

# Fighting Crime with Data

Minimizing risks and improving  
outcomes in Police Investigations



Crime is becoming increasingly complex and multi-faceted

# Fighting crime with Data

**How the powerful data analytics solution, Söze, can help fast-track findings, minimize risk and improve outcomes in police investigations.**

Crime is becoming increasingly complex and multi-faceted. According to the Australian Criminal Intelligence Commission, organized crime costs Australia around \$36 billion a year, and new types of crimes are emerging constantly, enabled by advancing digital technologies and infrastructure. Organized crime is also now a transnational business, with advances in technology dissolving the borders that previously protected people from overseas. In addition, criminal syndicates are employing professional facilitators and sophisticated obfuscation methods to conceal their activities to avoid detection.

For agencies tasked with investigating these increasingly complex and technically sophisticated crimes, the load is enormous.

When conducting an investigation, police must now manage a vast and ever-increasing amount of data – from an ever-expanding selection of devices and applications. Digital Forensics Units have been created to help extract insights from data sources

like mobile phones, images, and videos. However, while there is enormous potential for this data to reveal a raft of investigative avenues, it can also be extremely time consuming to dissect, to isolate patterns and to identify anomalies. Also, much of this work is still done manually, or using ad-hoc software that isn't specifically crafted for the needs of police. As such, skilled police analysts and investigators are often bogged down with time consuming data wrangling, when they could be using their time to focus on investigating solid leads.

To help streamline and fine-tune this investigative process, the team at Akkodis has partnered with a variety of state and federal Law Enforcement agencies to develop Söze: an innovative and powerful new data analytics platform specifically created for police investigations.

In this whitepaper we highlight some of the common challenges for Australian investigative teams and explain how a platform like Söze can help.





# Organized crime is costing Australia AUD\$60.1 billion a year\*

New types of crimes are emerging; these crimes are enabled by advancing digital technologies and infrastructure.

Organized crime is transnational business with advances in technology dissolving the borders that previously protected people from overseas threats.

Criminal syndicates are employing professional facilitators and sophisticated encryption methods to conceal their activities to avoid detection.

\* Source: Estimating the costs of serious and organised crime in Australia, 2020–21 | Australian Institute of Criminology (aic.gov.au)



## The challenge of criminal investigations in a data rich society

# Investigation

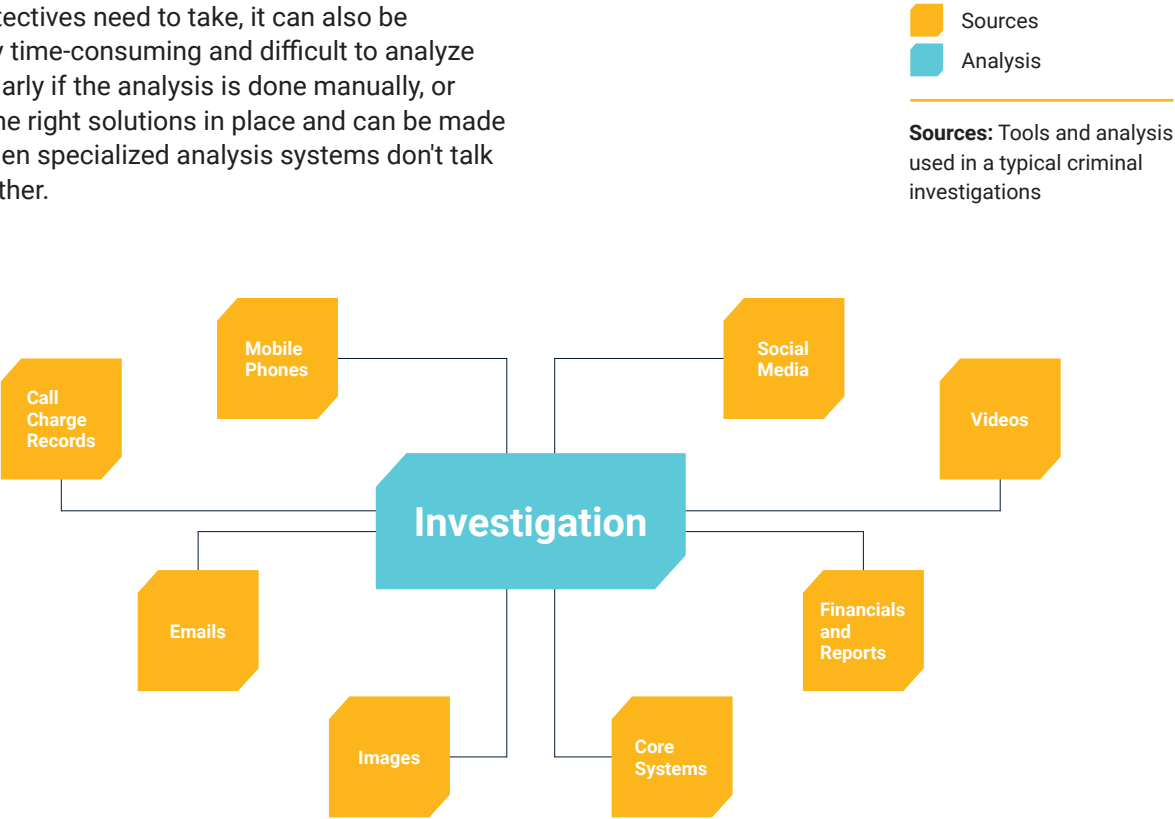
The modern criminal investigator faces several challenges when it comes to investigating crime in today's data-driven world. These include:

