

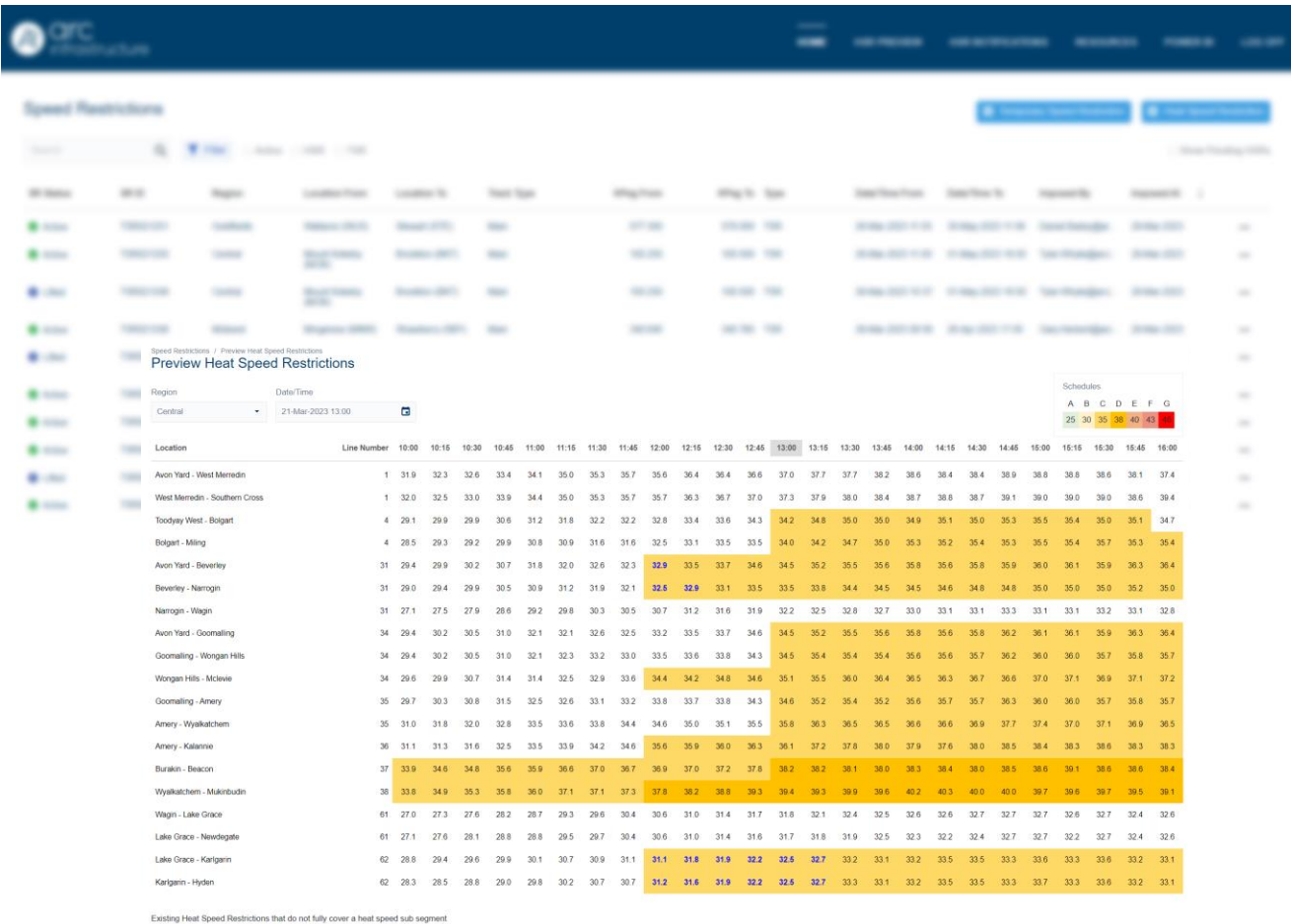
interfuze.

Case Study **ENCP Full Stack Development**



arc
infrastructure





Overview

- Arc Infrastructure Technology were looking to implement electronic train management and required custom software to be developed to augment functionality of the 3rd party system being rolled out under a project called ENCP. (Enhanced Network Control Project) To meet all business requirements for electronic train management additional modules were built in-house that had an interface with the 3rd party train planning and operation systems.
- Interfuze led and managed the full stack development of the custom software, starting with a **Network Possessions module (NPM)**, delivering early value by using an Agile approach and later developing the **Speed Restriction module (SRM)**.
- By viewing the problem with an **agile mindset and full stack development skills** Interfuze were able decouple the custom software delivery from the 3rd party software rollout, giving business simple to use applications **earlier** than originally planned.

The Client

Arc Infrastructure (formerly Brookfield Rail) is operator of West Australia's south west rail network, covering approximately 5,500 km of rail infrastructure.

The network is vital to providing access to the eastern states of Australia and overseas markets through the region's six government-owned ports.



- ✓ Complete full stack development team
- ✓ Application delivery and project management
- ✓ Agile approach providing delivery a year ahead of original schedule

The Challenge

- **Full stack development** to enable the management of Network Possessions, and Heat Speed Restrictions. Moving these from a legacy desktop application into easily navigated web apps, implement business and safety rules, and of course automate tasks where possible.
- These apps need **user friendly**, consistent front ends. With fast, **integrated** back ends reducing the amount of overhead for employees.
- **Component based delivery** Business was focused on the overall big project delivery, we had to help them to think at a component level to see how they could get value early, without the whole system being live
- **Tight deadlines, changing deliverables** aka the usual project challenges

The Approach

- **Agile process** used to identify a minimum viable product (MVP)
- A solution developed from this MVP allowed an **early go live** providing the business with **real benefits** as early as possible
- These MVP's receive **continual development** from real user feedback
- Consistent **user-friendly interface** across the suite of apps
- Agile **Delivery** with fortnightly reviews ensure the final product aligns with expectations, and allows continual re-prioritization of tasks to suite the current wider business demands

The Solution

- **Full stack** solution in **.Net core** with a **DevExtreme** web front end. These standardized controls gave users consistency across all apps
- Multiple **SQL Server** databases store complex data, including a complete map of the Arc railway network
- Background services to **drive application integrations** and provide users with the latest restriction recommendations
- **Azure DevOps** build and deploy pipelines for all environments
- Team's commitment to **Agile** and delivery meant that committed **delivery dates were met**, despite many challenges along the way

The Results

- The web apps have **increased visibility** to both employees and customers, while **reducing daily overheads** for Arc employees.
- **Automation** such as Heat Speed Restriction notifications drastically reduce the amount of manual double handling for staff members.
- Having a team of **full stack developers** meant development could be divided at any point across the team, keeping the project **on time**.

Interfuzo has augmented our technology team seamlessly. They quickly adapted to our culture and workflows, and have demonstrated reliability, flexibility, and the ability to deliver end-to-end solutions with a full stack development skillset



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Think we can help solve your problem?

Reach out to Interfuze on

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