Gloucestershire County Council
Data and Intelligence Strategy 2024-2028

## Gloucestershire
COUNTY COUNCIL

Contents

Introduction

Data and intelligence are among the most valuable assets of any organisation. They enable us to understand our customers, improve our services, make informed decisions, and drive innovation. Data and intelligence also help us to fulfil our statutory duties, comply with regulations, and demonstrate our impact and value for money. Access to quantitative and qualitative data and intelligence will also support our ambitions to work in a more co-produced way with people who use our services so we can demonstrate the impact we make. This strategy will support future ambitions around use of research and evaluation to drive innovation and improvement across the Council.

However, access to data alone is not enough. We need to ensure that we have the right data, at the right time, in the right format, and for the right purpose. We need to have the skills, tools and technology to analyse, research, interpret, and communicate data effectively. We need to have the policies and processes to govern, protect, and share data responsibly. And we need to have the culture and leadership to foster a data-driven culture of improvement across the organisation.

This document sets out our strategy for the next four years. It outlines our vision, our priorities, and our roadmap to becoming an intelligence-led organisation. It builds on our strengths, addresses our challenges, and aligns with our corporate strategy and values. It also reflects the feedback and input from our staff and stakeholders. We want to become intelligence-led, moving from descriptive and diagnostic analytics into a place where we can shape future service delivery and decision making based on insight from predictive and prescriptive analytics routinely.
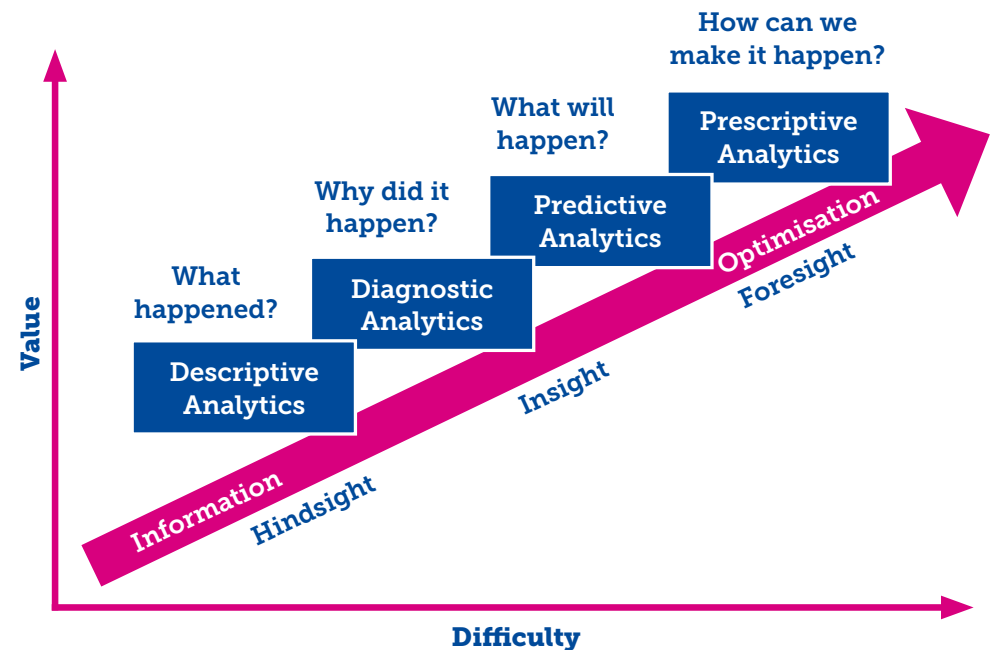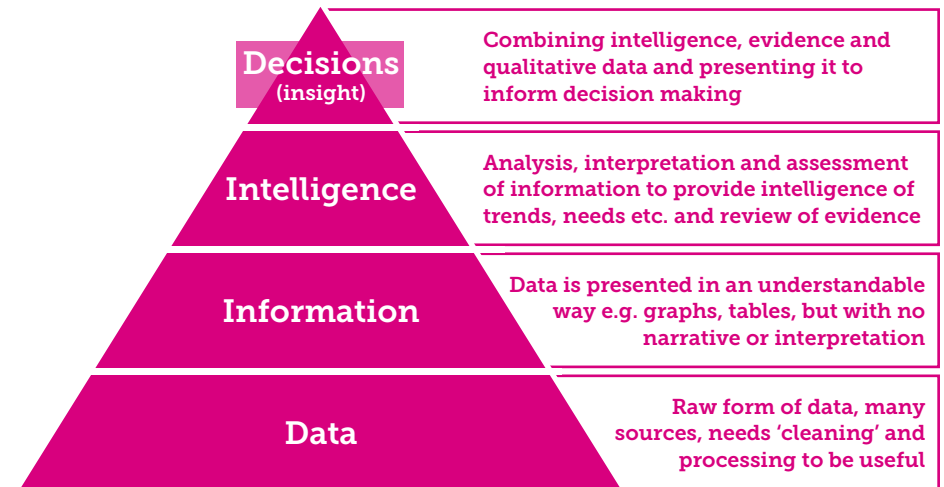

