



# Fast-growing third-party logistics provider in the US, innovates for the future with Microsoft Azure



USA



Logistics



Microsoft Azure

The customer is one of the largest third-party logistics (3PL) providers in the USA, and one of the fastest growing companies in North America. The 3PL provider offers innovative, customized solutions - connecting just-in-time shippers with the company's extensive carrier networks and functioning as an extension of their customers' supply chains.

The 3PL provider required a specialized data

platform capable of delivering near-real time insights of process lines, displaying a comprehensive view of business performance, and facilitating informed decision-making. The platform had to align with their data and AI strategy, as well as their technological investments. The platform also had to offer centralized, standardized data through an effective cleansing process, while ensuring secure accessibility for a diverse user base.

## Challenges

Data collection, analysis, and business insights play a pivotal role in long term decision making. However, the US-based 3PL provider did not have a data management platform to support evolving analytics and business intelligence needs. The 3PL provider's transportation management system contained the company's extensive logistics data, including data related to the various trucks, carriers and trips done

between locations. There were different use cases for this data and the 3PL provider hoped to use this data in near real-time basis to drive better business outcomes.

The lack of a single source of data presented several challenges, including:

**Inability to leverage the full potential of business intelligence:** The existing solution primarily focused on operational reporting and lacked analytical capabilities, which was further compounded by the clutter of numerous datasets.

**Time consuming data cleansing process:** The current setup lacked data consolidation and standardization. This caused data scientists to spend a significant amount of time on data cleansing and standardization tasks, and also forced data analysts to manually assemble reports.

**Lack of self-service BI capabilities:** The absence of self-service functionalities for business users and analysts resulted in the inability to swiftly generate, share, and collaborate on reports. Furthermore, there was a lack of insights into the usage of datasets and reports, hindering the ability to discern effective strategies from less effective ones.

**Limited information access:** Limited to a standard set of reports accessible to all, customized or specific needs went unaddressed. This led to departments conducting isolated analyses tailored to their requirements.

## Solution

Intellint (Fortude's data & AI arm) initiated the engagement with the US-based 3PL provider by conducting a comprehensive analytics health check. This involved a thorough review of the organization's data estate and analytics landscape, including data management mechanisms and processes, data governance approaches, reporting methodologies, and the needs and expectations of the organizational hierarchy. Based on this assessment, Intellint formulated a detailed and customized strategy and roadmap for data and analytics transformation. This initiative aimed to

enhance the company's existing data architecture and realign it to effectively address the current and future needs of the business. Intellint worked with the business to build a data management platform based on Microsoft Azure data services infrastructure. It leverages Azure Data Lake Gen2, synapse pipelines, Databricks, and machine learning features, along with Power BI Premium for enterprise data models and dashboards.

The key characteristics and benefits of this solution are:

### Enterprise-wide business intelligence

The solution has management/executive dashboarding capabilities, department-based analytics and group specific reviews, a self-service analysis function, and embedded reporting capabilities to enrich the existing ones.

## Flexibility and efficiency

At its core, this solution comprises a framework that provides standardized KPIs/metrics and consistent taxonomies. The department- and team-specific analytics functions, along with the self-service business intelligence capabilities, contribute towards a faster data analysis process. Users can access and generate customized reports they require based on their business needs.

## Modern data analytics platform

This platform consists of two main layers - the data and the analytics layers.

- The data layer is composed of a staging layer that stores raw data in a curated and standardized form. The ingestion layer within the data layer collects raw data from various systems, cleanses, and standardizes. You can implement this layer as a data lake.
- The analytics layer consists of the integration, data model, and business model layers. The data model layer stores data in an aggregated, analytical form to ensure it is relevant across the company. This layer functions as a typical data warehouse.

The first phase of Intellint's solution focused on the company's sales function and looked at enabling the sales team to do operational analysis for sales in one place. Previously, this 3PL provider had to get different people to build data sets and create reports. They also struggled to manage the vast volume of cluttered reports, so Intellint helped improve the structure of these existing reports. With the new architecture in place, all the data was housed in one location. This made it easy for the sales team to access data more easily and build reports simply via a drag and drop mechanism, without burdening other key resources.

The Intellint team also rolled out phase 2 and 3 of the project which focused on enabling operational analysis

for the carrier sales (sales is done through trucking companies) and logistics functions, respectively. Intellint also conducted quarterly business reviews with the organization which were focused on identifying opportunities for the business to better harness the potential of its digital investments. This includes consolidating data from other sources such as the company's financial data from their ERP, and the setup of machine learning models for cost predictions. Usually, logistics costs come from a third-party source and the prediction is not reflective of the actual costs. It tends to be considerably higher, so they tend to oversell to keep that margin. With ML, they are able to test out models fast so they can fix it and offer competitive pricing that reflects actual costs.

## Impact

The team can now view all their data on dashboards, with KPIs for sales. They are able to access the data faster, and this has a positive impact on their decision-making process. The company is now better placed to strategize their solutions based on the broader availability and visibility of data.

50-60% effort saving in extracting and cleansing data for ongoing data science initiatives.

Customized reports have been especially useful for gaining insights about specific business scenarios. While the team had Microsoft Power BI in place, it was used in an ad hoc manner to create a few operational reports. It was primarily used as a reporting tool for their transportation management system for application-specific reporting, so it was vastly underutilized. With Intellint's roll-out of self-service BI, the organization's business users can create their own custom reports, dashboards and data visualizations without relying on IT help. With new architecture in place, Power BI can be used across the organization and reporting/dashboarding can be done at different levels, including strategic, functional and operational.

The data management platform functions as a foundation for deriving insights for long term needs. In time, there will be cost savings as the data can help identify any inefficiencies that add to operational costs and rectify them.

On the data governance front, Intellint has set up data catalogues to create an inventory of the organization's analytics assets. Currently the Intellint team is working on putting down data governance policies, procedures, and standards in place to help the business better manage their data with their new platform. By defining roles and responsibilities, setting standards for data quality, and ensuring that data is being used in a way that is consistent with the business' goals and values, the company can avoid issues such as the creation of duplicate reports, inconsistent/conflicting data, data security breaches and data silos.



*We realized that our initial data management tool needed attention in more ways than one. Prior to consulting Fortude, we were only able to use the available data to generate reports and not derive business insights. Moreover, our data scientists spent a lot of their time cleaning and standardizing available data while we were unable to customize our teams' access to it. With Fortude's expertise and support, we set up a data management platform based on the Microsoft Azure data services infrastructure. It leverages Azure Data Lake Gen2, synapse pipelines, Databricks, and machine learning features along with Power BI Premium for enterprise data models and dashboards.*

Director of Information Technology at the leading 3PL provider

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Fortude has offices in the US, Canada, UK, Netherlands, Sweden, Sri Lanka, Singapore and Australia and partners with several large global technology, cloud, and automation product companies.