

In NELSON'S Footsteps: DataCore Integration



Key Outcomes

- Extend our DataCore to add support for GraphQL queries, mutations and subscriptions alongside the existing MAPLE interfaces.
- Support DOCKER containerisation enabling the DataCore to be integrated as a core component of the Navy Data Platform
- Existing MAPLE applications continue to work without modification and use the normal MAPLE interfaces.



In 2020, SeeByte were selected to integrate MAPLE's DataCore with the Navy Data Platform, to enable the storage, processing, and publishing of data transferred from unmanned systems deployed across the fleet.

Leveraging on our experience as the developer of the MAPLE Data Core, and a key member of the MAPLE team, our engineers worked closely with Navy Digital's NELSON team of computer and data scientists towards a successful integration.

We addressed the project in the following stages:

- Proof of concept
- Integration of core capabilities
- Integration of full capabilities
- Containerization and deployment

NELSON provided their software development kit and Navy Data Platform for the project.

During the project we overcame many challenges to meet the requirements and deliver on time.

At the time of this project our engineers were working on enhancements to the MAPLE DataCore for another project. To ensure we maintained a single software repository for both MAPLE and Navy Data Platform we had to carefully orchestrate updates to the current MAPLE Data Core at the same time as the development of the Navy Data Platform GraphQL API extension.

This required meticulous planning and creativity to architect the software changes within our continuous integration and development DevOps systems.

At the same time, we had to understand the full Navy Data Platform technology stack. Fortunately it uses modern open commercial technologies that SeeByte are using elsewhere and our engineers are familiar with.

The COVID-19 pandemic struck just as we were due to test the core capabilities with the NELSON team at their facilities. With face to face meetings off the table, and SeeByte and NELSON offices closed, we had no option other than to complete the later phases of the project whilst working remotely. Our IT infrastructure enabled our team to work remotely whilst collaborating closely with each other and the NELSON team.

Through the hard work and teamwork of the NELSON and SeeByte teams, the project achieved its goals on-time.

"We wish to extend our thanks to the NELSON team for this opportunity and support throughout this project.

We look forward to continue supporting the Royal Navy, NavyX, NELSON, and Dstl, and to demonstrate the capabilities later in the year".

*SeeByte's Engineering Lead for the project,
Matt Fitchett*