Source: Gartner (March 2012)

Principles

Data and intelligence should be useful, usable and used

When we refer to data, we mean information we hold or have access to about people, things and systems. The definition of data covers paper and digital records. The focus of this strategy is on digital information, but our approach needs to include all aspects.

When we refer to intelligence we mean analysis, interpretation and assessment of that data and information, to provide insight for decision making.

Data is often thought of as the "raw material of information" and information as "data in context". In reality, the two are intertwined and dependent on each other: *(Definitions taken from National Data Strategy, published by the government in Sept 2020)*

Decisions (insight) — Combining intelligence, evidence and qualitative data and presenting it to inform decision making

Intelligence — Analysis, interpretation and assessment of information to provide intelligence of trends, needs etc. and review of evidence

Information — Data is presented in an understandable way e.g. graphs, tables, but with no narrative or interpretation

Data — Raw form of data, many sources, needs 'cleaning' and processing to be useful

Principles of development:

- Data and information are valuable strategic assets. Develop a culture where our people recognise that asset at all points of service design, delivery and improvement. Removing silos so data can be accessed by the whole organisation. Moving from "My data" to "Our data", and to shared intelligence products.

- Right first time, every time. Data quality at point of capture is crucial.

- Data must be defined and managed consistently across its lifecycle. Labelled, sorted, understood (stored & deleted appropriately).

- Data and intelligence are situated in a centralised, consistent environment and made accessible to all who need it – Gloucestershire Data Insights analytics platform by design, acknowledging exceptions will exist: for example, permission from a third-party provider.

- Data and intelligence will be used by people who understand how to interpret and interrogate it. Without proper understanding and application, it can be misleading and poorly applied.

- Data ethics, as well as 'privacy by design'. Data governance is everyone's responsibility, but we will go further, considering not just if we could be using your information, but if we should.

Where we are now

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Gloucestershire County Council have a history of delivering good value from within its analytical capabilities within the organisation. With the toolsets advancing rapidly it is crucial that the Council evolves to enable us to exploit the best available tools and attract and retain quality analysts and decision makers with up-to-date skills and experience.

We have made significant progress in developing our capabilities and governance maturity over the past few years. We have invested in new technologies and platforms, such as Microsoft M365 and Power BI, as well as a data partner who have supported our initial journey in enabling better data collection, storage, analysis, and visualisation. We have a central data and analytics team, as well as a developing network of data champions across the organisation, to provide support and guidance. Our information management framework is well established, and we have good governance oversight in place. We have also delivered a number of data projects and initiatives, such as the Azure Data Lake, Inform Gloucestershire as a repository for intelligence products, and the Data Academy Programme pilot, to enhance our data offer and skills.

However, we also recognise that we have room for improvement and further development. Two Local Government Association (LGA) Peer Challenges - one corporate and one Adult Social Care specific - pointed out gaps in our practice and oversight, and our opportunity to make a significant step-change in use of data and intelligence in our operations and decision making, to improve outcomes and working practices.

We have conducted a self-assessment of our data maturity, using the Local Government Association's Data Maturity Model, and identified the following drivers for change:

- We need to improve the quality and consistency of our data, by ensuring that it is accurate, complete, timely, and relevant.

- We need to increase the skills and confidence of our staff, by providing them with the training, tools, and support they need to use and interpret data and intelligence effectively, while keeping pace with technological changes.

- We need to improve the availability and accessibility of our data, by making it easier to find, share, and reuse across the organisation and with our partners.

- We need to continue to strengthen our data governance and security, by ensuring that we have the policies, standards, and processes to manage, protect, and comply with regulations.

Our Drivers, challenges & opportunities
## Identified during our stakeholder engagement:

- **There is a fragmented view of data across some parts of the system leading to siloed views.** For example, within Children's Social Care, an incomplete view of a child, and in Adult Social Care, difficulty in sharing data with the ICB and partners. In turn this makes it difficult to provide full insight, and influence the whole system.

