

SELISE DIGITAL PLATFORMS PRESENTS

SELISE's Expertise with Microsoft Fabric

Unlocking Next Generation Data Engineering Solutions

TABLE OF CONTENTS

01	Abstract	01
02	Introduction	02
03	7 Reasons why SELISE chose Microsoft Fabric	03
04	A Microsoft Fabric Case Study	05
05	The Outcome	08
06	Future Focus with Microsoft Fabric	08
07	Conclusion	10





Abstract

SELISE Digital Platforms, a Swiss owned multinational software enterprise elevating business growth and revenue of its clients worldwide. By leveraging Microsoft Fabric's OneLake, SELISE is effectively mitigating clients' data management challenges stemming from scattered, duplicate, and redundant data factoring in a significantly large volume of data and diverse data sources.

As a result, clients experienced operational efficiency, resulting in higher customer satisfaction that was previously unachievable due to an unorganized data ecosystem that generates highly duplicate data from multiple applications. This article highlights the journey of SELISE in elevating operational excellence by delivering solutions based on Microsoft Fabric.

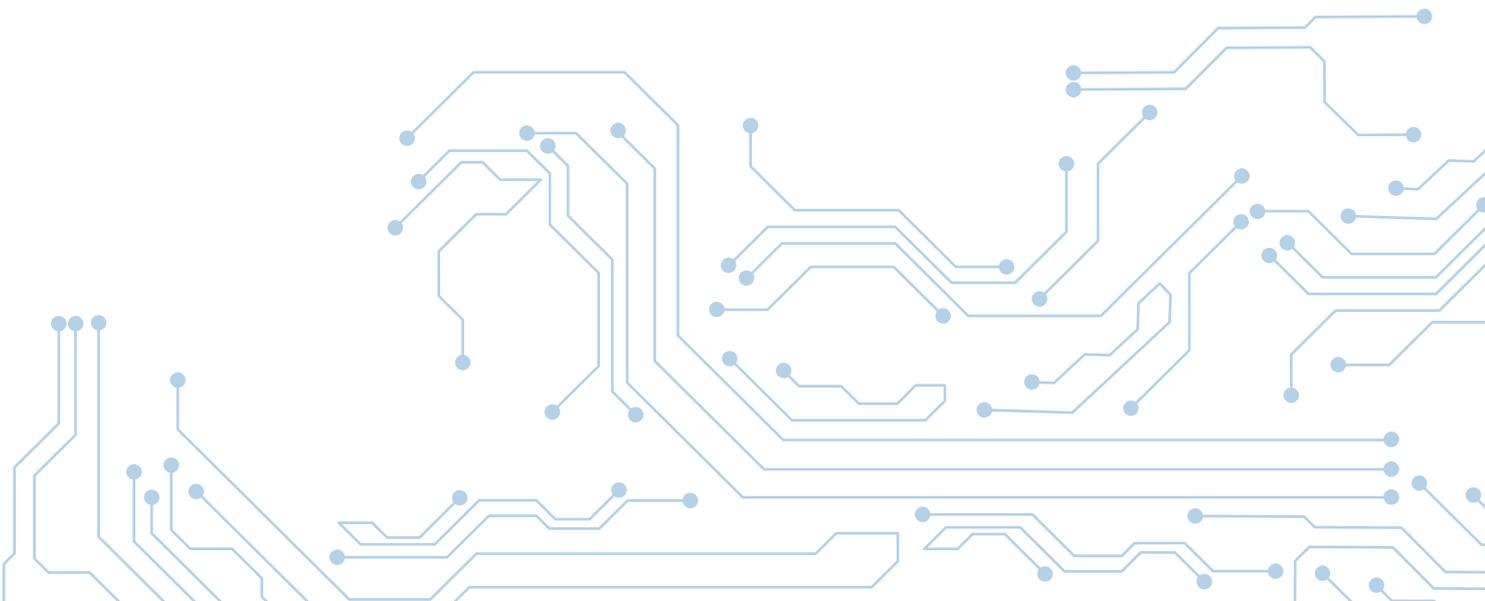
Introduction



Choosing the right tooling and platform is necessary for any technical business solution provider organization like SELISE, aiming to build scalable, dependable, and efficient data engineering solutions. When SELISE was addressing the data-oriented challenges faced by its prospective client, Microsoft Fabric emerged as a premier solution comprising high scalability and cost-effectiveness coupled with robust support for tried and tested data engineering frameworks powered by Copilot.

