and SQL Prompt enabled the team to adapt, upskill and embrace change. They've improved the quality of database deployments and increased efficiency, freeing up developers.

“Rather than hiring more people to get more work done, you need to find efficiencies that allow your dedicated and valuable pool of people to focus on the right things”

The Customer

This emergency rescue charity runs 24 hours a day, 365 days a year, across the UK and Republic of Ireland, to support people in danger at sea. Working together with partners and communities, it aims to educate, influence, supervise and rescue those at risk at sea by providing safety, international advocacy, research, and education programs.

In operation for well over 150 years and always funded by donations, the charity has 2,300 employees and a network of 40,000+ volunteers, all wholeheartedly dedicated to achieving their mission. In one of our first meetings with the Head of Data, his pager went off and the meeting was cut short as his volunteer team had been called to an emergency. They truly are ordinary people doing extraordinary things.

The data team was introduced around seven years ago, and now constitutes more than 45 people across research, product, Data Analytics and Data Science, and Integration, BI and Data Engineering developers. Although they adopted a cloud first approach with Azure, like many organizations they still have a number of legacy applications on-premises. While the current database estate is predominantly SQL Server, they are increasingly introducing Databricks as a cost saving initiative, and to increase alignment across teams.



Budgetary restrictions are nothing new for charities, as the Head of Data outlined: *“Charities are really struggling due to a combination of factors. As the macro global economic environment continues to be volatile, we are challenged by increasing costs, but we haven’t got customers that can shoulder a 10% or 20% increase in prices. So, if we can’t make more money, how do we spend less money? That’s when we started to look at increasing efficiencies.”*

2,300
EMPLOYEES

40,000
VOLUNTEERS

144,476
LIVES SAVED

“UX is a big thing for us. It could be the best tool in the world but if it's horrendous to use, then it just won't get used and becomes a really expensive paperweight”

The Challenge

The database itself is the one-stop-shop for all data at the charity, comprising of operational activity including emergency responder scheduling, employee, volunteer and donor Personally Identifiable Information (PII), plus marketing activity and financial operations. At a semantic level, it is accessed by those in data professions across the organization including data analysts, data scientists, data engineers and integration developers. It also has to meet access demands from embedded teams like market analysts, HR analysts and engineering analysts, which requires schema level security.

Prior to the implementation of Redgate Flyway Enterprise, deploying changes from one environment to the next was a very manual process. Developers would handle the changes, which required the relevant permissions and depending on the cycle, a change could include up to 50 scripts. With one script taking over an hour of developer time, multiplied across workloads and deploying weekly, this became a huge time burden. This was highly inefficient and there was also a significant probability of human error in the process.

Working with shared development environments added further challenges around managing code. There was the risk of developers overwriting one another's code, incorrect or outdated access levels, and issues keeping track of changes. They had limited visibility on what was actually deployed, when and by who, and which issues related to what deployment.



Following a team restructure, the Head of Data decided the time was right to make some fundamental changes to the way they worked, focusing on the shift in approach from Waterfall to Agile. A big driver for change was to improve their code management, having a format they could easily manage. They needed to increase visibility to avoid code being overwritten and introduce processes to track those changes. Adopting Continuous Integration / Continuous Development (CI/CD) in place of manual processing was the logical answer, but it became apparent that they would need a solution which could tie the whole process together.

“We can now do releases much smoother, quicker, in a more controlled way. Freeing up developer’s time to do the real development, rather than the actual deployment”

The Solution

The restructuring gave the team the opportunity to adapt and evolve. Rather than being opposed to change, they embraced it, identifying their key challenges and ways to overcome these. As the Head of Data outlined: *“We began by trying to cross skill, starting by reducing the number of tools and making them applicable to a wider pool of individuals. This created cross-team resilience and a shared way of working by aligning both skill sets and technology.”*

Microsoft’s Donovan Brown famously stated that *“DevOps is the union of people, process, and products to enable continuous delivery of value to our end users”*. Through the restructuring changes and evolving to an Agile way of working, the team addressed people and process, but to achieve their goal of implementing a CI/CD pipeline they knew they needed to invest in products.

The team originally looked at Microsoft Visual Studio, but found it lacked a couple of non-negotiable options. With GitHub as their chosen source control repository, support for their integration platform was key, but this was not a current option with Visual Studio. Secondly there is no GUI front-end in Visual Studio, which was a must-have user experience (UX) feature to match the developers’ preferred way of working.



The Head of Data knew the right solution for the team would need to not only offer CI/CD capabilities but also meet strict criteria for success. A simple user interface, resources to easily onboard new team members and other teams across the organization, out-of-the-box integrations that worked with their existing set up, and a proven return on investment. A team member had successfully worked with Redgate and SQL Prompt in previous organizations and, after initial discussions with Redgate, they were confident that Redgate Flyway Enterprise would meet and far exceed these requirements.

A core group within the team were assigned trial licenses and began testing hands-on with Redgate Flyway Enterprise to determine its Proof of Value. The initial feedback was overwhelmingly positive with developers easily able to get up to speed using the intuitive interface, integrating Redgate Flyway Enterprise with their existing setup, and demonstrating value through time savings and reduced deployment risks.

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The Results

Following the trial and Proof of Value work within the core group, Redgate Flyway Enterprise was successfully rolled out across the entire team. There was an initial meeting between Redgate and the team which brought the solution to life and offered the chance for Q&A around their specific setup. Utilizing Flyway AutoPilot, they easily installed baselines and pipelines, allowing them to get started and see value straight away. The range of free onboarding resources such as documentation and Redgate University training material also enhanced their learning experience, so they were able to embrace the products by diving in and getting hands-on. This meant that the whole team got up and running quickly, and they began to see the return on their investment.

The major win for the Data Team and wider organization has been the efficiency gained from automation. As a charity funded by donations, it is limited to the headcount that can be afforded, so by implementing Redgate Flyway Enterprise to remove the manual workload, it allows the team to focus on where they can truly add value. They have increased speed and efficiency, optimized costs and are now able to work much smarter to deliver results for their customers.



On a technical level, automating deployments removed the risk of human error which led to a drop in failed deployments and maximized release rates. Prior to Redgate Flyway Enterprise, the team had no version control in place which made tracking and auditing database changes challenging with no way to see which version had been deployed, by who and when. Now Redgate Flyway Enterprise is the single source of truth, tracking and increasing the reliability of deployments.

They also introduced Redgate's SQL Prompt to standardize ways of working across multiple development teams, and saw immediate success. On top of the obvious time savings with autocomplete and templates, SQL Prompt also takes care of formatting and object renaming, so the teams can concentrate on how the code actually works. As the Lead Data Engineer, commented: *"Developers couldn't imagine not having SQL Prompt now. It would feel like trying to work with their hands tied behind their back."*

With deployments now much smoother, faster and more controlled, developers have more time to work on the projects that make a difference and drive improvements. They no longer spend hours each day running the same manual checks and scripts. Instead, they are engaged and embracing the new changes to processes and products. Introducing standardization across teams has also enhanced internal code reviews, with one standard for formatting meaning anyone can pick up code and clearly understand what is going on. Again, saving time and increasing efficiency across the teams.



The Head of Data knows that there are still areas they can continue to improve and evolve to further increase the speed of deployments, with their end goal being to align these to their sprints. But having the agreed process to follow and Redgate Flyway Enterprise in place is great for inducting new team members, and the next step is expanding this out to the testing teams.