- **Improved commissioning:** the Analyse > Plan > Do > Review cycle has great potential for improvement - to drive efficiency, productivity and outcomes for people. Improved capture of commissioned service data & research could have significant benefits.

- **Financial data linkage** with other operational and partner data is fragmented, and in places there are gaps. We need to be able to deliver insight that takes into account the spend on services / cohorts to drive improvement and to influence strategy/efficiency.

- **There are financial challenges for the organisation.** Improving data access and interpretation skills will help us make sure we are investing in the right priorities and targeting resources. e.g. with a more holistic view of road safety data alongside road conditions, we can target the greatest risks.

- **We need to be more proactive rather than reactive;** e.g. being able to predictively analyse how our population is changing, using that to understand how to meet demand and design services accordingly, potentially being more efficient as well as effective.

- **Improved public engagement and transparency.** With reliable and available data, we can be more transparent about decisions making. It can also give a voice to the voiceless - Data can help us show why we are investing in greatest need or risk areas, rather than where people may shout loudest.

- **Our ability to demonstrate that we are delivering value for money,** understand our risks and opportunities, and help us leverage inward investment (e.g. road maintenance and sustainable transport).

Our Vision

Our vision is to become an intelligence-led organisation, where data and information enable our ambition to drive improvement in everything we do.

We want to use data and intelligence to:

- Understand our customers and their needs, preferences, and behaviours.

- Improve our service efficiency, equity and outcomes, by designing, delivering, and evaluating them based on evidence and insight.

- Make informed decisions, by using it to support planning, prioritisation, and resource allocation.

- Drive innovation, and motivate our staff, using data and intelligence to identify opportunities, challenges, and solutions.

- Collaborate and communicate, by using data and information to engage, inform, and influence our staff, partners, and service users.

- Provide an effective corporate memory.

Quality | Skills

Intelligence led organisation

Availability | Governance
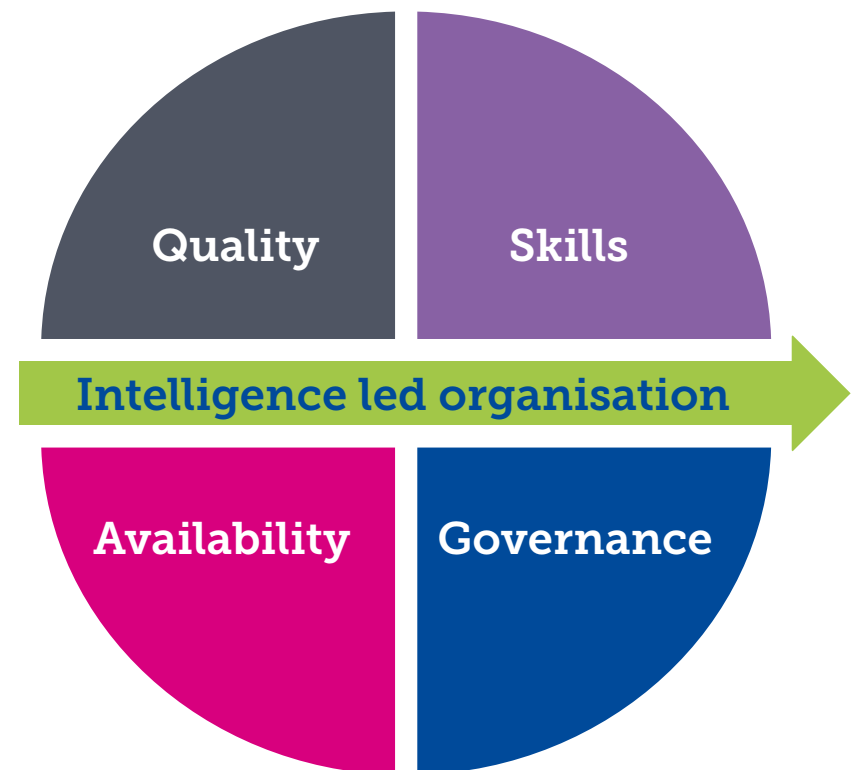
Our Priorities

To achieve our vision, we have identified four strategic priorities for our strategy. They are:

Quality of data and intelligence

We will ensure that our data is accurate, consistent, complete, timely, and relevant, and that intelligence produced from it meets the needs and expectations of our users and customers.

Skills for manipulation and interpretation

We will increase the skills and confidence of our staff, by providing them with the training, tools, and support they need to use data and intelligence effectively and efficiently.

Availability of data and intelligence

We will improve the availability and accessibility of our data and information, using a default central platform where possible, making it easier to find, share, and reuse across the organisation and with our partners.

