STRATEGENICS

Transcending the informational black hole with AI

How the public sector can navigate beyond challenging information management realities with Artificial Intelligence and the right solution partner →

aws
PARTNER
Public Sector

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Introduction

We are living in a digital-first world, where everyday citizens are creating, consuming and demanding information at new levels each day.

Like with many organisations, those in the public sector have long lived by the mantra "*do more, with less*".

Since the pandemic crashed into workplaces around the world, we were expected to keep up and deliver outcomes faster, plus be more agile and more responsive than ever.

Agile public sector enterprises necessitate progress towards an organisation where the speed and efficiency of information management isn't just a good idea – it's a responsibility from the top down.

Information Management (IM) is something you're already familiar with. In business terms, it essentially refers to how information is acquired, stored, organised, shared, maintained and protected within an organisation.

You could also segment this in the following ways:

Knowledge management
Identifying, acquiring and sharing knowledge within or across teams.

Information security
Enforcing policies, controls, systems, communications and training to secure information.

Information asset management
identifying and managing information assets including access controls and appropriate user, with support from information custodians.

Data management
Collecting, storing and maintaining data in an organised and consistent manner.

Records management
Managing the retention and disposal of records in accordance with legal and regulatory requirements.

Information governance
Establishing policies, processes and procedures for managing information to ensure that they are accurate, secure and meet quality expectations.

Business intelligence and data analytics
Using data, information and knowledge to support decision-making and discover opportunities for improvement.

Public sector teams across Australia are no strangers to the significant challenges in day-to-day information management, and how ongoing poor practices can lead to reduced efficiency and increased compliance risks.

In this white paper, we discuss:

- How public sector teams have set expectations to improve information management practices using modern, standardised frameworks.

- The reality of ongoing challenges and examples of how exponential growth in data and information collide with those challenges to lead to an informational black hole.

- How teams can not only solve these challenges but also strengthen their capability using AI.

- How public sector organisations can ensure enduring results with the support of experienced partners.

THE EXPECTATION:

Adopt modern information management practices from standardised frameworks

Valuing information as a corporate asset is the first brick in a strong foundation of enabling public sector teams to collaborate effectively and maintain operational excellence.

Adopt modern information management practices from sophisticated strategies and frameworks

Over the years, practically all corners of the Australian public sector have crafted multiple frameworks, strategies, handbooks, plans and more to implement a modern practice of information management.

For instance, as part of the New South Wales Government's ongoing digital transformation commitment, they have developed a detailed Information Management Framework to coordinate their efforts and long-term vision for fostering mature and effective information management.

The Victorian Government has a similar approach, creating their own Information Management Framework to improve current practices in order to support better planning and delivery of public service.

Looking at an offshore example, the Scottish Government in 2021 published a formal review of their corporate processes for information management as a response to growing challenges and to align their strategic plans with technological advancements.