## 1 Ever-increasing data volumes and data types

Investigators are tasked with collating and analyzing an ever-expanding volume of information from all kinds of sources. This includes call charge records, mobile phone data, emails, images, videos, social media messages, financials, and reports, as well as data from core systems.

A particular investigation could involve, for example, cross-referencing an extract from a mobile phone or a seized hard drive, updates from a suspect's Facebook, Instagram or Twitter account, or even a classified listing that a suspect made on a website.

While all of this information can be extremely valuable in identifying patterns and helping narrow down the number of potential investigative avenues which detectives need to take, it can also be extremely time-consuming and difficult to analyze – particularly if the analysis is done manually, or without the right solutions in place and can be made worse when specialized analysis systems don't talk to each other.



Söze has been developed with police, for police, and is very unique in this regard



## 2 Lack of overarching insight

Another key problem faced by many investigative teams is that their software operates in isolation. Typically, teams of analysts and investigators will rely upon several pieces of software – which may or may not work together. In addition, one department may have an excellent solution for comparing and analyzing images; another may have a great solution for filtering and extracting insights from seized mobile phones; and another may have a solution targeted at identifying instances of financial fraud, or international financial scams. Unless these solutions can work together, however, there is great potential for investigative avenues to be missed altogether.

## 3 Data Security

In the past, most police departments have had to rely on on-premise solutions in order to meet very strict data compliance and security regulations. As well as being costly, this also limits the potential for the solution to provide overarching insights – or for it to be used from a variety of locations.

## 4 Access to analysts

In the past, most police departments rely on analyst services for an investigations data holdings - access to these specialist resources is a challenge. Analysts also spend a large proportion of their time processing and wrangling datasets, rather than high-value analysis tasks.

## 5 Investigative risk

As police teams must deal with such huge volumes of disparate data, there is a risk important information will not be discovered. Both for investigators, and for the general public, the inability to capture all available data, in a timely and efficient way, can mean considerable risk.

# How Söze helps fine-tune investigations

**“Advances in technology are contributing to law enforcement’s ability to discover, understand and respond to serious organised crime.”\***

Söze is a powerful new data analytics platform that enables police investigators to integrate and visualize vast amount of data from multiple sources and devices, at speed more easily.

Importantly, Söze has been developed from the ground up in partnership with multiple State and National Law Enforcement Agencies – so it is finely tuned to the needs of real investigators across a broad spectrum of policing work.

