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## Defence and Manufacturing - Transforming Data Architecture



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CASE STUDY

Transitioning to a modern, decentralised data platform with Microsoft Cloud technologies enhances data accessibility, security, governance, and enables advanced analytics.

## PROBLEM

The client's existing data architecture is centralised around a Microsoft SQL Server infrastructure, leading to numerous inefficiencies and vulnerabilities. The centralised system results in significant bottlenecks, making data access and processing slow and cumbersome. Security is another major concern, with the centralised approach increasing the risk of data breaches that could compromise the integrity of sensitive information. Additionally, the system struggles to handle the growing volume and variety of data, limiting the client's ability to perform advanced analytics and derive meaningful insights. Moreover, the lack of a cohesive strategy integrating people, processes, and technology further impedes the client's ability to leverage its data assets effectively. The challenge is to transition from this outdated setup to a modern data analytics ecosystem that can support the client's evolving data needs and strategic objectives.

## SOLUTION

The client partnered with exposé to develop a comprehensive data strategy, modernising their architecture by transitioning to a decentralised, secure, and efficient data platform within the Microsoft Cloud ecosystem using Azure, Microsoft Fabric, and Power Platform. Central to this is adopting a Medallion Architecture with three layers to enhance data processing, governance, and accessibility, ensuring scalable and flexible data management.

The strategy also employs a federated data mesh approach, organising data around specific business domains and divisions to enhance relevance and quality.

Microsoft Purview will support a robust data governance framework, ensuring data assets are secure, well-managed, and trusted.

The strategy emphasises the integration of people, processes, and technology, including a detailed roadmap developed from hundreds of data-related user stories, outlining actions, technological deployments, and procedural modifications for a comprehensive transformation.

## BUSINESS BENEFITS

The new data architecture will significantly improve data accessibility, integrity, and governance, supporting data workers with consistent, accurate, and timely assets. Enhanced governance and security measures, including classification and lineage tracking, will promote transparency, reducing time spent on data manipulation and increasing trust. The platform will support advanced analytics, AI, and machine learning, aligning with the client's long-term strategy.

Integrating people and processes will foster a data-driven culture, empowering employees and facilitating informed decision-making. The roadmap ensures a well-guided transition with iterative refinements.

Outcome: This transition will enhance data management, decision-making, operational efficiency, and strategic insights, leveraging data assets to drive success.