In 2019, the Queensland Government surveyed their departments with an information management maturity model describing levels of maturity from "unmanaged" through to "proactive"
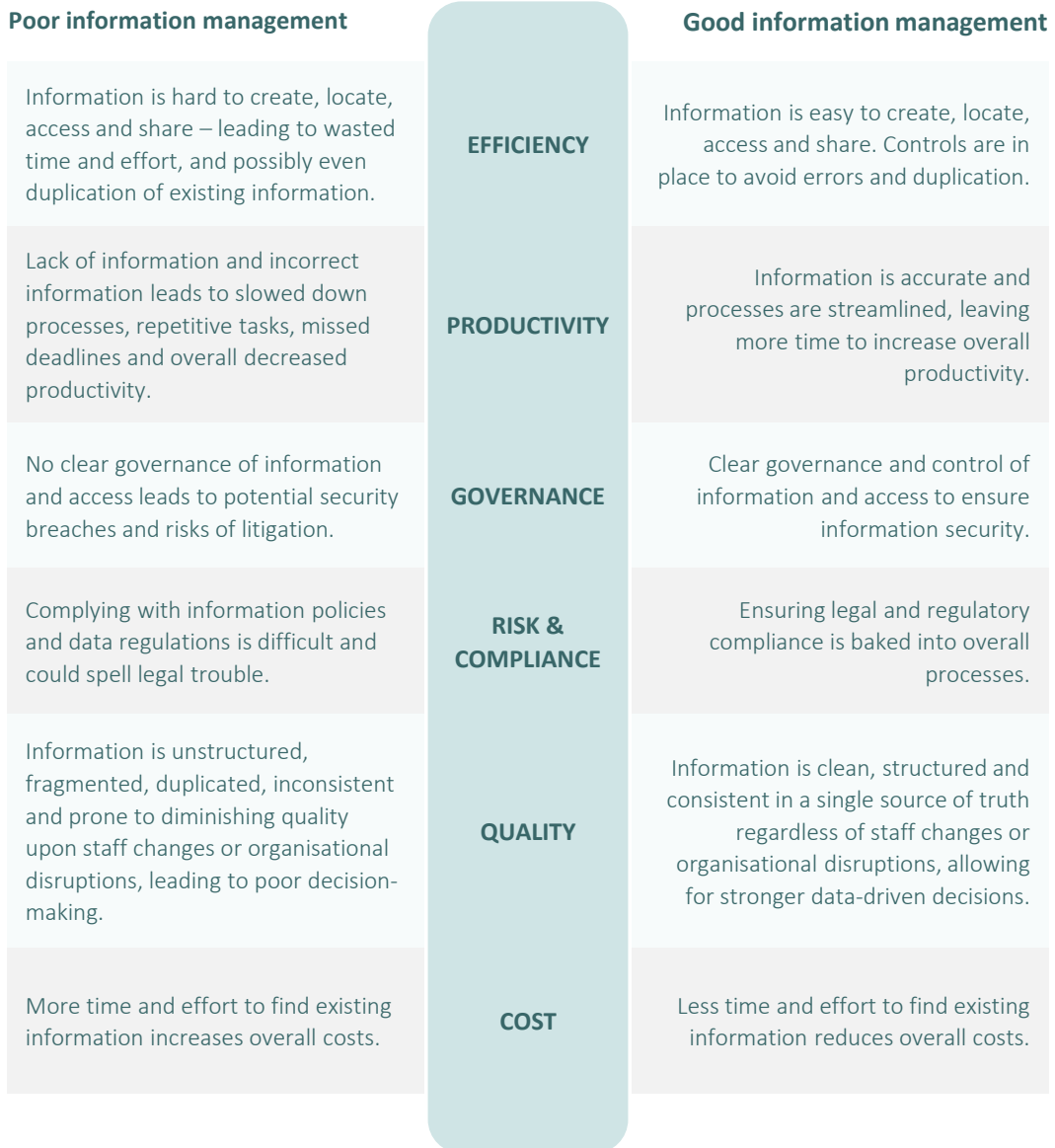
information management. A consistent key finding was that current maturity was ranked lower than the desired state.

So, why all the fuss about needing to have effective information management?

Let's take a look at specific outcomes of information management for public sector organisations.

Poor information management		Good information management
Information is hard to create, locate, access and share – leading to wasted time and effort, and possibly even duplication of existing information.	**EFFICIENCY**	Information is easy to create, locate, access and share. Controls are in place to avoid errors and duplication.
Lack of information and incorrect information leads to slowed down processes, repetitive tasks, missed deadlines and overall decreased productivity.	**PRODUCTIVITY**	Information is accurate and processes are streamlined, leaving more time to increase overall productivity.
No clear governance of information and access leads to potential security breaches and risks of litigation.	**GOVERNANCE**	Clear governance and control of information and access to ensure information security.
Complying with information policies and data regulations is difficult and could spell legal trouble.	**RISK & COMPLIANCE**	Ensuring legal and regulatory compliance is baked into overall processes.
Information is unstructured, fragmented, duplicated, inconsistent and prone to diminishing quality upon staff changes or organisational disruptions, leading to poor decision-making.	**QUALITY**	Information is clean, structured and consistent in a single source of truth regardless of staff changes or organisational disruptions, allowing for stronger data-driven decisions.
More time and effort to find existing information increases overall costs.	**COST**	Less time and effort to find existing information reduces overall costs.

The value and importance of good information management for the public sector are so well-documented that it makes sense why organisations are devoting their resources to laying the groundwork for improvements both externally and internally.

But is that enough? Unfortunately, that's simply not the current reality.

Exponential growth in information collides with ongoing challenges leading to an informational black hole

Without truly understanding the scenarios in which agencies are facing information management challenges, the gap between expectation and reality inevitably widens.

