Funded by UK Government

Data Pathways

Sample Data Strategy

Develop a detailed strategy to maximise the use of all data resources within the organisation meet objectives. This well-established data strategy approach dictates the methods for data collection, storage, analysis, and application. By using this effective data strategy as the basis for your own, organisations can effectively utilise data to make sound decisions, foster innovation, and provide better life chances for its children.

What is Our Goal?

By 2024 we will be a nationally recognised centre of excellence for pertinent, accessible educational data that changes the way that we work, live and learn, both within the organisation and nationally. We will use data and information to inform our effective, efficient and intelligent educational practices in the student interest.

Our ambition is to establish a systematic focus on data and knowledge throughout the organisation, with a culture of innovation and collaboration that will allow us to achieve and sustain the best educational outcomes for all. Effective and intelligent use of data will allow us to anticipate where there is a risk that our core objectives may not be met and help us mitigate those risks.

Overarching Strategy

Data lies at the heart of the organisation, informs and drives policy, is collected and consumed by academies and is central to the delivery of the highest quality education to help students achieve their full potential. In order to optimise the use of our data throughout its lifecycle, and ensure that it is appropriately protected, a data strategy is required.

Data within the organisation needs to be examined and dealt with in a unified and consistent manner. Across academy and department boundaries, data sources are often independent and lack harmonisation and consistency, frequently making it difficult to accurately and reliably reuse data for new administrative and statistical purposes.

Better treatment of data, through standardised data management practices, advocating data reuse over data collection, promotion of cross-department data-sharing underpinned by a clear basis and driven by improved efficiencies and outcomes for students is central to the solution of these challenges.

Across the trust there are many examples of good data management practices being employed by individual academies and departments. However, as a whole-of-organisation cross cutting concern, data is not being examined and dealt with in a unified and consistent manner. Data is often maintained in silos, where it is collected and stored for the needs of individual academies. There are benefits to these practices, as is evidenced by the safe, secure delivery of outcomes for students but it also results in inefficiencies such as potential duplication of data being stored and collected by different departments and a reduction in data quality.

The overall result is a sub-optimal whole-of-organisation ecosystem where data is governed and managed by the policies of individual academies, and not easily reused to deliver joined up services or assist policy making and evaluation. In order to improve the various forms of data reuse, a greater degree of standardisation in terms of systems, policies and practices is required. The good practices being employed by academies and departments should serve as the foundation for building a more co-ordinated, consistent approach to data management in a whole-of-organisation manner.

We are not alone in this endeavour. Schools and Multi-Academy Trusts (MATs) in the education sector are facing similar obstacles. Collaboration within the sector presents a great opportunity to share ideas, work plans, case studies, and successes, promoting collective learning. By working together, resources can be pooled, diverse perspectives can be leveraged, and progress towards effective data management practices that benefit all students can be accelerated. Through the establishment of a community of practice, best practices can be shared and implemented, allowing every institution to excel in the data-driven educational environment.

To enable us to innovate and support academic activity, a modern digital and data-enabled organisation should develop and consistently follow industry standards governing transparency, archiving, management, usability, interoperability and privacy. This would enable the organisation and others to unlock the value of data and provide better services, support evidence-informed decisions, create internal efficiencies and better understand the real impact of projects so that funds can be directed towards those interventions that have the greatest impact.

The most important things for us to do are:

1. Develop and embed a shared data strategy across the trust appropriate to the needs of the organisation
2. Improve and develop overall standards and guidelines that govern how departments access, collect, use, safeguard and share data, and a clear process for developing and refining these over time
3. Create data governance structures around the data to ensure that the organisation manages valuable data assets
4. Improve professional development practices to ensure that we have the skilled people we need to do data work in a digital environment and a common data language is used throughout the organisation
5. Ensure that we have a robust data ecosystem that democratises the use of disruptive technologies throughout the organisation.

These recommendations acknowledge that whilst there is a need for common standards and principles to guide the organisation's efforts, beyond the core data systems there cannot be a "one-size-fits-all" approach to all and this document is intended to be evergreen and inevitably evolve with a changing context.

Background

The volume of data that academies produce is growing exponentially, animated by digital technologies, legislation and current accountability measures. External organisations are changing their business models, building new expertise and devising new ways of managing and unlocking the value of their data: we needs to evolve rapidly to keep up.

How the organisation collects, manages and governs data, and how it accesses and shares data with internal departments and external organisations must change. A forward-looking, collaborative, open approach to data is an essential strategy.

Today, individual departments and academies generate and hold a vast, diverse and ever-expanding array of data. This data is often collected in ways, based on informal principles and practices, that make it difficult to share with other departments or academies. Their use is inconsistent across the organisation and their value is sub-optimised in the decision-making process and day-to-day operations.

When we speak of "Data", this covers a broad spectrum of both structured and unstructured data, across our multiple information technology systems and business areas. The opportunity to collect and leverage data on a large scale ("big data"), across the entire organisation, will deliver insights that help the organisation to operate more efficiently and deliver better outcomes.