Governance

We will strengthen our governance and security, by ensuring that we have the policies, standards, and processes to manage, protect, and comply with best practice and regulation.

Quality

Skills

Availability

Governance

Intelligence led council

1. Quality

Data quality is the foundation of our strategy. Without a bedrock of good quality data, we cannot trust, use, or benefit from the insight it produces. We will ensure that our data and intelligence is accurate, complete, timely, and relevant, and that it meets the needs and expectations of our users and customers.

We will do this by:

- Implementing and maintaining a Data Quality Framework, which defines the roles, responsibilities, and standards for data quality across the organisation.

- Establishing and monitoring data quality indicators and metrics, to measure and report on the quality of our data and identify areas for improvement.

- Providing data quality tools and guidance, to enable our staff to check, validate, and improve the quality of their data, including that supplied to us by partners and commissioned providers.

- Embedding data quality principles and practices, into our business processes, systems, and projects, to ensure that data quality is considered and addressed at every stage of the data lifecycle.

- Promoting a culture of data quality and ownership, by raising awareness, recognising good practice, and encouraging feedback and continuous improvement.

- Ensure appropriate technical and organisational measures are adopted to ensure data integrity.

- Improve quality in the intelligence products we produce; standardised, e.g. use of confidence intervals for statistical significance.

Potential use cases and goals for GCC exploration:

Quality of current user training and understanding – the culture of data quality at the front end. The building of systems like Liquid Logic not being designed in the best practice way

Creation of Data Steward roles within the organisation, and establishing a Data Quality Framework

Enhancing training to Information Asset Owners and Managers

Standardise collection of core data, such as fields for understanding inequalities and protected charateristics

2. Skills

Data skills are the key to unlocking the value of data. Without these skills, we cannot analyse, interpret, or communicate data effectively. We will increase the skills and confidence of our people, by providing them with the training, tools, and support they need.

We will do this by:

- Delivering and expanding the Data Academy Programme, which will provide a range of learning opportunities and resources, from basic to advanced levels, to develop the skills, literacy and knowledge of our people.

- Providing data tools and platforms, such as Power BI and SharePoint, to enable our staff to access, analyse, and visualise data and information in a user-friendly and interactive way.

- Supporting data champions and networks, to facilitate the sharing of data, building skills, expertise, and best practice across the organisation and with our partners.

- Creating data and intelligence products and services, such as dashboards, reports, and insights, to provide our staff with the data they need to inform their work and decisions.

- Building a data culture, by fostering an intelligence-driven mindset, encouraging curiosity and innovation, and celebrating success and impact.

- Building confidence in our staff when sharing data with partners safely, securely and appropriately, with the right governance in place.

Potential use cases and goals for GCC exploration:

| Appropriate use of new technologies - AI, Co-Pilot, automation potential | Developing a wider set of training across the spectrum of data and interpretation skills | Developing capability within the council for data engineering and data science | Embedding Power BI across the organisation as a tool of choice for analytics | Evidence based and effective decisions which show the use of intelligence products |

3. Availability

Availability and access is the enabler of our data and intelligence strategy. Without availability, we cannot access, share, or reuse data efficiently and effectively. We will improve availability and accessibility , by making it easier to find, share, and reuse data and intelligence products across the organisation and with our partners.

We will do this by:

- Developing and maintaining the Gloucestershire Data Insights analytics platform and environment as the default central repository and gateway for our data and intelligence, both internally and externally.

- M365/Sharepoint are the default for wider information storage and collaboration. Implementing and applying standards and metadata, to ensure that our data and information is consistent, comparable, and understandable to support search and retrieval.

- Adopting and promoting open data principles and practices, to increase the transparency, accountability, and reuse of our data, where appropriate and possible.

- Establishing and improving information sharing agreements and protocols, to facilitate the secure and lawful exchange of data with our partners and stakeholders.

- Enhancing discovery and access, by providing data catalogues, search functions, and APIs, to enable our staff and customers to find and use the data they need.

- Live, real-time data as an ideal, where appropriate to do so.

- Ensure appropriate technical and organisational measures are adopted to enable ongoing availability.

