Bloor

InPerspective

InPerspective by Bloor

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Leveraging Data Management Partnerships for Enhanced Supply Chain Solutions with InterSystems Supply Chain Orchestrator™

This InPerspective paper will focus on the importance of data management in the development of supply chain solutions in general, the particular strengths of InterSystems technology solutions and the perspective of three key InterSystems' partners on how InterSystems technology has added value not only to their overall solution stack, but to the organisation overall.

InterSystems
Creative data technology

Introduction

In today's global marketplace, supply chain management plays a pivotal role in the success of businesses across various industries and, with the increasing complexity and interconnectedness of supply chain networks, the demand for efficient and effective solutions continues to rise.

Independent software vendors (ISVs) and systems integrators (SIs), working closely with organisations with supply chain challenges, are at the forefront of meeting these demands. However, for these technology vendors to provide a comprehensive solution to their customers they will need to ensure they are agile as technologies and customer demands evolve and mostly differentiate themselves from the wash of available supply chain solutions. In such cases, building and maintaining partnerships with key technology and service providers is a critical element in being able to truly excel in developing differentiated supply chain solutions.

While supply chains may be reliant on oil to keep them moving physically, data is critical to the flow of information that optimises them for timeliness, cost effectiveness, agility and reliability. Managing that data involves far more than having an effective database management system.

This InPerspective paper will focus on the importance of data management in the development of supply chain solutions in general, the particular strengths of InterSystems technology solutions and the perspective of three key InterSystems' partners on how InterSystems technology has added value not only to their overall solution stack, but to the organisation overall.

Let's have a look in a little more detail at the component parts of a good data management solution, and how they can add value to supply chain ISVs and SIs.
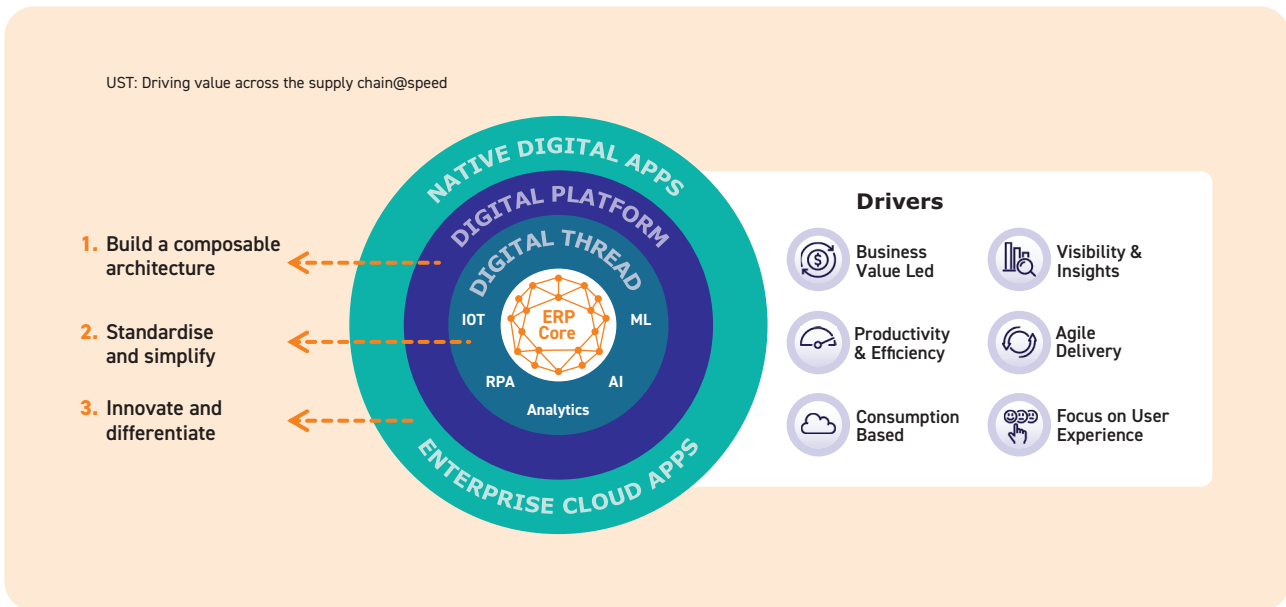