Because there is no one single big data solution, we will implement a range of technologies and methodologies to build a data architecture that is secure, fosters collaboration and can easily scale as the organisation's demands grown: this is what is known as the data ecosystem.

The data ecosystem isn't just an alternate way of storing data. Its role is to provide a single place where internal and external data can be organised, integrated, engineered and modelled to:

- Improve process efficiencies
- Provide insights to increase understanding
- Lay the groundwork for transitioning data to information and, ultimately, to knowledge
- Present outcomes that improve decision-making for both the trust and the academies

The data ecosystem includes infrastructure, analytics and applications; all three are equally important to delivering value.

Infrastructure:
The technologies that form the ecosystem's core and can store, process and analyse data, including unstructured data.

Analytics:
The technologies such as business intelligence and machine learning that let businesses derive insights from data.

Applications:
The interfaces through which users can interact with data to gain insights that can drive decision-making.

The Scope

This strategy focuses on how the trust can improve how it creates, protects, uses, manages and shares data to improve the educational outcomes of its students, supports research and how it makes decisions on policy and programmes.

Figure 1 :: Where does our data come from?

Data Strategy Framework

Figure 2 :: The Framework for Effective Data Management

It is recognised that data which is governed, trusted, good quality and well-managed is crucial to the success of this data strategy. To facilitate this change, a framework to govern and manage data across

the trust has been developed to ensure that the strategy is implemented effective to achieve the following outcomes:

Desired Outcomes

- Improved student outcomes
- Greater value from data
- Greater usability and availability of data
- Trusted and sound governance of data, which are treated as a valuable and strategic asset
- Increased evidence-informed decision making
- Better reporting on results
- Increased intra- and inter-organisational collaboration

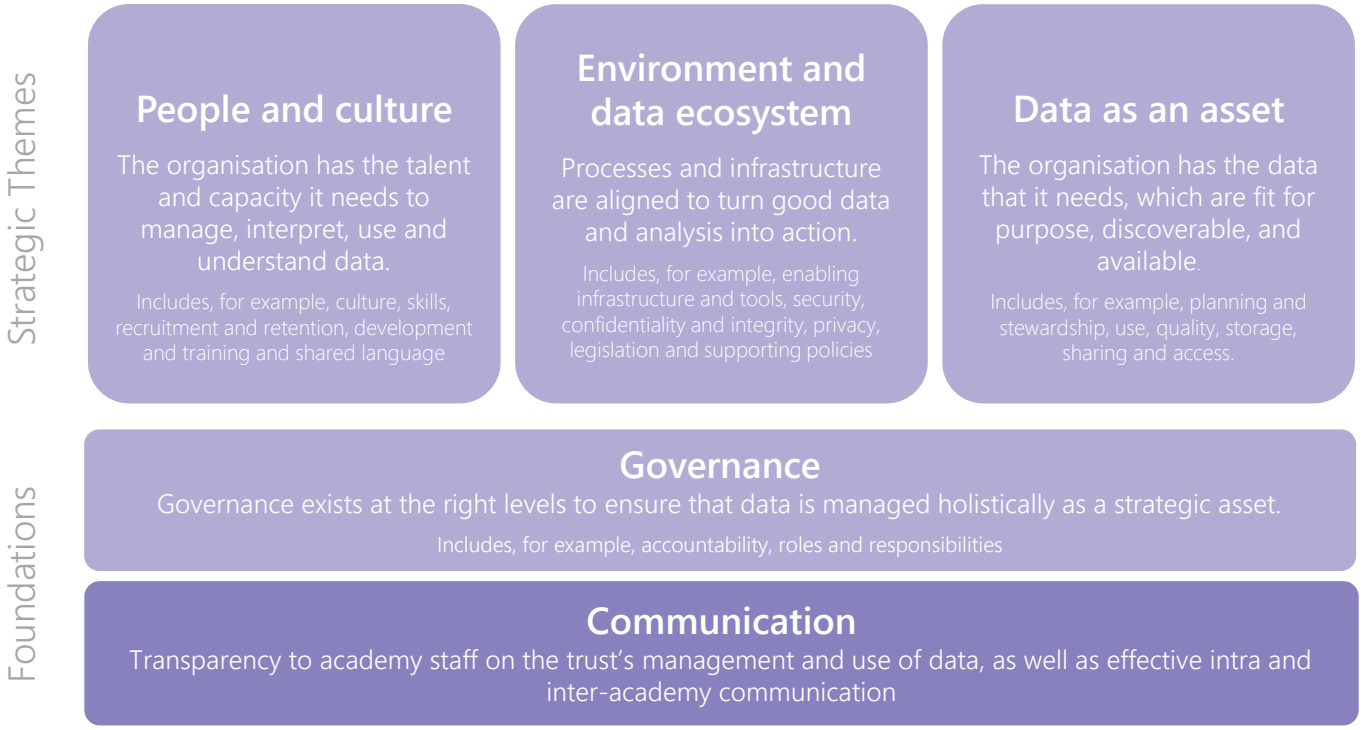

Figure 3 :: Strategic Themes & Foundations