Build Your First End-to-End Lakehouse Solution with Microsoft Fabric

Hands-on workshop

Build better analytics and turn data into decisions

Why join the workshop?

Immediate Practical Experience	Hands-on approach ensured – solutions built collaboratively from day one, with no theory-only sessions
Real-World Case Study	Analyzing NYC taxi mobility data to inform transportation planning and enhance urban safety
Full Data Lifecycle Coverage	Presentation of the full data workflow – from ingestion and preparation to transformation, analytics, and deployment
Expert Guidance	Ongoing expert support provided to facilitate problem-solving, clarify questions, and encourage collaboration
Skills You Can Apply	Delivery of practical knowledge ready for immediate application in real-world projects and daily work

Contact us to find out more about our **data & AI solutions** www.cloudsonmars.com
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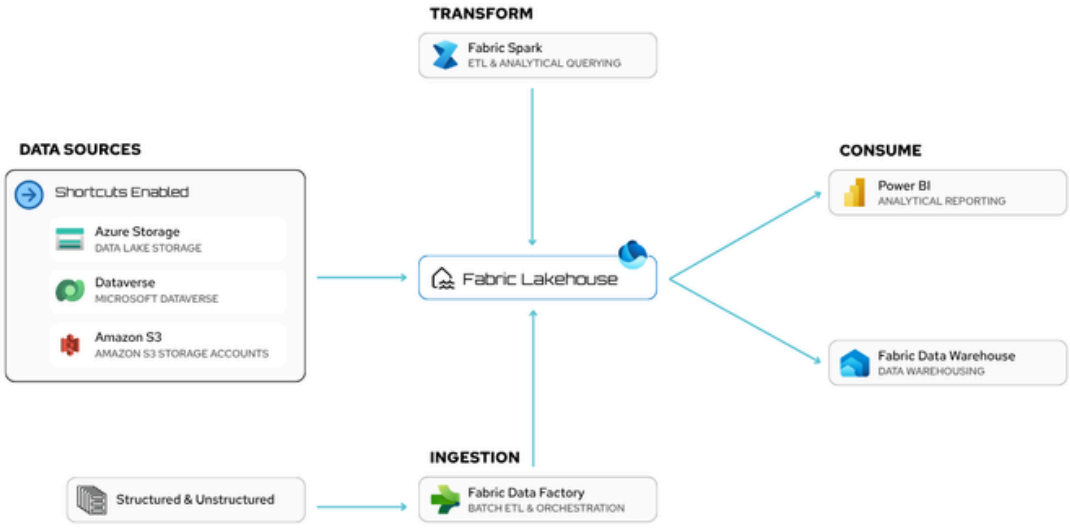
Scope

What makes the Lakehouse Approach in Microsoft Fabric unique?

- **Unified Analytics Platform** eliminates data silos by centralizing all analytics activities on a single platform
- **Future-Proof Infrastructure** designed for scalability and adaptability to meet evolving urban mobility needs (and beyond)
- **Enhanced Decision Making** enables access to current, comprehensive, and reliable data for business leaders, BI analysts, and data scientists
- **Automation & Optimization** streamlines key urban management areas like fleet operations, traffic forecasting, and infrastructure planning
- **Collaboration Ready** ensures data, analytics, and visualizations are easy to share and manage across both IT and business teams



Workshop deliverables

5 practical, hands-on exercises

Instructor's support and facilitations

Fabric data integration, engineering & data science

Complete data workflow

Hands-on Training Benefits

Training that goes beyond theory – participants build real solutions from data ingestion to visualization using Microsoft Fabric, gaining practical skills that can be immediately applied to real-world challenges.

Discover how modern Lakehouse solutions empower businesses by transforming data into actionable insights – illustrated with a real-world example using NYC Yellow Taxi data to support smarter decisions and drive growth.

Challenge #1 – Optimizing Driver Allocation

Problem: placing enough drivers in the right place at the right time is critical, yet often complex. Without clear insights, resources may be wasted or missed opportunities ignored.

Solution: integrate real-time and historical trip data in a lakehouse to analyze demand patterns by hour, day, and location – with dynamic heatmaps enabling smarter driver scheduling that maximizes earnings and minimizes downtime.

Challenge #2 – Improving Route Profitability

Problem: some routes are costly due to tolls or low tips, eating into profits. Understanding which routes perform best is key to targeted improvements.

Solution: lakehouse analytics enable deep examination of individual trip costs, revenues, and surcharges, allowing identification of unprofitable routes, adjustment of pricing strategies, and smart allocation of resources to enhance net revenue.

Challenge #3 – Customer Behavior

Problem: without data-driven insights, personalizing rides or payment options is guesswork, leading to missed revenue and customer dissatisfaction.

Solution: by analyzing trip details alongside tipping and payment types, we uncover customer segments and preferences. This enables targeted promotions, encourages digital payments, and tailors offerings that enhance customer loyalty.

Challenge #4 – Enhancing Ops Efficiency

Problem: idle vehicles and connectivity issues disrupt daily operations and increase costs.

Solution: lakehouse-powered analytics identify idle times, inefficient routes, and zones with poor connectivity. This supports smarter dispatching, reduced vehicle downtime, and investments in infrastructure where needed.

Challenge #5 – Compliance and Regulatory

Problem: navigating complex fare regulations and avoiding penalties demands accurate reporting and monitoring.

Solution: using lakehouse data models, we automate tracking of surcharge zones and fare codes. This ensures compliance, reduces risks, and aids negotiation of contracts with airports or regulatory bodies.