

Data and Analytics

Organisations have always recognised the value of data driven decision making. But, there are two powerful forces that are really driving business to pay serious attention to Data and Analytics today, Artificial Intelligence and the arrival of Data Fabrics.



Data and Analytics Challenges

TEKenable is well aware of the challenges presented by data analytics. We have over the years delivered projects as diverse as fraud detection in financial trading for an investment bank, to sources of profitability analytics for wholesale foods. All require good quality, timely and accessible data coupled with a capable suite of tools for analysis and, critically, a good sense of what the actionable insight that the analysis would deliver. Without a sense of direction, a goal for the analysis that is quantifiable as “If I know X it enables me to do Y which will deliver Z outcome”, the whole exercise is more or less pointless. **So it should begin with the outcomes and work backwards from there.**

The selected platform is also critical to success. We have created data lakes for IoT data, data warehouses for multi-dimensional financial analysis, Hadoop implementations for payment data and struggled with the provision of the required infrastructure and the basic incompatibility of these tools. Today, we have Data Fabric from Microsoft which is a single vertical stack of highly integrated technologies covering all of the above needs and more.

We are delivering projects using Fabric, Synapse and more, for organisations such as local authorities, third level education and financial services.

“ It is now more important and easier than ever before to bring together an organisation’s data, curate it, apply good governance and derive value from it starting to deliver on the promise of a data driven organisation. ”

BENEFITS OF DATA ENGINEERING AND ANALYTICS

INFORMED DECISION MAKING

With accurate data analytics, businesses can make decisions based on facts, trends, and statistical numbers, rather than relying on gut feelings or intuition.



IDENTIFYING NEW OPPORTUNITIES

Data analytics can reveal patterns and trends in your business data, helping you identify new market opportunities or areas for product development.



ENHANCED CUSTOMER EXPERIENCE

By understanding customer behavior and preferences, businesses can tailor their products, services, and marketing strategies to better meet customer needs.



OPERATIONAL EFFICIENCY

Data Engineering helps in automating, optimising, and streamlining business processes, leading to reduced operational costs and increased efficiency.



RISK MANAGEMENT

Predictive analytics can help businesses identify potential risks and develop strategies to mitigate them.



Structured Data, Big and Small, Meets Unstructured Data in Data Fabric

All the data in an organisation is either structured (formal databases typically) or unstructured (documents) and can be big data such as IoT streams and activity logs or data manageable using more traditional data tools such as data held in ERPs, CRMs.



Up until now the each type of data and scale of data has needed a different solution for its management leading to a highly fragmented data storage and processing landscape leading to inefficiency, unnecessary cost and the need for a very diverse skillset to manage the often sprawling infrastructure.



Today we can offer data management, reporting and analytics solutions that reside on a Data Fabric.

Data Fabric is a technology that can unify not just the types of data but also the tools that can be used to organise and analyse it. Data Fabric contains the big data tooling, data warehouse and data lake capabilities and integrates them so that you do not need to be concerned with which is used for what. It just appears to be one data repository. Data Fabric is also a serverless technology. That means it only uses server time when actively processing or analysing the data optimising costs as well.

With your data in one place along with the tooling needed to analyse it without the effort required to create a data warehouse Data Fabric is a real leap forward, let us show you the power with a demonstration and guided discussion.



Data Products

The concept of Data Products represent a fundamental shift in the way data is collected, managed and governed. A Data Product delivers a high quality, ready to use, data set of data that is constructed in such a way that it can be easily consumed by people and systems across an organisation and reused across multiple business challenges. A Data Product could for example provide a 360 degree view of sales, customers, staff, stock etc.

The benefits of this approach can be substantial.

New business cases can be delivered up to 90% faster and the total cost of ownership, including technology development and maintenance costs, can be reduced by up to 30%. (Source: McKinsey –

New business cases delivered 90% faster.



Development and maintenance costs reduced by 30%



Using the Microsoft Fabric tools, TEKenable can help your organisation to design or redesign your data management around the concept of Data Products.



Artificial Intelligence

Probably does not need saying but AI is totally dependent on data, custom machine learning models especially so. Generative AI is pre-trained, and we can apply it to your documents as the data source to answer questions when the answers are locked up in unstructured sources like Word and PDF file so less dependent on Data Fabric but still requires data curation and governance.

Machine learning is however 100% dependent on the quality, coverage and availability of data to function at all.



Data Governance

No Data and Analytics solution is complete without consideration of Governance. Governance is a combination of process and tooling and the concept of Data Products can assist greatly in clarifying ownership and hence stewardship responsibilities. We use Microsoft Purview to bring many of the aspects of data governance to your organisation.

Microsoft Purview is a family of data governance, risk, and compliance solutions that can help your organisation govern, protect, and manage your entire data estate. Microsoft Purview solutions provide integrated coverage and help address the recent increases in remote user connectivity, the fragmentation of data across organisations, and the blurring of traditional IT management roles.

Microsoft Purview combines the former Azure Purview and Microsoft 365 compliance solutions and services together into a single brand.

Together, these solutions help your organisation to:

- **Gain visibility** into data assets across your organisation
- **Enable access** to your data, security, and risk solutions
- **Safeguard and manage sensitive data** across clouds, apps, and endpoints
- **Manage end-to-end data risks** and regulatory compliance
- **Empower your organisation** to govern, protect, and manage data in new, comprehensive ways

We have the experience, approach and tools to put you on the right path to creating a best in class Data and Analytics capability in your organisation allowing you to start to deliver on the promise of a data driven organisation.