

# Driving Asset Management Efficiencies with Data Standardisation and Automated Workflows

Case Study: City of Armadale

*“GDV Hub gives us near instant turnaround on A-SPEC validation reports. The results are more transparent and easy to interpret, and that’s improved things not only for our department, but also for our subdivision engineers, landscape architects and project managers.”*

Declan Simons, Senior Asset Systems Officer, City of Armadale

**Industry** Local Government

**Customer** City of Armadale, Western Australia

**Challenge** Automate the validation and integration of standardised asset data in a rapidly changing environment to drive operational and asset management efficiencies

**Solution** Deploy the 1Spatial Geospatial Data Validation Hub (GDV Hub) for automated validation of the A-SPEC as-constructed asset data standard, and Safe Software’s FME software for data integration and workflow automation across asset management and other systems

## Key Benefits:

- Reduced turnaround times on A-SPEC validations from up to 10 hours to less than an hour
- Enabled asset data officers without specialist IT skills to perform validations independently
- Reduced dependence on specialists, allowing them to shift focus to advanced data management
- Automated workflows and integrations ensure operational staff always have up-to-date data
- Requests for information are processed more quickly, and data quality is maintained across different systems

### Overview

Located 28 kilometres from central Perth and spanning around 560 square kilometres, the City of Armadale is one of Western Australia's fastest-growing local government areas. With a booming population and economy, it offers vibrant open spaces, business parks, a transforming city centre and rich tourism experiences.

With an annual budget of approximately \$120 million and 500 staff, the City of Armadale serves nearly 110,000 residents and a local economy of 6,000 businesses and 26,000 jobs. Digital technology, including the city's asset management systems, is key to effectively managing an asset portfolio of over \$2 billion.

In 2023, the city embarked on a journey to improve the quality and completeness of its data to better manage its assets. It began by adopting A-SPEC, a common specification for supplying data on as-constructed infrastructure assets. Developed through a collaboration of Australian government, utility, software and consulting organisations, A-SPEC helps ensure that captured asset data is relevant, accurate and complete.

A-SPEC has transformed the City of Armadale's asset data collection. Previously, infrastructure developers submitted a range of drawings and digital files describing constructed assets. They are now required to provide a complete dataset to the City of Armadale in a standard format and terminology. With A-SPEC, the city's asset management systems can more easily value assets, assess their condition and ensure their maintenance is as efficient and effective as possible, making the best use of the city's available resources.

### Challenge

But this improvement also presented a challenge. Asset data volume increased sharply and, initially, each submission still had to be validated, transformed and loaded manually. "A-SPEC gave us consistency, but we still lacked capacity and automation," said Declan Simons, Senior Asset Systems Officer at the City of Armadale. "Our systems needed to evolve to keep up with both the quality and quantity of asset data."

That evolution began with building workspaces using FME Form, Safe Software's no-code authoring environment for data workflows. FME workspaces were designed to validate A-SPEC data and transform and load it into the city's previous enterprise asset management (EAM) system. Later, the FME workspaces were updated to support a new TechnologyOne Ci Anywhere (CiA) EAM system.

Then, in the middle of its EAM system migration, the City of Armadale encountered an even bigger challenge – a major evolution of the A-SPEC

specification. Without significant updates to its workspaces, the city could only use FME to validate A-SPEC data against the previous standard, risking the acceptance of incorrect data.

The city continued to update its FME workspaces, but with the additional workload from the EAM systems migration and the ongoing evolution of the A-SPEC standard, the city's asset lifecycle team was struggling to close the gap.

"While the previous process ensured data quality, it wasn't very efficient or scalable and relied heavily on the expertise of just a few people. We were dealing with a large backlog and, ultimately, we were in a time crunch to validate A-SPEC using out-of-date FME workspaces, which was compromising data integrity. This led us to look at the GDV Hub," said Simons.

### Solution

The Geospatial Data Validation Hub (GDV Hub) is a unique web-based solution developed by 1Spatial in collaboration with GISSA International, which owns A-SPEC. It allows organisations to validate and automatically apply logical corrections to A-SPEC data utilising the 1Data Gateway portal and the 1Spatial Business Rules Engine.

To get on top of its "time crunch", the City of Armadale implemented GDV Hub while its asset lifecycle team rebuilt internal capacity. But what was meant to be a stopgap solution quickly became a core process that has significantly improved A-SPEC data validation. "As soon as we brought in GDV Hub, it was such a pressure valve release," said Simons. "We knew early on that we would continue with it."

GDV Hub quickly delivered benefits, reducing turnaround times on A-SPEC validations from up to 10 hours to less than an hour, and producing clearer reports in a PDF format. This enabled asset data officers without specialist IT skills to perform validations independently and report to developers the same day.

The solution has also built capability across the team and reduced dependence on one or two specialists, allowing them to shift focus from firefighting data issues to managing and improving the city's asset information.



## The Future

Having automated asset data validation workflows with GDV Hub, the City of Armadale has turned its attention to improving other data processes with FME Flow, Safe Software's workflow automation platform. The city is also broadening its FME skills base by engaging 1Spatial, the leading global Safe Software Partner and FME reseller, to train its asset data officers.