Exponential growth in information collides with ongoing challenges leading to an informational black hole

The accumulation of new information happens faster than we realise; in today's deeply digital information age, it's like trying to catch rain with a teaspoon.

The hard truth is that even though frameworks and strategies are in place to implement better methods of information management, we simply can't keep up with the exponential growth of the volumes of data and information created daily.

The more information we have at hand, the harder it is to sift through and the longer it takes to get to the right information to do our jobs well – therein lies the black hole where information is lost in the abyss and there is no right person to turn to for answers.

The fact that information is created, accessed, altered and shared by each individual in an organisation at a phenomenal rate each day is enough to signal the unquestionable importance of having the right processes and tools in place.

As the COVID-19 pandemic took the world by surprise, digital transformation ventures catapulted to new levels virtually overnight, which unfortunately placed some public sector organisations in chaos.

Those that were still in the early-stage rollout of new information management frameworks scrambled to fast-track and adapt their plans to a remote-first workforce. Others, who fell behind in planning for such transformations, would have faced additional challenges and greater risks of security breaches.

The root of these ongoing challenges can be identified in 4 major ways:

1. Unclear visibility and permission structures

In order to prioritise security, information is generally locked down to specific users and groups, which makes sense until you lose track of the details and it becomes unclear who has or doesn't have access, as well as who should and shouldn't.

This forces users into a trade-off position to either follow corporate policy and track the information down (often the much longer route), or covertly curate their own local repository to fulfil their own knowledge management needs (the faster yet obviously incorrect route).

2. Multiple copies of the same or similar information

Without knowing where to look or what already exists, people end up with an incorrect or outdated version of the information. Worse still is when they feel the need to make their own version of it, further adding to the problem.

3. Navigation difficulty

While common tools such as SharePoint have been the corporate norm in storing and sharing information, their usability has not evolved as fast or as well as it should in a world that has shifted to more fluid ways of working.

SharePoint does have useful basic functions in place for publishing, sharing and security, however it is not designed to be intuitive, user-centric and collaborative – leaving users today still struggling to navigate the SharePoint maze.

4. Resistance to change

The challenge of resistance is tied to the overall culture of an organisation or team.

Oftentimes we see that as managers and executives do not evolve and strengthen their information management processes, the behaviour trickles down to the rest of the team and becomes the standard.

Additionally, the assumption that change is "difficult" leaves teams believing they have freed themselves from having to endure process changes in the short term, only to face a more difficult (and urgent) response to change later on.

Let's reframe these challenges in a few
realistic daily scenarios.

Scenario 1

You are new to the team and require
specific information and documents to
support an upcoming task deadline.

You ask your supervisor which folders to
look in for the information, but they are
unsure because the information was
previously created and managed by
someone else who has since left the
organisation.

A colleague suggests you create the
information yourself and store it locally
on your device so you can easily access
it later. You do so, only to discover after
some time where the original
information was stored.

In addition, you email a copy to your
manager to review, who sends back
their own updated version to you.

A few issues just occurred in this
scenario:

1. You **spent a lot of time and effort** first
   recreating the information from
   scratch, instead of simply locating
   and learning from existing data to
   inform your upcoming task.

2. By creating a new instance of the
   information, it's **unclear which is the
   correct source of truth**. Should the
   previous information be deleted?
   Should only your version be
   maintained?

3. You store the information locally on
   your device, **prohibiting other team
   members to access and collaborate**
   with it.

   What happens to the information if
   you leave the organisation? What
   happens if another colleague also
   unintentionally recreates the
   information? What happens to the
   version you shared via email and all
   the subsequent versions that are
   later shared?

Scenario 2

You and 3 colleagues are tasked with processing a large volume of documents to collate specific data sets and key insights for an annual report. The documents are a combination of digital and scanned handwritten formats.

Your manager does not believe you need new tools or processes to help do this automatically or more efficiently, because this is the way it's always been done.

This means that each of you need to manually look through at least 20 documents a day to achieve the results in time to prepare the annual report.

You are all provided with access to the same templated spreadsheet to store the information as you retrieve them from the documents.

A few issues just occurred in this scenario:

1. Some of the scanned documents contain handwritten text that is more difficult to decipher, causing you to **spend more time reviewing the context** of the text to derive the most accurate understanding of the information. On a few occasions, you've misunderstood some text and **extracted the wrong data**.

