



Case Study

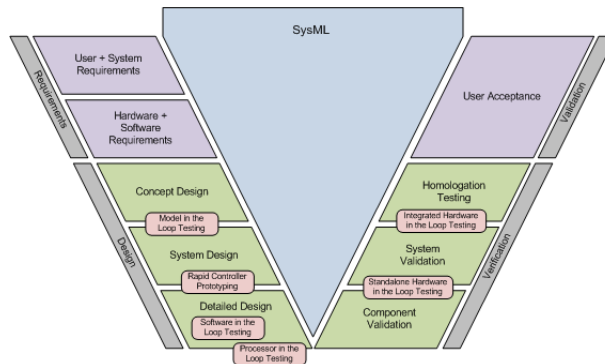
Train Zero – Systems Integration

Frazer-Nash worked with Bombardier Transportation UK to design and commission Train Zero, a Model Based Design facility, providing the UK rail industry with cutting edge capability to efficiently integrate, develop and validate train electrical and control systems.

Train Zero enables an innovative approach to systems integration using Model Based Design. This offers Bombardier the capability for integration, testing and refinement of new rolling stock much earlier in the design process. Train Zero enables Bombardier to design and manufacture the next generation of rolling stock to be safer, more reliable and have enhanced performance.

OUR ROLE

- Developing the business case and requirements for the facility and engineering processes
- Developing the concept (hardware, software and mechanical)
- Specifying simulator hardware and supplier down selection
- Developing, implementing, testing and deploying the simulation models
- Developing the software interface and configuring the simulation environment.



THE BENEFITS OF ADOPTING THIS APPROACH

Our approach will reduce the time taken, significantly reduce the risk and cost to develop and deliver new rail systems. Specifically we can help you to:

- Confirm the characteristics of all system components, and reduce any incompatibilities that may require modifications during early development stages
- Provide confidence in system development to customers from early project stages
- Engage with key suppliers and promote commonality of systems
- Enable a more efficient verification and validation leg of the systems engineering development V-lifecycle, resulting in a shorter overall development cycle
- Specify more efficient testing resulting in fewer unexpected faults
- Provide support to projects throughout their warranty period.

Rail Business Awards 2015 – Winner Best Technological Innovation

National Instruments Engineering Impact Awards 2016 – Winner Global

Category: Transportation & Heavy Equipment

“Train Zero testing facility has the potential to revolutionise the design process of the next generation of rolling stock.” *Railway Technology magazine*

Client

Bombardier Transportation

Business need

When Bombardier, the global leader in the rail industry, won the contract to supply the trains to Crossrail, a new 118km railway line creating a direct east-west connection straight through greater London, it looked to optimise its processes in order to develop a modern train fit for this purpose, whilst shortening the time taken in design, verification and validation.

Why Frazer-Nash

Our rail engineers are renowned for bringing clarity to projects and operational situations where challenges are faced. Frazer-Nash takes a whole systems approach and applies the best practice from other industries to the rail sector. We support a wide range of customers in the rail industry, including rolling stock and infrastructure companies, train operating companies, original equipment manufacturers and research and regulatory bodies.

www.fnc.co.uk - www.fncaustralia.com.au

Offices throughout the UK and Australia

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Find out more
To find out more about our work and how we can add value to your business visit our website.