Potential use cases and goals for GCC exploration:

| ⭐ Single view of the child – and related partnership data views available to social workers and teams (Population Health Management) | ⭐ Improved linkages between financial and person/placement level data for cost analysis | ⭐ All commissioning to consider access to data (including person level), where appropriate and justified | ⭐ Road survey data considerations – e.g. equipment on other council vehicles | ⭐ Greater intelligence on the route optimisation e.g. on-demand public transport and customer journeys | ⭐ Improved data structure and availability around employment and skills (Plexal) |

4. Governance

Data and information governance is the safeguard of our strategy. Without good governance, we cannot manage, protect, or comply with regulation. We will strengthen our data governance and security, by ensuring that we have the policies, standards, and processes to manage, protect, and comply with regulations by default. We want the people that we work with and for to know they can trust us with their data and information.

We will do this by:

- Embedding privacy and data protection by design. We will consult about the use of personal data, we will be open and transparent about how we use it, to ensure we can meet people's individual rights.

- Developing and implementing a research and data ethics framework.

- Applying lifecycle management to our data and information, whatever the format.

- Establishing and enforcing data roles and responsibilities, to ensure clear accountability and ownership for data across the organisation, and with partners. Regular reviews to ensure that we are aligned with the latest legislation, guidance, and best practice.

- Conducting and maintaining audits and assessments, to identify and mitigate any risks, issues, or gaps.

- Providing security tools and training, to ensure that our staff are aware of and follow relevant rules and standards.

- Monitoring and reporting on data compliance and performance, to ensure that we meet our legal and ethical obligations and demonstrate our data value and impact.

Potential use cases and goals for GCC exploration:

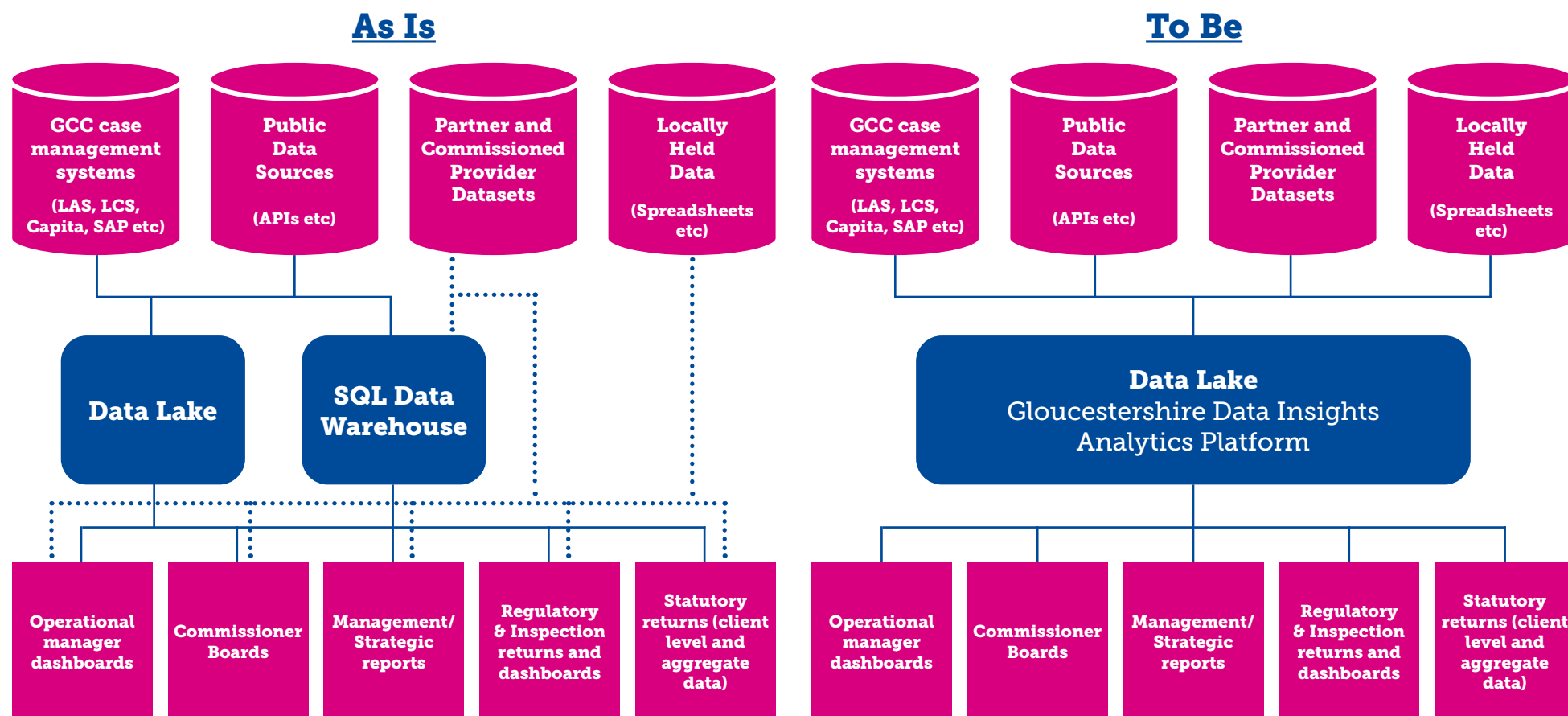| ★ Explore the adoption of Microsoft Fabric to help us create a unified platform for centralizing data governance, making it easier to apply and enforce policies across all data environments | ★ Increase understanding, oversight and visibility of our data and information assets, including with partners (e.g. ICS data strategy) | ★ Automate information management and governance functionality in M365 wherever feasible, such as utilising SharePoint for the management of unstructured electronic information | ★ Meet the changing transparency and open data requirements | ★ Increase and improve electronic archives | ★ Increased use of intelligence products in decision making |