2. You and your colleagues are given a very similar, repetitive task that leads to natural fatigue after a few days, which caused each of you to miss extracting a few important details from some documents.

   On a few occasions, some of you accidentally inputted the same data twice and entered data into the wrong field on the spreadsheet. **Your information is now less accurate** and leads to **poor insights and business decisions**.

3. Your manager's resistance to improving the process makes you and your colleagues **falsely believe that there is no method for achieving more efficiency**. You and your colleagues are using far more effort than needed to do **menial tasks that otherwise could have been simplified or automated**.

You've either personally had a similar first-hand experience to the above scenarios, or at the very least you were part of the story:

- Maybe you are the supervisor who didn't know where specific information is stored, how to gain access to it, or who's the right person to ask.

- Maybe you are the colleague who suggested a new document is created and stored on a local device, creating additional siloes and worsening the information management culture.

- Maybe you are the one who has to finalise the annual report, who is now unknowingly working with inaccurate data from a poor extraction process.

- Maybe you are the manager who is resistant to change, because you prefer to be in the comfort of processes you are already familiar with rather than align with new advancements.

No matter what the story is, they all point to the same thing:

The issues have been identified and the frameworks are there, but finding the right underlying technology is still a missing piece of the puzzle.

So, where to go from here and how can we improve these current realities?

THE SOLUTION:

Strengthen team capability with Artificial Intelligence

Advanced innovation in the public sector matters now more than ever in order to empower teams to find exciting new ways to serve, ultimately creating more value for citizens.

Strengthen processes and build greater capability with Artificial Intelligence

There needs to be more stringent and detailed processes outlined for teams and individuals to adopt better information management, but bear in mind that this will do nothing without the support of technology and training.

You're on the right track, but it's time to go in the fast lane – Artificial Intelligence (AI) is the way to do this; what was once science fiction is now a significant tool in bringing order to chaos.

For public sector organisations, this means that having AI at the core of information management will help minimise manual and repetitive effort, and elevate human tasks to be more intelligent.

The ultimately allows users to have more capability to derive accurate data and form valuable insights that lead to truly meaningful impact.

LEVERAGING AI TO TRANSFORM PUBLIC SERVICE

By 2035, AI is anticipated to double yearly economic growth rates and boost labour productivity by up to 40%.

Artificial Intelligence, Genuine Impact: Accenture, 2018

Amazon Web Services (AWS) is leading the charge with game-changing products and offers a wide range of AI services, all hosted in Australia, that directly impact information management, including:

Amazon Kendra

A service based on intelligent enterprise search that helps users find information faster and automate menial tasks across different content repositories.

For example, you can use this service to search through various organisational web pages and documents, enrich and classify content with relevant metadata, and better understand search usability from analytics visualisations.

See how Gilead Sciences improved information management processes with Amazon Kendra →

Amazon Textract

A service that automatically extracts text, handwriting, and data from scanned documents to further identify and understand the data, turning hours of work into minutes.

For example, you can use this service to accurately extract information from invoices, medical intake forms, tax documents, data tables, PDF reports and more to build a more robust information catalogue and make more informed decisions based on the data extracted.

See how NIB automates document processing to reduce manual effort and enable faster customer responses →

Amazon Comprehend

A Natural Language Processing (NLP) service that processes text transcriptions derived from various data sources (e.g. documents, support tickets, emails, social media, chat, phone calls) to extract key phrases, topics, sentiment and more for further insight and analysis.

For example, you can use the service to recognise policy numbers within documents, assign a sentiment score from feedback in public channels, moderate website comments, triage customer support, organise documents, and even redact specific personal or financial text within documents.

See how LexisNexis identified insights across 200 million documents →

The Australian public sector is no stranger to leveraging AI tools for various needs :

- The Australian Taxation Office's virtual assistant, Alex, has had more than 4.3 million conversations with clients and resolved enquiries on first contact 87% of the time.

- Transport for NSW uses AI to transition from historically based analytics and is now able to predict patronage numbers across the entire transport network, enabling the agency to better plan workforce and asset utilisation.

- Queensland Fire & Emergency Services uses AI to forecast the likelihood of major hazards (e.g. fire, cyclones) which drive service demands.

- Services Australia uses augmented intelligence to improve digital services to customers where language is a barrier, overcoming the customers' need for external language translation services.

- IP Australia uses AI to allow users to upload a logo and search instantaneously through a database of over 400,000 images, which then return trademark results based on visual similarity through image recognition.