Owing to Microsoft Fabric's promise of superior data processing capabilities, SELISE recognized Microsoft Fabric as a prominent choice compared to other products in its product segment.

Gaining proficiency in Microsoft Fabric and the ability to architect and deploy data engineering solutions fast, have taken SELISE to a new height thanks to Microsoft Fabric. This expertise has enhanced SELISE's reputation and solidified its position as an industry leader in delivering simple and effective cloud-based data engineering solutions that meet complex demands of modern businesses.





7 Reasons why SELISE chose Microsoft Fabric

01 Strategic Problem-Solving

SELISE's data experts were able to bring invaluable insight and expertise to the table by leveraging Microsoft Fabric. Due to the lean product design of Microsoft Fabric, SELISE's data engineers found working with this tool very intuitive when it came to strategic problem solving. Since Microsoft Fabric offers out of box lake house creation, excellent support for Power BI, has first party support for battle tested data engineering languages, SELISE could focus on strategic problem solving without losing much time or effort to perform technical feasibility analysis of the platform

02 Consistent Support

SELISE's international presence and a streamlined incident management structure allows the company to provide consistent support to its clients across the globe. This demands that any SaaS solution that SELISE adopts must ensure robust technical support and high velocity incident management which Microsoft Fabric offers. SELISE, being one of the early adopters of bespoke tools like Microsoft Fabric, also requires that the platform be backed by a trusted technology solution partner like Microsoft to gain confidence in the investment that SELISE makes into a SaaS platform. Due to SELISE being a Gold Partner of Microsoft we had no doubt about Microsoft's technical support and Microsoft Fabric's sustainability.

03 Near Zero Downtime

As downtimes are highly intolerable and a lot of B2B and B2C clients rely on SELISE's business solutions, it is of paramount importance that the SaaS solutions SELISE works with provide near zero downtimes. Microsoft Fabric's promise of 99.99% uptime created great confidence in us since SELISE already uses the reliable Microsoft Azure platform to maintain a wide array of microservices that act as the cloud infrastructure backplate and has deployed numerous applications on the Azure Kubernetes platform.

04 Scalability

SELISE's choice of Microsoft Fabric enabled us to design and deploy highly scalable data engineering solutions. Thanks to Microsoft Fabric's application availability zones that manage data in highly scalable distributed data centers that always ensure high availability and performance. With an innovative SKU based hardware capability model, SELISE was able to start small for experimenting with the tools capabilities and ramp up the SKU tier once it was time for production grade deployment.

05 Efficient Data Management

Since Microsoft Fabric is an evolution of Azure Synapse, that brought in a unified approach to managing data sources, data pipelines and data science utilizing already familiar tools like Azure Data Factory, Apache Spark, SQL, and Power BI, SELISE gained operational efficiency with minimal learning curve in data management.

06 Cost Effectiveness

Since Microsoft Fabric offers a large trial period of 60 days (about 2 months) and no upfront investment was required, it was attractive for SELISE to choose Microsoft Fabric as a potential data engineering platform. On top of that our cost feasibility analysis showed that Fabric allows a highly effective cost calculation model that has compute unit per second model compared to other data engineering solution providers that has a pay as you go model and requires an upfront cost when getting started.

07 Developer Friendliness

Working with a new tool always poses a risk of poor documentation and unclear guidelines by the solution provider. Fortunately, SELISE's developers found that Microsoft Fabric's large documentation was tremendously helpful in gaining developers efficiency. Microsoft is well known for its elaborate documentation made available for all its products and programming tools, which is not an exception for Microsoft Fabric.

A Microsoft Fabric Case Study

Below lies a detailed case study discussing SELISE's solution with Microsoft Fabric, driving customer success.

Client background

Two prominent business entities within the shipping industry merged to form a new conglomerate. This merger, while strategically beneficial, led the newly formed company to face a significant challenge: Disorganized, redundant, and duplicate sets of data sources from both ends that was difficult to amalgamate as both entities are using different sets of applications to manage their shipping operations. Due to the lack of traceability of data, the new organization was threatened by degraded operational performance due to having to deal with added complexities in reporting due to having duplicate data, declining customer satisfaction due to unprecise data origins and human effort required to distinguish information from a huge clutter of data, resulting in a direct hit in revenue.