How we will get there

To deliver our data and intelligence strategy, we are developing a roadmap that outlines the key deliverables and milestones for each of our priorities. The roadmap is divided into three phases: short term (2025-2026), medium term (2026-2027), and long term (2027-2028). The roadmap is flexible and adaptable, and will be reviewed and updated regularly, to reflect any changes in our needs, resources, and environment. The roadmap is also aligned with our corporate and digital strategies, and supports our vision of being a council that works with communities to improve people's lives.

This will require ongoing investment in developing the technology and the skills to exploit it. A more detailed delivery blueprint will follow with associated investment case.

Priority	Short term	Medium term	Long term
Quality	Implement a Data Quality Framework	Establish and monitor data quality indicators and metrics	Embed data quality principles and practices into our business processes, systems, and projects
Skills	Deliver and expand the Data Academy Apprenticeship Programme, with more varied and short-term options, and to include more decision makers and data product use	Provide data tools and platforms, such as Power BI to a wider audience	Create data products and services, such as dashboards, reports, and insights
Availability	Develop and maintain the Azure Platform Deploy Microsoft Fabric	Implement and apply data standards and metadata (Microsoft Fabric)	Enhance data discovery and access, by providing data catalogues, search functions, and APIs
Governance	Design and implement a research and data ethics framework	Establish and enforce data roles and responsibilities	Monitor and report on data compliance and performance
Wider Potential Deliverables	A detailed delivery and investment plan, including change management & benefits realisation planning Build our understanding of data and information assets Review performance data to tell the story of how the council is delivering for local people	Single View of the Child Alignment of Finance and Person-Level data Meeting our Open Data requirements	Making use of environmental sensor data and aligning to person-centric data

Simplified illustration of Current Data Flow /Reporting Architecture

As Is

To Be

GCC case management systems

(LAS, LCS, Capita, SAP etc)

Public Data Sources

(APIs etc)

Partner and Commissioned Provider Datasets

Locally Held Data

(Spreadsheets etc)

GCC case management systems

(LAS, LCS, Capita, SAP etc)

Public Data Sources

(APIs etc)

Partner and Commissioned Provider Datasets

Locally Held Data

(Spreadsheets etc)

Data Lake

SQL Data Warehouse

Data Lake
Gloucestershire Data Insights Analytics Platform

Operational manager dashboards

Commissioner Boards

Management/ Strategic reports

Regulatory & Inspection returns and dashboards

Statutory returns (client level and aggregate data)

Operational manager dashboards

Commissioner Boards

Management/ Strategic reports

Regulatory & Inspection returns and dashboards

**Statutory returns (client level and aggregate data)**

Currently, data is held in a variety of locations internal and external to the Council (pink boxes to the top) relating to services provided by the council.

Data from those sources are required for numerous outputs and purposes, such as statutory reporting, inspection, operational management information, performance oversight and public reporting (white boxes at the bottom).