*“Söze has been developed with police, for police, and is very unique in this regard. There are some good policing solutions in the market, but none are*

*contextualized to policing need,”* says Tim Thomas - Detective Inspector at Western Australian Police.

Built on Microsoft Azure, Söze has the potential to support Australian and global law enforcement and intelligence agencies and investigators – revolutionizing their ability to use analytics to find information that can help them respond to threats and solve cases, faster.

\* Source: Australian Criminal Intelligence Commission, Organised Crime in Australia Report 2017





# With Söze, Investigations Teams can:

## 1 Save an enormous amount of time

Söze can help alleviate the mundane and repetitive analytical tasks which consume analysts or investigators time and result in a backlog within investigative departments. By automating the very time-consuming 'bread and butter' analysis, skilled analysts or investigators can focus more specific areas of analysis and pursue individual investigative channels.

## 2 Think in more abstract terms

By having a much broader and comprehensive analytical platform, analysts aren't limited to the tools at hand.

*"If you're an analyst or investigator and you're looking at a homicide job, the type of analysis you perform is crafted by the systems you have to use," says Thomas. "Söze allows you to think in a more abstract way – for example: "show me links between Person A and guns", or "show me how Person A and Person B are connected."*

## 3 Think in more abstract terms

Söze brings disparate analytical tools together on the one, overarching analytical platform. This enables much broader and deeper insights.

*"A very large portion of the time, our existing analytical methods deliver what we need – however the workload on our analysts and investigative teams is considerable. Söze enables us to cross-reference different areas of analysis to uncover patterns,*

*anomalies, and investigative avenues we wouldn't have been able to uncover previously," says Thomas.*

## 4 Investigate more, and deeper

Söze also utilizes powerful machine learning and artificial intelligence features to delve deeper into existing data and uncover insights or relationships that would ordinarily not have been possible.

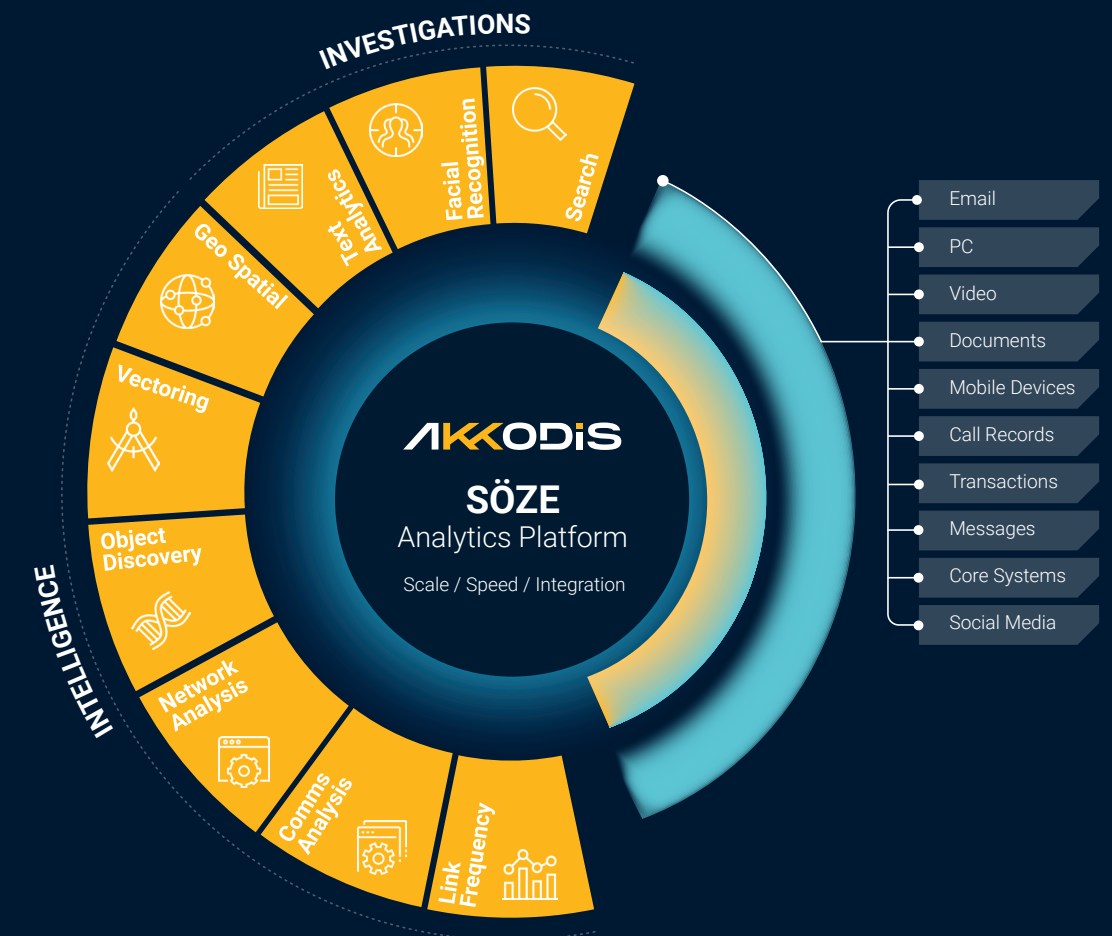
For instance, while an investigator may be able to manually categorize hundreds or potentially thousands of photos and images relating to a particular case, Söze can discover metadata, objects, people, and faces in millions of images, and identify anomalies, patterns, or connections far faster than any human can.