- Australia Securities & Investments Commission (ASIC) has been exploring AI to help detect misleading internet advertisements and monitor financial market trading.

Clearly with the right AI tools and services in place, we are all enabled to achieve more with less effort and progress faster with less doubt.

Still, a looming risk remains:

> How do we ensure the technology needed is relevant and correctly implemented for long-term value, and that everyone in the organisation sticks with the plan and maximises these efficient new tools as part of their day-to-day work?

THE REINFORCEMENT:
Secure the right support and lead with meaningful values to achieve enduring results

Seeing cultural shifts that stand the test of time calls for having the right support in place as well as progressive leadership that creates opportunities for technology to be a vehicle for success.

Secure the right support and lead with meaningful values to achieve enduring results

The consequences of not implementing the right support and advocacy for effective information management is that we will either revert back to our old ways or the transition will fail before it gets a real chance to take off – and the public sector simply cannot afford to fall behind.

We've identified 6 main reasons why new processes and technologies fail to make an impact:

1. Not securing the right services or support partner

While public sector organisations often already have the financial resources to procure and implement the tools they need themselves, the journey is undoubtedly longer and more complex without the specific skills and experiences in-house.

Having an experienced external implementation or managed service partner on-hand means you only need to worry about ensuring the outcome aligns with the involvement of your team and overall vision – partners will take care of the setup, ongoing management and tailored training that suits your needs.

2. Training on how to get started is missing or lacking depth

Vague information on how to start using a new process or tool is a sure way to kill any enthusiasm.

Where do you go to access it in the first place? How can you use this specifically for your role and achieve your tasks? How can you get the most value from it? Which previous processes and tools can you now eliminate from your routine?

For team members who came on board later, do they have the same orientation experience with the tools?

3. Ongoing support or additional training is unclear

Different people adopt new processes and technologies at different paces or in different ways, and sometimes they are not too forthcoming about it.

What additional support is in place for users? Are there various training and documentation formats (e.g. text, video, audio, in-person) to learn from?

Is there a designated internal or external resource to seek out when someone has questions or challenges?

4. Leaders are not leading by example

Even the most motivated team members can be discouraged when their leaders don't practice what they preach.

A reason for this could be that they have not seen how the changes instructed from higher management will specifically affect or improve their team, and so they wait to see it get played out in an unintentional self-fulfilling prophecy.

Leaders of different departments need to see realistic use cases and success metrics unique to them in order to truly see the value.

Once they see and resonate with this value, they will not be able to unsee it – and only then can they meaningfully champion the cause and lead their team through the abyss.

5. Transition stages seem painful

With any process changes involving multiple team members, new technologies, and large amounts of existing information the actual transition is always the most challenging and may even entail exhaustive migration activities.

One way to alleviate the pain and ensure a smooth transition is to break it down into smaller stages, so that the team can incrementally adjust and familiarise themselves with everything as they go, and by the time they get to the end they are already accustomed to the new methods and have started applying them to their routines.

6. Strategy does not consider unique organizational factors

Adoption of new policies, processes and systems needs to be guided by a holistic strategy that considers the unique organisational challenges.

These unique factors of political, cultural and structural constraints (plus existing workloads) significantly impact the viability of adoption and business change.

We highly recommend developing a customised strategy which considers your unique organisational constraints and factors, articulates the benefits to be delivered and risks to be mitigated, as well as the actions to be taken.

Your next step starts here

Our experience in supporting public sector organisations over the years has helped us shape packages that reflect real-world challenges and deliver strategic, successful and enduring results.

Contact us for a free consultation →

STRATEGY

- Knowledge management,
- Information management
- Data analytics management
- Knowledge, information and data Governance
- Capability growth (people, processes, and systems)
- Artificial Intelligence
- People change management

POLICY DEVELOPMENT

- Knowledge management,
- Information management
- Data Analytics management
- Knowledge, information and data governance
- Artificial Intelligence

CAPABILITY DEVELOPMENT & TRAINING

- Data literacy and foundations
- Information custodianship
- Agile teams
- Preparing for enterprise change

ACCELERATORS FOR AI ADOPTION

- Enterprise search
- Natural language processing
- Text extraction
- Computer vision

About Strategenics

We are a team of strategists, advisors, and tech junkies who are dedicated to bettering our world with the magic of cloud technology.