At the moment, on the left (As Is), data flows through multiple routes through various processing routes (blue boxes in the middle), with varying levels of manual intervention and burden. The aspiration is to streamline and automate the flow of data in to a single, central location to enable streamlines ingestion of data and output f reporting and analysis, per diagram on the right (To Be). This requires an element of technological investment, resource and capability, as well as a desire to increase the level of data literacy across the organisation to drive up the level of comfort in manipulating and interpreting/interrogating data and analysis.
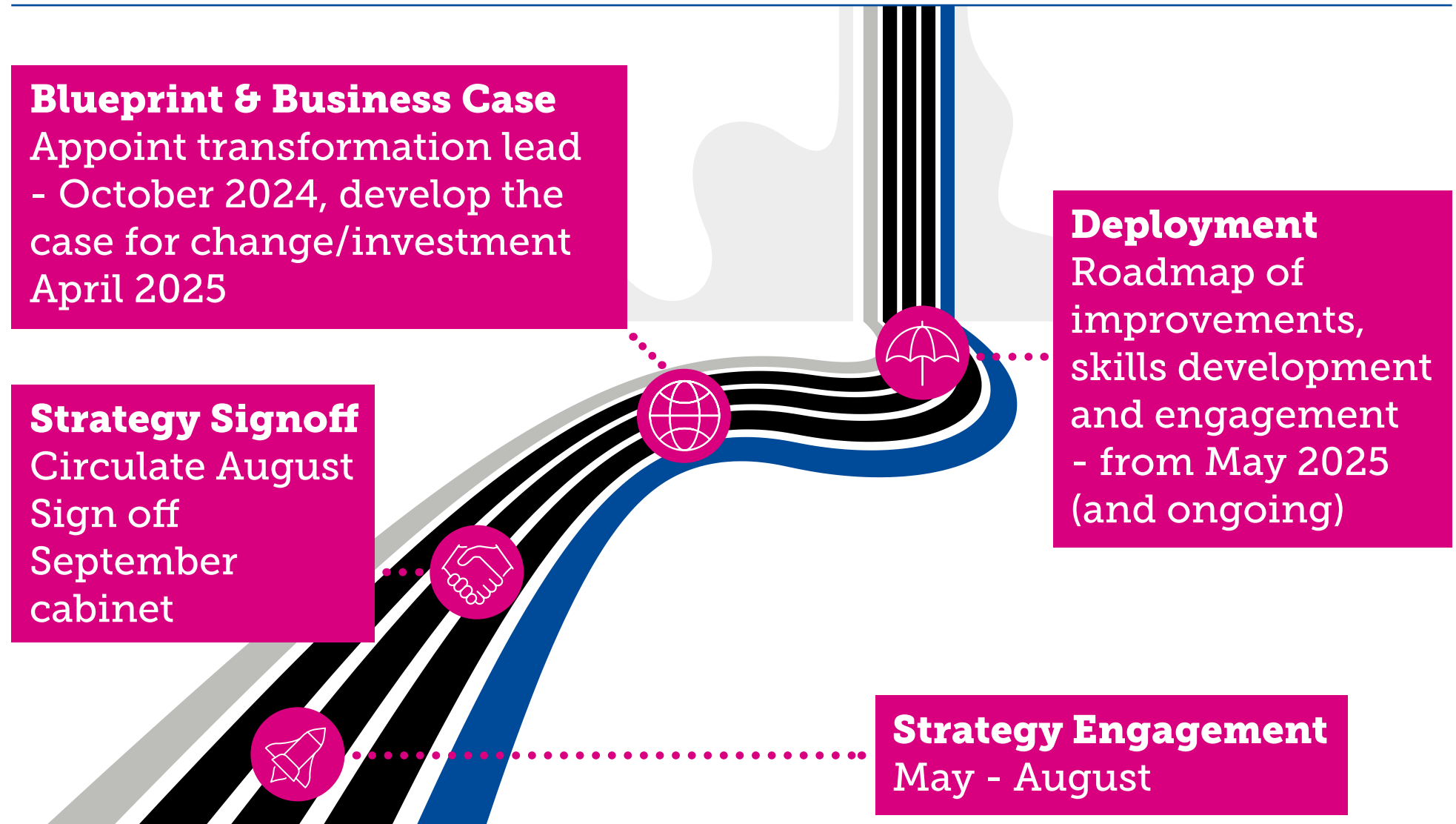
Proposed Technical Architecture Requirement
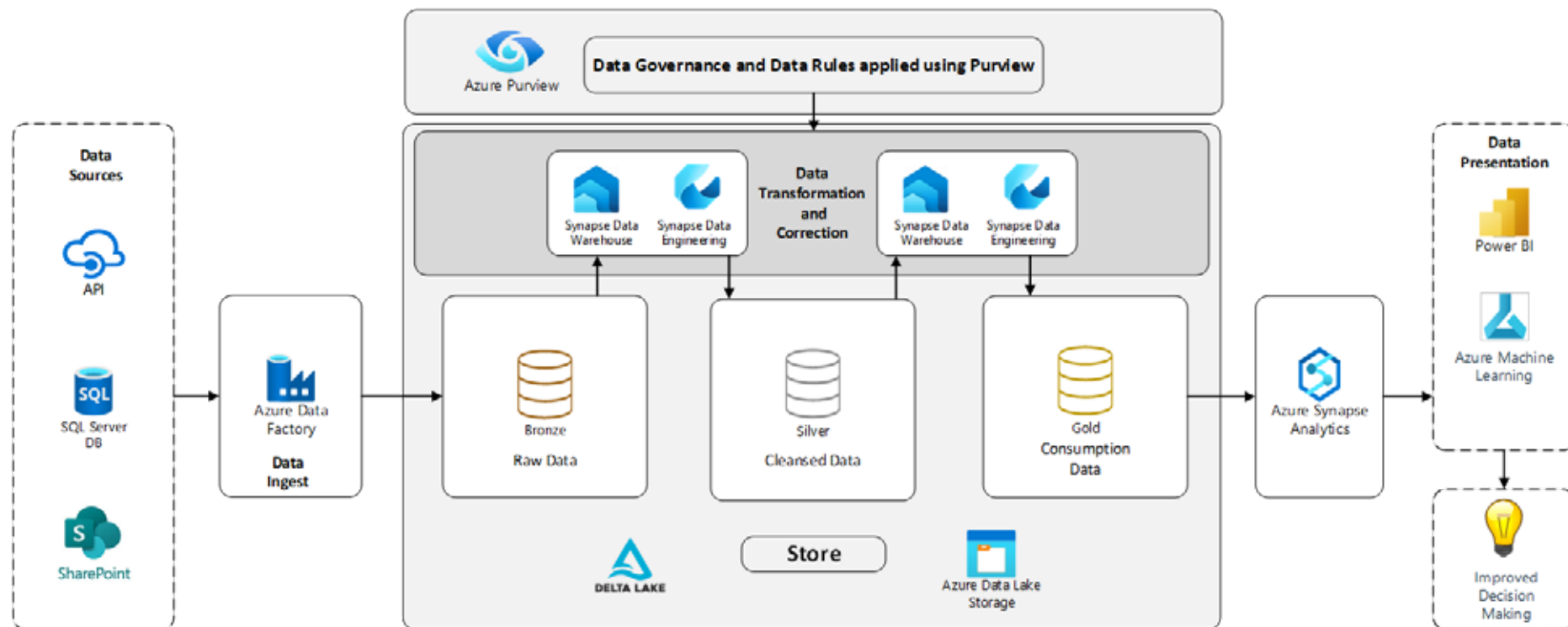
This schematic provides a more detailed outline of the technical and technological requirements to deliver on the To Be model on the previous page. Some of this already exists within GCC's infrastructure but other aspects need to be configured and established as part of the Gloucestershire Data Insights analytics platform.

