

CONNECTED DATA ANALYTICS PLATFORM

# Transforming Policing in Western Australia

The Western Australia Police Force has been recognised both in Australia and globally for their adoption of advanced technology solutions. Their graph platform IRIS, powered by GraphAware Hume, is no exception, delivering a cutting-edge technology solution that helps the agency in its mission to keep the Western Australian community safe.

# Western Australia Police Force

## Background

The Western Australia Police Force is known for world-leading adoption of advanced technologies. Digital forensics and automatic number plate recognition initiatives exemplify the organisation's willingness and appetite for data-driven policing.

The WA Police Force is responsible for policing the world's largest single police jurisdiction, covering Western Australia's 2.5 million square kilometres with over 150 police stations across 8 metropolitan and 7 regional districts.

### BEFORE

- Data siloed in disparate systems
- Data analysis largely a time-consuming and manual process
- Manual monitoring of data changes
- Difficult to uncover hidden connections within and between data sources

### AFTER

- ✓ Single view of intelligence across many data sources
- ✓ Knowledge graph implementation, removing the manual effort of uncovering associations
- ✓ Automated pattern discovery & monitoring
- ✓ Hidden linkages uncovered



## Siloed data

Policing organisations are uniquely challenged by data silos due to the number of disparate sources required for complex crime analysis.

In response to the rising complexity of solving crime, the Western Australia Police Force successfully implemented a number of state-of-the-art data technologies. These initiatives collected and stored significant amounts of valuable data in specialised systems and databases.

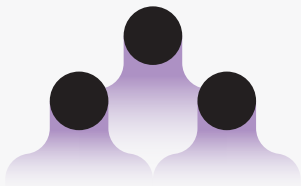
These data sources offered valuable insights to intelligence analysts, investigators, and frontline officers in their day-to-day work.

However, the all-too-common challenge of working within a modern policing environment remained: the mountains of data from these systems were disconnected and siloed. In practical terms, this meant that users had to search through dozens of systems and conduct disconnected crime analysis.

Traditional analysis techniques and tools fell short, as they required analysts to manually uncover key linkages between entities. The WA Police Force had all of the data, but they didn't have a single platform that unified their data, enabled deep link analysis, and rapidly uncovered hidden connections and associations of interest.



- ✓ Increasing complexity of criminal activity
- ✓ Rapid increases in the amount of valuable data trapped in disconnected silos
- ✓ Key linkages between entities & events remained hidden



## Single view of intelligence

The Western Australia Police Force deployed IRIS, a graph database platform powered by GraphAware Hume and Neo4j.

Within four months, the project team were able to ingest data from data silos scattered throughout the organisation and create a consolidated single view of intelligence.

Using Hume Orchestra, entities and relationships from source systems were loaded into Neo4j, then connected using entity resolution pipelines. The single view of intelligence that was created allowed users to quickly and easily get a complete picture of an entity of interest across all ingested data sources. Using Hume Actions, users could rapidly find answers to their key questions of interest instead of having to query data in multiple systems manually.

Having launched IRIS to production within four months, the next challenge was to onboard and train thousands of users across the organisation.

GraphAware and the WA Police Force worked together to train tactical intelligence analysts, investigators and front line officers. They learned how to use IRIS through the use of manuals and guides and participation in on-line courses and in-person scenario based training.

- ✓ Single view of intelligence with GraphAware Hume
- ✓ Hume Orchestra loaded & resolved source data entities
- ✓ Automated analysis of connected data
- ✓ GraphAware worked with Western Australia Police Force to create a thorough training package



## Accelerated analysis

The IRIS platform, powered by GraphAware Hume, is now in the hands of numerous users, with hundreds accessing the platform each month.

Data queries that once took hours now happen in an instant, empowering law enforcement to act swiftly and dynamically react to changes in real time.

But the true impact extends beyond numbers and statistics. GraphAware Hume has enabled the Western Australia Police Force to better serve the community and respond to the ever-increasing challenges of crime.

The previously time-consuming manual process for investigating high volume crime, has been significantly sped up thanks to investigators ability to search and analyse the connected data within IRIS.

Such high-speed information-gathering and analysis has enhanced the force's ability to respond to high volume crime.

- ✓ Over 2000 users across different divisions and units
- ✓ Connected data in the hands of police officers
- ✓ Enhanced efficiency in tackling high-volume crime

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The journey with IRIS is only just beginning. We will see IRIS further developed in the form of new data sources and additional capability such as automated alerts for patterns of interest and much more.

These capabilities will empower users to prevent, disrupt, and solve crimes faster and with more insight into data than ever before.

– JANELLE BAILY, HEAD OF DATA SCIENCE AND ANALYTICS



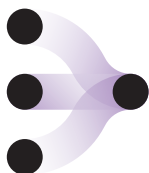


# The power of graph at core .



## A transformation driven by leadership

The unwavering leadership support of the WA Police Force was key to this success story. Their quick recognition of the value GraphAware Hume and Neo4j could bring to law enforcement, helped pave the way for rapid adoption.



## Graph-based analysis for efficient policing

GraphAware Hume puts connected graph data into the hands of those who need it. By ingesting and connecting data in a graph, the WA Police Force IRIS platform dramatically increased the efficiency and effectiveness of information analysis.



## Extending the intelligence across teams and divisions

After a two week proof of concept, over 50 intelligence analysts adopted Neo4j and GraphAware Hume for daily use, and within eight months, thousands users were harnessing its power of graph in production. These users included intelligence analysts, investigators and front line officers.