Orion

Intelligent Navigation through the Retail Unified Commerce Supply Chain Data Landscape

Optimize Profitability, Empower Stakeholders,
Drive Innovation, and Reduce Cost

The landscape of the retail supply chain is composed of complex systems of technologies and organizations involving customers, employees, and partners (suppliers, third-party logistic providers, and marketplace participants).

Retailers, in a pursuit to drive profitable growth and a unified commerce experience, are accelerating their investments in data science, machine learning, and artificial intelligence. These newer technologies are critically dependent on explosive amounts of data that need to be accurate and synchronized. However, their investments to ensure that these data-hungry technologies are fed unified and trustworthy data lag significantly. This often leads to delayed and costly project overruns, as well as complete project failures.

Retailers embarking on digital transformation projects are often impeded by several data-related challenges. There is no single source of "truth" due to data silos and complex technologies being distributed within and outside the organization. Data quality is questionable and data trustworthiness is unknown or unverifiable because you can't always be sure where the data originated and how it was produced or modified (data lineage). Inefficient and error-prone manual efforts are often required to find useful data (data discovery), identify and remove duplicated data assets (deduplication), and identify the underlying reason for analytic failures rather than simply patching the symptoms (root cause analysis). Without the capability of mapping all systems and viewing how data travels from the system of records through various other systems to its destination, a unified commerce supply chain's data pipeline is often broken, resulting in lost revenue, reduced market share, and lost profits.

Fortunately, Orion Governance's Enterprise Information Intelligence Graph (EIIG), a self-defined data fabric platform, can help ensure the successful leveraging of the new data-driven initiatives and innovation.

EIIG, a self-defined data fabric platform, automatically collects ALL forms of data about metadata (data about data), be it technical, business, operational, or social, and automatically builds a catalog based on these discovered facts about the data assets. EIIG's bottom-up, fact-based, and all-encompassing approach enables a self-defined data fabric to build the industry's most accurate and trustworthy view of an enterprise's. It allows you to track this complex data supply chain environment, so you know all the systems and data in your environment (data catalog), where your data came from and how it was created and processed (data lineage), and how the data is currently moving through your systems and how it is being used (active metadata). EIIG natively integrates these key capabilities (data catalog, data lineage, active metadata, and metadata analytics) and metadata analytics in one single product.

To use an analogy, EIIG is like a living and breathing digital map, enabling retailers to get a bird's-eye view of their unified commerce supply chain data landscape, identifying and redirecting around hazards, and ensuring accurate data is reliably delivered to the intended destination.

How can EIIG help you achieve your dream of a comprehensive and unified data fabric that gives you full visibility into your complex supply chain data landscape and enable your digital transformation?

Enhance unified commerce with a centralized information knowledge graph to establish a single source of truth and real-time data observability.

EIIG automatically ingests metadata from a wide range of technologies across operating platforms, programming languages, ETL tools, and business intelligence tools. Its ability to handle complex datasets from all these technologies enables enterprises to identify and break down data silos and bridge various complex systems. EIIG also presents a unified and near real-time view of disparate data across your enterprise, in a vendor/colud and technology agnostic maaner, no matter what environments you may have, be it modern and cloud such as AWS, Snowflake, or Databricks or legacy systems such as the mainframe or AS400.

To continue the GPS metaphor, EIIG lets retailers establish inter-system connections between different technologies or vendors just like highways linking various disparate cities or communities.
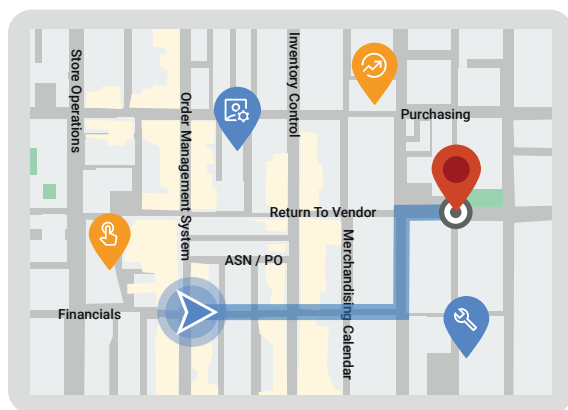
EIIG lets retailers better orchestrate their various vendors. Your order system, for example, may be out of sync with some applications such as delivery scheduling. That discrepancy will result in delayed orders or inaccurate inventory and ultimate revenue loss. Retailers typically use several different application vendors. The SAP merchandising system, for instance, may be linked to an application developed in Python or a supply chain planning solution developed in Java or RPG. If you cannot parse scripts written in Python, Java, or RPG, you cannot track where the data came from and how it was modified so you will see broken lineages. EIIG gives you a comprehensive view of sources and flows in and out of these disparate systems, resulting in minimizing negative business disruptions that impact on-time and in-full order delivery to your customers while maximizing positive market share, customer satisfaction, and profits.

In the same way, EIIG also presents detailed intra-system connections like roads, streets, and alleys that move through and around a community.

EIIG continuously monitors data as it moves through your complex data landscape. This capability of observing data movement in real-time and actionable insight lets retailers optimize their profitability. For example, by monitoring operational metadata, EIIG can dashboard and send alerts about SLA violations in near real-time. This capability can help retailers quickly identify root causes of issues such as discrepancies in the number of orders between two systems and thus prevent missing orders.

Just like an interactive map, active metadata is visualized like real-time traffic information and alerts flash just like you get a notification when there is an accident that may impact your travel.