Challenge

The primary challenge was to efficiently manage and consolidate disparate data sets from two separate entities into clean, unified, coherent, and easily accessible data. The redundancy, conflict and disorganization of the post-merger data necessitated an agile approach for data processing, cleaning and deduplicating. In consequence, curation enables data aggregation to establish a sole source of truth for their business activities. This was crucial for enabling effective decision-making and streamlining operations.

Solution

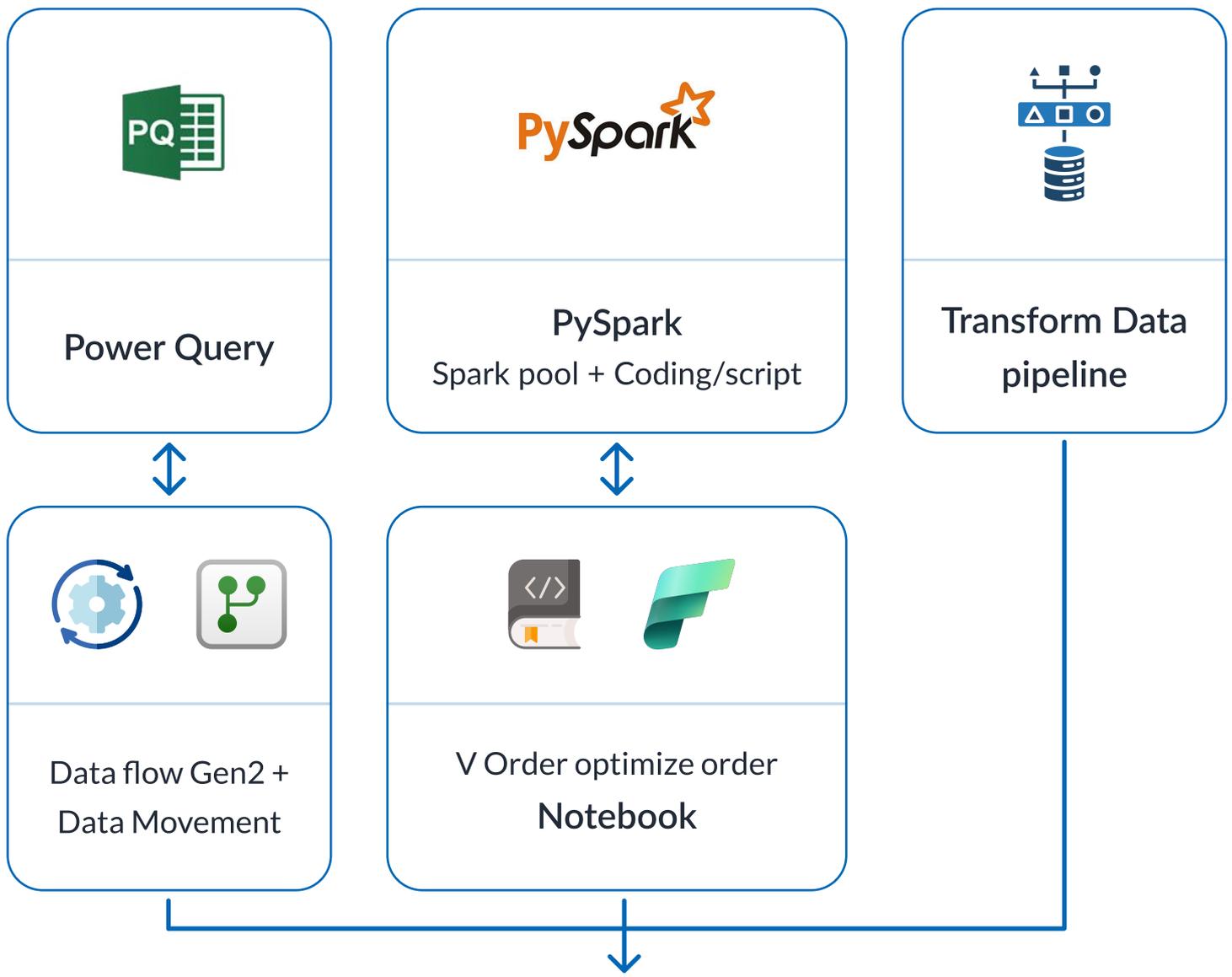
To overcome this challenge, SELISE initiated a pre-study phase to first assess the pain points from different teams within the conglomerate to understand the depth and complexity of the data ecosystem. The process included study of multiple business domains, specific use cases of each business domain from a reporting perspective while allowing the newly built data platform to open to machine learning capabilities. The most daunting task was performing STTM (Source to Target Mapping) between source data and target data since the company uses a wide array of applications to manage not only internal operations but had separate portals for their customers as well. SELISE understood that the primary solution was to introduce a unified data lake that can ingest data from multiple databases and perform multi-level cleaning and aggregation with relational mapping to ensure a trackable pool of data.