UST: Driving value across the supply chain@speed

1. Build a composable architecture
2. Standardise and simplify
3. Innovate and differentiate

NATIVE DIGITAL APPS
DIGITAL PLATFORM
DIGITAL THREAD

IOT · ERP Core · ML
RPA · AI
Analytics

ENTERPRISE CLOUD APPS

Drivers

- Business Value Led
- Visibility & Insights
- Productivity & Efficiency
- Agile Delivery
- Consumption Based
- Focus on User Experience

Fig 1 – Enabling a future-proof digital enterprise

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The fundamental role of data for supply chain optimisation

Having access to comprehensive data insights is a critical requirement of supply chain operations. Vendors of data management solutions specialise in collecting, processing, and analysing vast amounts of data related to supply chain operations. InterSystems Supply Chain Orchestrator offers a unified approach to unify data, providing capabilities for storing, processing, and analysing diverse types of data, including structured and unstructured data, in real-time. In the context of supply chain solutions, where data comes from various sources such as ERP systems, IoT devices, sensors, and external data feeds, having a unified decision intelligence platform for managing, integrating and analysing this data is invaluable. ISVs can leverage Supply Chain Orchestrator to create a centralised data repository that serves as a single source of truth for supply chain-related information, enabling better decision-making and optimisation.

This gives ISVs and SIs access to comprehensive prescriptive data insights that can drive informed decision-making and optimisation strategies. These insights encompass various aspects of the supply chain, including inventory levels, demand forecasting, transportation routes, and supplier performance. Armed with this information, developers can create targeted solutions that tackle specific pain points and inefficiencies within the supply chain, resulting in enhanced operational efficiency and cost savings.

The need for predictive analytics and forecasting

While organisations collect vast amounts of data, deriving actionable insights from it remains a challenge. Many organisations struggle to leverage advanced analytics and predictive modelling to optimise their supply chain processes. For ISVs and SIs collaborating with data management vendors that have made substantial investments in data analytics capabilities and talent, extracting valuable insights from supply chain data becomes crucial.

Predictive and, increasingly, prescriptive analytics and forecasting are invaluable tools for anticipating and acting upon changes in future demand, optimising inventory levels, and mitigating supply chain risks. Supply Chain Orchestrator enhances capabilities in advanced analytics and machine learning. It achieves this by incorporating preconfigured analytics cubes on various supply chain topics, including sales orders, shipments, purchase orders, inventory etc. All of these are easily configurable with no coding required and facilitate the development of business outcome based KPIs.

This enables ISVs and SIs to build predictive models, perform data-driven forecasting, and extract actionable insights from any data sources. By analysing historical data and identifying patterns, trends, and anomalies, they can help businesses anticipate demand, optimise inventory levels, and mitigate supply chain risks. The ability to embed analytics directly into supply chain solutions enhances their solution offering, enabling businesses to make smarter decisions and drive better outcomes.

The importance of integration and interoperability

Supply chain management for any organisation, involves a multitude of interconnected processes and systems, each generating a wealth of data. Integrating disparate data sources, applications and systems is essential for building holistic solutions that provide end-to-end visibility and control over supply chain operations. Data management companies excel in integrating diverse data sources, ranging from enterprise resource planning (ERP) systems to Internet of Things (IoT) devices and external data feeds. By leveraging their integration capabilities, software application developers can ensure seamless interoperability between different components of their solutions, thereby enhancing overall efficiency and effectiveness.