Roles and responsibilities

Delivering the strategy is everyone's job – but here are the key responsibilities within our organisation:

Members	Scrutiny and challenge of frameworks and assurance
CEO/Cabinet	Ultimate strategic accountability for data quality and decision making
Corporate Leadership Team (CLT)	Responsible for overall assurance that arrangements are in place, operational and delegated decisions
Senior Information Risk Owner (SIRO)	Responsible for organisation's information risk policy
Heads of Service	Maintaining data assets, ensuring staff are appropriately trained in data and information management
Information Asset Owners/Managers	Senior leaders with accountability for their information assets
System users – all staff	Awareness of personal responsibilities for data use and storage
Data Analysis & Insight Team (DAIT)	Data and Performance framework owners - Centralised data function, Analysis expertise, report/dashboard design and delivery
Data Protection Officer	Statutory role, fulfilling tasks sets out in General Data Protection Regulations. Must be consulted (via IMS) on any proposals involving the use of personal data
Information Management Service (IMS)	Information governance – supporting delivery of good governance
Digital and ICT service (DICT)	Infrastructure owners - Data engineering lead, permissions and gateways for movement of data
Gloucestershire Archives	Responsible for the organisation's corporate memory by providing trusted and authentic information

Next steps

Blueprint & Business Case
Appoint transformation lead
- October 2024, develop the
case for change/investment
April 2025

Strategy Signoff
Circulate August
Sign off
September
cabinet

Deployment
Roadmap of
improvements,
skills development
and engagement
- from May 2025
(and ongoing)

Strategy Engagement
May - August

Linked strategies and policies:

GCC

- Council Strategy – Building Back Better in Gloucestershire
- Digital Strategy (in development)
- Adult Social Care data strategy
- Gloucestershire Archives
- Data Quality Standards
- Information handling Policy
- Information Management and Security Policies

Partners

- ICS data sharing strategy (emerging)

National Drivers

- Care Data Matters, GDPR

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