SELISE's strategy consisted of several phases. We went with Medallion Architecture which is widely used to combat similar kinds of data engineering challenges.



Data Ingestion

Since SELISE was in realm of compiling large sets of data that contained geographic, financial, human resources and customer information along with data that are generated by IoT (Internet of Things) devices. We were presented that not all data are present in a SQL Server Database format some are streaming data which are unstructured, some are from SharePoint that are semi structured and the remaining come as proper SQL database format. On top of that we also faced the challenge of connecting to on-premises SQL Server databases that blown a red flag to the entire plan. Thankfully, we discovered that Microsoft Fabric supports all kinds of data ingestion utilizing Azure Hub and Azure Data Factory along with on premises data ingestion with On-Premises Data Gateway. This enabled us to simplify major challenges regarding data ingestion from multiple cloud and on-prem sources and store it into the bronze layer



Actions

- Organize data in different schema like star, snowflake based on business need.
- Apply business specific rules
- Tables generated via Stored Procedure
- Tables with Calculated columns / values
- Business ready data to be used directly
- Apply complex relational / aggregate queries if required
- Applying ETL operations to structure the data better

Figure: Different approach of ETL applied depending on the nature of data

The Outcome

The new conglomerate was able to completely transform the way they managed their data ecosystem. The establishment of a sole source of truth improved analytical capabilities, decision-making processes, and operational efficiency of the company. This data transformation directly addressed initial challenges by establishing a new standard for data management within the merged entity. Consequently, this trajectory positions the new conglomerate on a path toward higher revenue generation and sustained business growth.

Future Focus with Microsoft Fabric

Microsoft Fabric, the comprehensive and unified platform empowers data and business professionals alike to unlock the potential of organization data and ways for advancements in the age of artificial intelligence. Organizations who have significant business data require them to manage and process extensively. Microsoft Fabric is the best platform here with many capabilities to process and convert these data into business intelligent decisions that immensely help organizations for their business growth and directions. SELISE has planned to adopt several features and services ahead considering the prospect of future market trends. Incorporating Microsoft Fabric into new projects aligns seamlessly with SELISE's strategic vision for the future.

IoT Data Integration



SELISE has extended expertise in IoT projects along with controlling and managing data coming from distant devices. SELISE plans to ingest and process that data into Microsoft Fabric and generate analytics reports for business directions.

AI Powered Analysis



SELISE has already integrated and worked with intelligent communication and plans to extend AI based decision-making over OneLake data that will be processed and curated.