Supply Chain Orchestrator is a solution that has been designed specifically to enable supply chain leaders and their teams with a comprehensive view of end-to-end supply chain data. This includes data from within their own enterprise, suppliers, logistics carriers and customers. Data from all these sources are ingested into a supply chain specific, canonical data model (CDM) that includes API and Adaptors. This approach simplifies and speeds up the task of integrating data that doesn't always adhere to industry norms and taxonomies, into rationalised, normalised unified data for ease of analysis by the underpinning data platform. In addition, it leverages InterSystems Smart Data Fabric. Unlike existing data fabric tools, this Smart Data Fabric is a fully integrated architecture that goes beyond traditional data fabric tools. Unlike existing approaches, this Smart Data Fabric embeds a diverse set of analytics capabilities directly within the fabric. These capabilities, include data exploration, business intelligence, natural language processing, and machine learning. As a result, organisations can gain new insights easier and faster and power intelligent predictive and prescriptive services and applications. This is described by InterSystems as the 'last mile' of analytics and positioned as an essential capability for generating real value from analytics technology.

These robust integration and interoperability capabilities, enable ISVs and SIs to seamlessly connect their supply chain solutions with other systems, applications, and data sources. When integrating with ERP systems, transportation management systems, or third-party APIs, ISVs can leverage Supply Chain Orchestrator to build integrated supply chain solutions. These solutions streamline workflows and facilitate data exchange across the entire supply chain ecosystem. This interoperability ensures that supply chain solutions can effectively communicate and collaborate with other systems, maximising their value and utility. InterSystems Smart Data Fabric architecture leverages the investment in the existing solutions and enhances it with additional capabilities. This results in a much lighter touch, lower cost, and faster ROI along with ensuring data being fed into the models is accurate and relevant.

InterSystems Supply Chain Orchestrator Differentiation

Power your supply chain application ecosystem with a connective tissue providing four embedded technologies acting as one capability accelerating time to value and lowering total cost of ownership as one product.
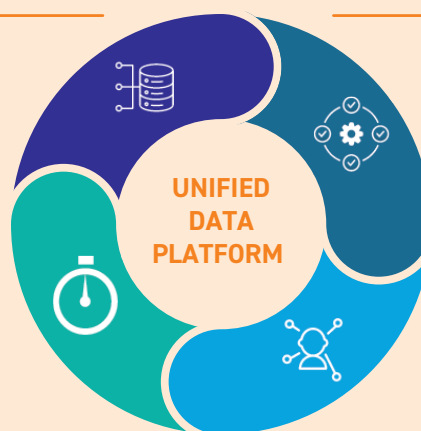
Consistent data
MULTI-MODEL DBMS

Harmonise and normalise disparate sources and formats – relational, non-relational, streaming, etc. – for consistent and accurate data representation.

Real-time data and analytics
MULTI-WORKLOAD DBMS

Ingest, process and analyse data in real-time without delay and at scale, without moving or copying the data for analysis.

UNIFIED DATA PLATFORM

Intelligent processes
INTEROPERABILITY

Enable seamless, accurate, connected supply chain orchestration and AI-enabled intelligent business processes.

Actionable insights
ADVANCED ANALYTICS

Real-time advanced analytics BI, ML, AI, NLP – for descriptive, predictive and prescriptive insights in the moment.

InterSystems™
Supply Chain Orchestrator

Fig 2 – InterSystems Supply Chain Orchestrator differentiation

Real-time visibility and tracking

Real-time visibility and tracking of goods throughout the supply chain are essential for monitoring shipment progress, identifying bottlenecks, and responding swiftly to disruptions. Data management companies offer solutions for real-time monitoring and tracking of inventory, shipments, and transportation routes. These solutions leverage technologies such as RFID, GPS, and sensors to provide granular visibility into the movement of goods across the supply chain. By integrating real-time visibility and tracking capabilities into their solutions, software application developers can empower businesses to make data-driven decisions and proactively manage logistics operations, ultimately improving efficiency and reducing costs.