Empower stakeholders with easy discovery of and access to trusted data to assure timely and accurate decision making.

Given the complex data landscape, users often don't know what data is available to them to perform their analyses and make their predictions. EIIG's knowledge graph allows users to quickly find the data they want. Its column- and code-level data lineage and deep cataloging capabilities allow users to quickly establish the trustworthiness of the data they have discovered. EIIG helps retailers establish and visualize the single source of truth of their unified commerce supply chain data with the knowledge graph.

Again, like a GPS navigation system, EIIG lets users search for potential destinations and to see multiple routes to reach them. They also provide reviews of these destinations, so users know if they are worth traveling to. They can also use the reviews to compare and contrast destinations and choose the one that works best for them.

The EIIG platform offers multiple views of a single data source and satisfies the needs of different personas. Compliance managers can show auditors end-to-end data transparency and automatically map regulatory glossaries with technical assets; privacy officers can easily tag all PII data assets; data stewards can view all policies and rules; and marketing managers can easily locate customer data to conduct campaigns; with visibility into all data movement and lineage across multiple vendors' technologies connected with the scheduling application, a scheduler for a grocery chain can set up unloading schedule precisely so that no perishable goods would sit on the truck to run the risk of being unsellable.

EIIG also empowers stakeholders by augmenting data quality and propagating trust metrics through the knowledge graph. With active metadata, EIIG offers continuous monitoring of data quality by showing the data quality score at each stage throughout the various and complex data systems from the source to the endpoint. Integrated with commonly used BI reporting tools such as Tableau, Qlik, or Power BI, users can see key metrics such as trust score, value score, and quality score right in the report. If desired, they can dive into EIIG to trace the lineage of that particular data set.

The implication of tracking data quality is profound because data users can make much more accurate decisions according to the quality of the underpinning data of the report. For example, CFOs now have the power at their fingertips: they don't need to rely on a team of people to validate whether the data used in a financial report is good or accurate. A merchandiser or inventory manager can confidently drive their supply chains with accurate assortments, inventory levels, order receipts, and order deliveries. C-level executives can drive strategies based on accurate and aligned analytics that they rely on to make decisions.

With end-to-end data transparency and easy data discovery and data access, EIIG also promotes collaboration and facilitates communication between stakeholders inside and outside the organization. More efficient collaboration and communication will translate into better customer satisfaction and more revenue growth.

As part of the digital transformation strategy, retailers are migrating some of the workloads to cloud for speed, resilience, and agility to improve their supply chain and achieve their growth objectives. EIIG can help accelerate and guarantee success at the same time ensuring that the modernized application is compliant with regulations such as CCPA, GDPR, SOX.

Because EIIG offers a comprehensive inventory and a thorough understanding of the landscape of data assets, customers can easily perform a migration readiness assessment. EIIG provides a full catalog of their data assets including code and reports within hours to make sure every report, data table, dashboard, metric, and dimension is accounted for, the source tables are identified, and the transformation logic is documented.

EIIG also helps eliminate the cost bloat problem. By automatically identifying unused but stored information and identifying redundant data assets such as duplicate reports, code, and tables, EIIG dramatically reduces the scope of migration and ultimately the total cost.

Empowered by AI/ML, EIIG helps determine which data assets can be reused in the new environment and sets up migration priorities and approaches according to the popularity, criticality, sensitivity, and relevance to regulatory compliance.

Finally, EIIG's near real-time impact analysis feature helps preempt issues arising from code changes that are otherwise detected only after code has been migrated to production systems. Impact analysis reduces IT delivery and testing times significantly. With EIIG, customers can understand the effects of any change within minutes. It can provide snapshot versions of the data landscape between iterations, enable running comparisons and doing impact analysis for root cause analysis. This capability also makes application development more agile: the testing team can now clearly see the dependencies and narrow down specific data to test instead of boiling the ocean.

Closely related to cloud migration acceleration is cost reduction. In today's highly competitive environment, retailers' margins are razor thin. One of the objectives of cloud migration is to cut costs. However, some CFOs get a sticker shock once migration projects are underway. The main reason for this disconnect is the lack of understanding of the legacy environment. Some retailers choose a lift-and-shift approach. The result is that they just move all the inefficiencies and useless models from on-premises systems to the cloud only to see the IT infrastructure cost going up rather than down.

EIIG helps retailers understand the flow of information before they modernize. It automatically pinpoints information that has no value for the business and identifies redundant data assets such as duplicate reports, code, logic, and tables to dramatically reduce the scope of migration. For example, with EIIG, a customer was able to eliminate 60% of their reports and cleans up 40% of their duplicated ETL jobs before they started the migration.

Often, in the complex retail supply chain environment, it requires several SMEs such as data engineers, domain experts, and business managers to come together to troubleshoot some issues. EIIG eliminates such triage costs by providing automated end-to-end traceability and visibility. In short it makes everyone a specialist, without needing to be one.

Another major way of reducing cost is through automation based on the bottom-up approach. When deploying EIIG, there is no coding involved and no need for hiring a team of expensive consultants.

In summary, Orion's EIIG provides retailers with a GPS-like system to navigate intelligently through their complex unified commerce supply chain information landscape. With EIIG, retailers can get a better understanding of what is going on in their complex network of supply chain systems to optimize their unified commerce supply chain operations. Leveraging information on the DNA level and with near real-time visibility into data movement, EIIG enables retailers to detect bottlenecks quickly, unlock the value of their data efficiently, cut costs, accelerate the pace of their digital transformation and innovation, and gain a competitive edge while optimizing profitability.

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