Real-time Data Analysis



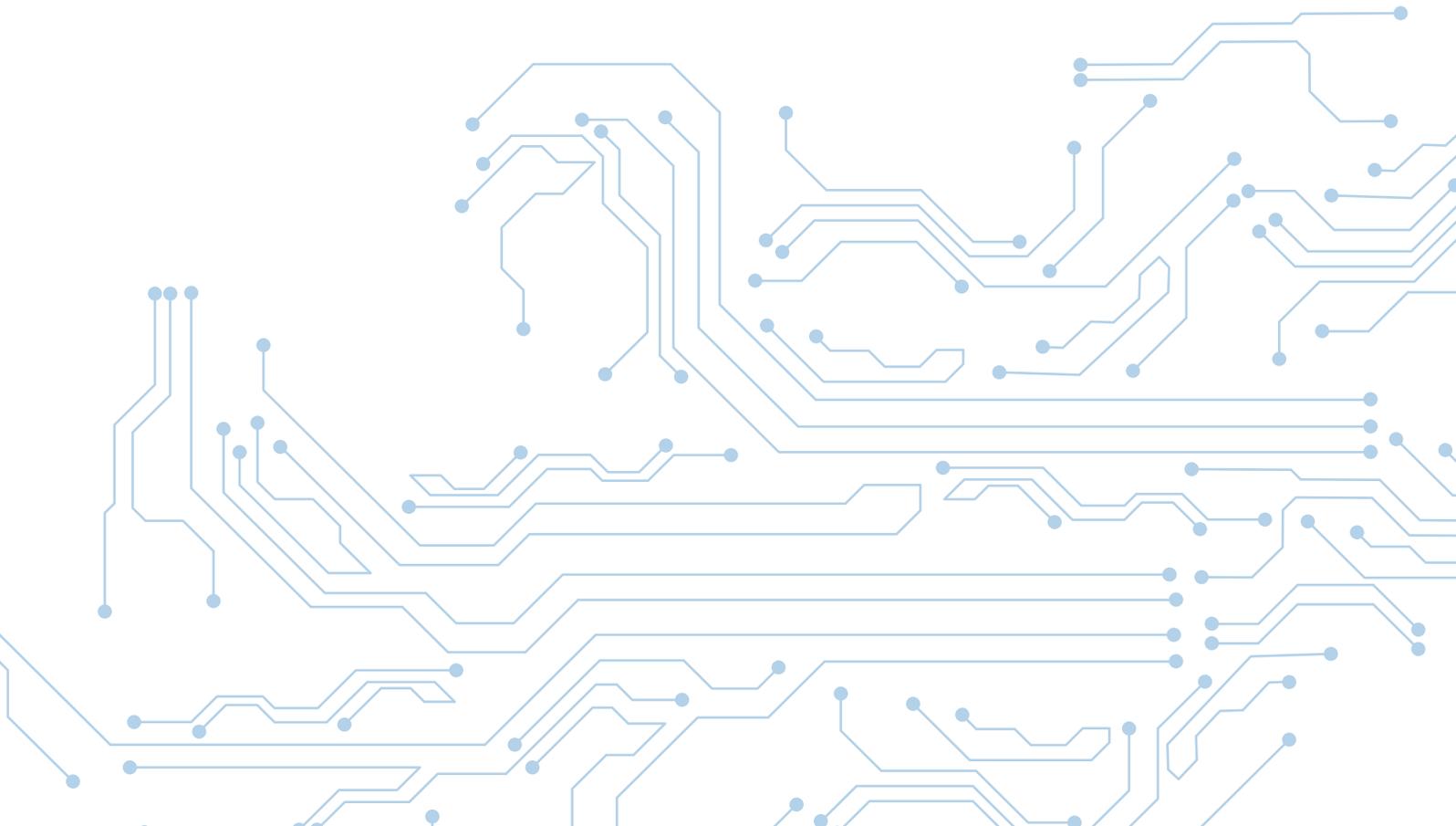
SELISE plans to perform real-time ship data analysis to determine ship health by analyzing data captured directly from ships. This approach enables the immediate detection of anomalies, contributing to enhanced safety and operational efficiency.

SELISE is dedicated to perpetuating and enriching its training initiatives focused on Microsoft Fabric, emphasizing areas like Data Engineering, Data Science, Big Data, and other high-demanding sectors. This commitment is aimed at strengthening its workforce, thereby enhancing standards of professional excellence, solution quality and client satisfaction when providing data engineering solutions.

This sophisticated platform, with its integrated analytics capabilities, accelerates many potentials including AI-driven data analytics and modern ETL framework development. By leveraging Microsoft Fabric, SELISE positions itself at the forefront of technological innovation and ensures it remains well-equipped to navigate the evolving demands of the industry. It also highlights the commitment to meeting and exceeding the expectations of our clients in an ever-changing technological landscape.

Conclusion

SELISE's journey with Microsoft Fabric has been one of continuous growth and excellence. Presently, SELISE stands as a pioneer in harnessing the power of Microsoft Fabric to deliver tailored solutions to its clients, driving digital transformation. Looking ahead, SELISE is prepared to further expand its capabilities and offerings with Microsoft Fabric at the forefront. The expertise gained in this partnership not only fortifies SELISE's position in the industry but also delivers substantial value to its clients, empowering them to achieve their digital objectives with confidence and efficiently.





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