Scalability and flexibility

As businesses grow and evolve, their supply chain needs become increasingly complex and dynamic. ISVs and SIs must build solutions that are scalable, performant and flexible enough to accommodate changing requirements and scale with the business. Supply Chain Orchestrator is designed for scalability, offering high-performance data processing and transactional capabilities that can handle large volumes of data and support growing user bases. ISVs can build robust and scalable supply chain solutions on the decision intelligence platform, ensuring that their applications can scale seamlessly to meet the evolving needs of businesses, thereby future proofing their investments and maximising return on investment.

Compliance, security and risk management

Supply chain operations are subject to various regulations, standards, and compliance requirements, particularly in industries such as healthcare, food and beverage, and pharmaceuticals. Data management vendors specialise in regulatory compliance and risk management, ensuring that solutions adhere to relevant laws and standards. By partnering with these companies, software application developers can mitigate compliance risks and ensure their solutions meet the necessary regulatory requirements. This compliance assurance not only reduces legal liabilities but also enhances trust and credibility with customers and stakeholders.

Additionally, InterSystems technology offers robust security features, including data encryption, access controls, and audit logging, to protect sensitive information and ensure compliance with regulatory requirements. ISVs can leverage these built-in security capabilities to build secure and compliant supply chain solutions that safeguard data integrity and confidentiality.

Innovation and competitive advantage

Collaboration between software application developers and data management vendors fosters innovation and differentiation in the market. By combining their respective strengths and capabilities, partners can develop cutting-edge solutions that offer unique and competitive advantages. Whether it's leveraging artificial intelligence for demand forecasting or blockchain for supply chain traceability, these innovative solutions set businesses apart from their competitors and drive business growth. Moreover, continuous innovation ensures that solutions remain relevant, agile and competitive in a rapidly evolving marketplace, positioning businesses for long-term success.

Developer productivity

Speed and agility have become defining requirements in any software development environment. But often the integration challenges posed by legacy systems and the ingestion of large amounts of data from multiple sources can slow down development to a point where that organisation considers starting from scratch. This can often be sub-optimal and, in our research, we have found that InterSystems technology is designed to enhance developer productivity, providing a range of tools and resources to accelerate application development and deployment. From Low-code/no-code capabilities, integrated development environments (IDEs) to pre-built components and libraries, ISVs can streamline the development lifecycle and bring supply chain solutions to market faster. InterSystems platform's support for multiple programming languages and frameworks further enhances flexibility and enables developers to work with familiar tools and technologies. This allows the ISV or SI to accelerate time to value.

Support and ecosystem

In an IT world where functional differentiation can be hard to find, let alone define, the support provided for ISVs and SIs by the software vendor becomes of paramount importance. InterSystems provides comprehensive award winning support and a vibrant ecosystem of partners, developers, and customers, offering ISVs and SIs access to resources, expertise, and best practices. Whether seeking technical assistance, training, or collaboration opportunities, partners can benefit from InterSystems' extensive network and community. This support ecosystem enables them to overcome challenges, leverage industry insights, and drive innovation in their supply chain solutions.

In conclusion, partnerships between software application developers and data management vendors are instrumental in developing innovative and robust supply chain solutions. These collaborations provide access to comprehensive data insights, integration capabilities, predictive analytics, real-time visibility, scalability, high performance, compliance expertise, and opportunities for innovation. InterSystems Supply Chain Orchestrator, with its unified data management, advanced analytics, scalability, integration, security, developer productivity, and support ecosystem, serves as a robust foundation for building innovative and effective supply chain solutions that adapt to evolving business needs, in any industry. By harnessing the capabilities of the platform, ISVs and SIs can create differentiated and value-added solutions that drive efficiency, visibility, and resilience across the entire supply chain.

The partner perspective

As part of this InPerspective report InterSystems asked Bloor Research to speak to three of its partners, evaluate their experience using InterSystems technology and test whether or not our evaluations are born out in practice.