Whether you're only just embarking on a cloud migration journey, deep in the trenches of scaling your digital transformation processes, or even somewhere in between - we'll find the smartest, fastest, and most efficient way to get you where you need to be.

As a certified **AWS Advanced Tier Partner**, our experienced team will help you accelerate, improve and scale your business transformation with AWS cloud solutions.

We don't just deliver AWS solutions, we use them too. Our environments are built on AWS and we leverage their product suite to create innovative services for our team – and we can't wait to do the same for your team.
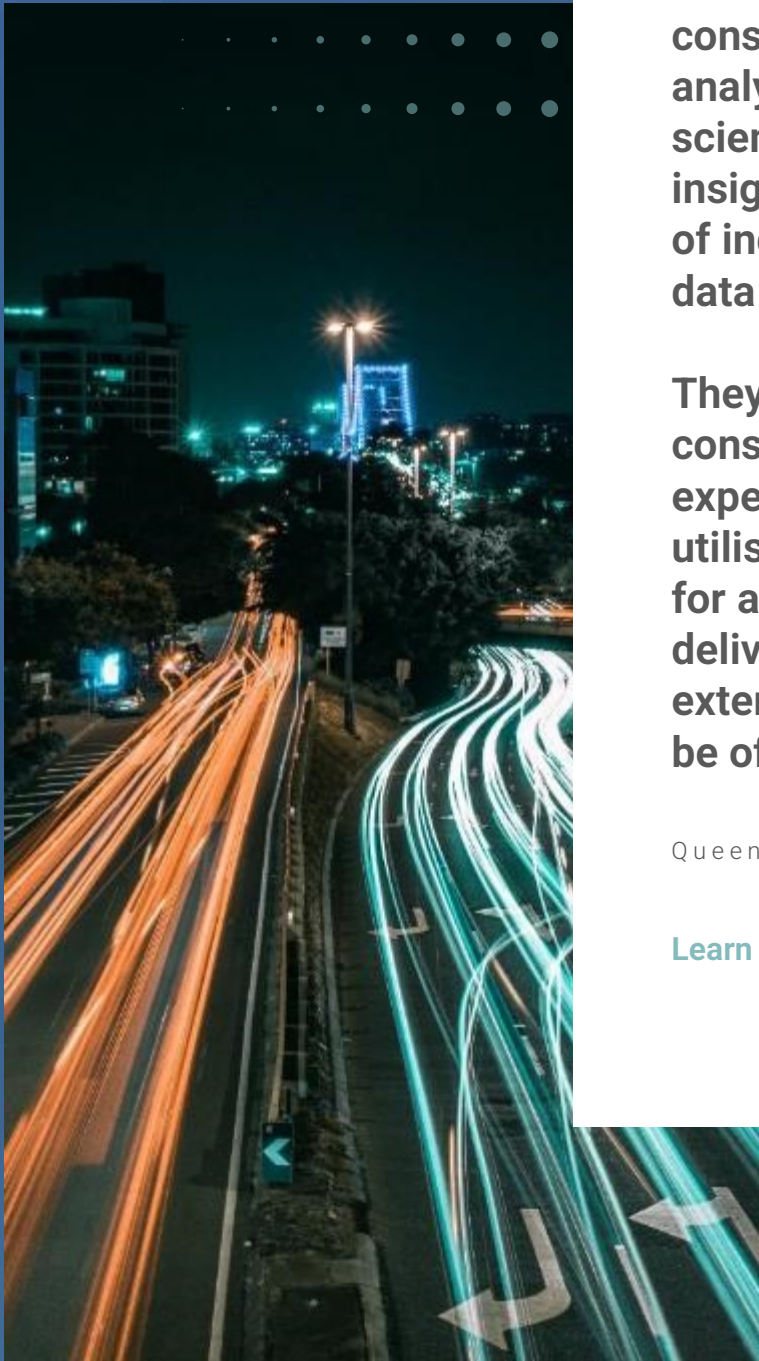
"Strategenics provides a highly professional range of services to Treasury including strategic advice, consulting services for data analytics, technical data science services and deep insights into a broad range of industry and economic data sources.

They combine their consulting services with expert technical services utilising the AWS platform for a seamless services delivery that our internal and external customers find to be of high value.

Queensland Treasury

Learn more on our website →

Ready to elevate your information management processes?

Talk to us →

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