The City of Armadale has already automated the integration of asset spatial data into TechnologyOne CiA. Spatial data is now loaded into and extracted from the EAM system via automated, bidirectional workflows. FME Flow pushes new or updated spatial data into CiA and pulls it down for tools such as the Intramaps interactive mapping portal, Before You Dig requests, and other operational purposes.

"The automated workflows ensure that operational staff always have up-to-date data, which means requests for information are quicker and data quality is maintained across systems," said Simons. "And because it's built on FME moving to FME Flow, it will allow even more automation and scheduling across other processes in the future."

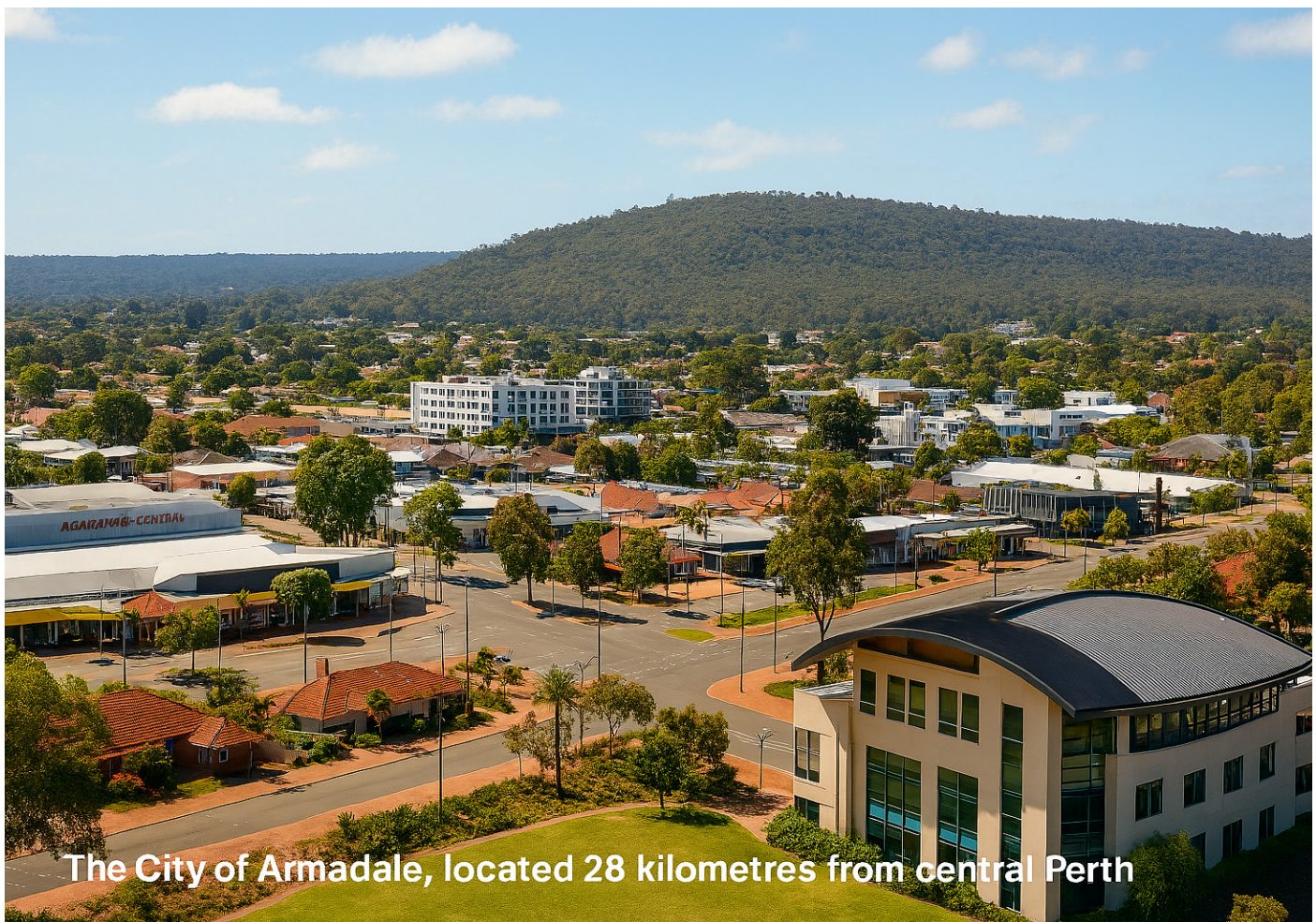
*"GDV Hub has changed the way we work. Our asset data officers now have clear ownership of the process. They run the A-SPEC validations themselves, interpret the reports and communicate directly with consultants, and only escalate when there might be a significant issue."*

*"The next evolution for us is moving other workflows from FME Form into FME Flow so they're automated, logged and managed without someone needing to manually run them. That will help give us a truly continuous process from asset data validation to systems integration."*

– Declan Simons, Senior Asset Systems Officer, City of Armadale

*"The City of Armadale has taken a remarkable data management journey, starting with a commitment to standardisation and data quality and evolving with the use of advanced data workflow tools like GDV Hub and FME to increase automation and efficiency."*

– Christian Fellingner, Sales Director, 1Spatial Australia



The City of Armadale, located 28 kilometres from central Perth