## 5 Leverage existing tools

Importantly the Söze platform doesn't replace existing analytical infrastructure, but rather sits across current solutions and enables deep and overarching analysis. This means departments can retain any software and solutions which their analysts and investigators are already familiar with.



# Akkodis Söze Platform



Söze works by bringing a broad range of existing analytical tools together, and applies intelligent metrics to provide rapid, deep, and overarching analysis. This includes:

- Link and frequency analysis
- Communications analysis
- Network analysis
- Object discovery
- Vectoring
- Geo spatial analysis
- Text analysis
- Facial recognition
- Search

*"We initially met with Akkodis about solving a problem with our existing link and frequency analysis tool. They came back to us with a solution that not only helped us overcome this initial problem – but also solved a lot of larger problems for us," says Thomas.*

### Work securely and stay up to date

Söze is hosted in Microsoft Azure, that has been a de facto standard for Government workloads in many countries, as Microsoft build, maintain and expand their local presence to guarantee data sovereignty. Plus, Söze is also updated constantly, in accordance with new regulations and emerging technologies, so analysts and investigators can rest assured they have the most up to date technology and tools at their fingertips.

## Why Akkodis?

Specializing in law enforcement and justice, Akkodis has worked with a wide range of government agencies, including Western Australian Police, New South Wales Police, Western Australia Department of Justice, Western Australia Department of Corrective Services, Queensland Government Department of Justice and Attorney General, Australian Government Attorney General's Department, and several other federal intelligence and defence agencies.

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The real strength of Söze is that it's been developed as a partnership: with police, for police. Essentially, it means we can solve crimes and resolve problems and arrest criminals faster, which makes the community safer and better for all.

**Tim Thomas**  
Detective Inspector,  
Western Australian Police

Akkodis is a global leader in the engineering and R&D market that is leveraging the power of connected data to accelerate innovation and digital transformation. Akkodis offers broad industry experience, and strong know-how in key technology sectors such as mobility, software & technology services, robotics, testing, simulations, data security, AI & data analytics. The combined IT and engineering expertise brings a unique end-to-end solution offering, with four service lines – Consulting, Solutions, Talent, and Academy – to support clients in rethinking their product development and business processes, improve productivity, minimize time to market and shape a smarter and more sustainable tomorrow.

## Find out more

If you are interested in learning more about Söze, and how we can help your organization, please contact our team:

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