Two of the partners, M-Tech and CDS, have been InterSystems partners for around 30 years and use the InterSystems data platform as the development and database environment for their core customer offering, supply chain focused, ERP systems. The third is UST, a large Global digital trans-formation software vendor that works with customers to decipher core supply chain problems, then design, build and execute solutions that solve them. They have been an InterSystems partner for over 2 years and have launched two new products built on InterSystems technology – UST Omni, a next generation, SaaS solution for end-to-end visibility and orchestration across the supply chain, and UST Optum for supply chain business outcome based, Optimisation-as-a-Service.

In speaking with Graeme Lea, Managing Director at Computer Design Systems Ltd (CDS), who have developed CODAS, the UK and Ireland's number one software solution for downstream Oil and LPG distributors, and Paul Martin, Operations Director at M-Tech Computers Ltd, with their AMO ERP application which has carved a particular niche with small and medium sized businesses in the retail eCommerce & Mail Order/Catalogue sectors, I heard a number of very consistent messages about the strength of the relationship with InterSystems and the performance of its technology.

> **...we don't need to call upon third line tech support from InterSystems very often means that it stays in the background, and everybody just enjoys using great software.**

For both Graeme and Paul, performance and reliability are key factors in their ongoing development of their customer facing systems. Graeme commented, *"The InterSystems data platform works very well for us. The fact that it's reliable, dependable and we don't need to call upon third line tech support from InterSystems very often means that it stays in the background, and everybody just enjoys using great software."*

For Paul, dealing with small and medium sized businesses, having a system that used hardware resources very efficiently was a major differentiator. *"InterSystems technology enabled us to run large applications on very small boxes. It's very efficient and very fast, and we haven't had to worry about performance or scalability at all."*

The fact that InterSystems technology provides an integrated development and data management capability has been very important in enabling both CDS and M-Tech to quickly develop new features and functionality to take advantage of emerging technologies and changes in their markets. Graeme described how developing and integrating a vehicle routing system into CODAS gave them a distinct market advantage over their competitors. *"With the back up (of InterSystems), there are certain areas where we know we're better. So things like routing logistics, we've invested a lot of time in our mapping and routing tool."* For M-Tech this integrated capability enabled them to develop a web-based e-commerce front end that integrated seamlessly with the back-end functions of the established AMO application *"You often find that customers have ended up buying an ERP solution from one vendor and the e-commerce web site from another vendor which they then have to stitch together. It is quite unusual in the market, but we have been enabled to develop an integrated ERP and web-commerce front end which gives us a strong differentiation."*

> **InterSystems technology enabled us to run large applications on very small boxes. It's very efficient and very fast, and we haven't had to worry about performance or scalability at all.**

In comparison to CDS and M-Tech, the relationship between UST and InterSystems is much newer. While many of the features of the technology and the relationship building approach of InterSystems were a strong factor in UST's decision to the partnership, the ability, out-of-the-box, of InterSystems Supply Chain Orchestrator to ingest and integrate data from a wide range of sources through modern APIs, in particular SAP, was key.

"UST developed UST Optum bringing together its supply chain expertise, SAP's Business Technology Platform and capabilities of InterSystems' world-class data platform, to provide the right solution for an organisation's needs."

When I asked why UST chose InterSystems technology for the on-going development of its supply chain excellence strategy, Jonathan Colehower, Managing Director, Supply Chain Management answered, *"It's not just another analytics platform. Through advanced data modelling and features like Embedded Python, it is highly consumable. The ease and speed of integration is great for interoperability. It's also fast and highly scalable."*

InterSystems technology has also been key in the development of UST's Omni solution. As Jonathan put it *"InterSystems technology really serves as the brain behind*

UST Omni. Our customers have been able to cut inventory by 10% and improve customer service by 15%. Nobody understands the power of predictive analytics better than InterSystems."

Among all the individual performance, scalability and analytics capabilities that these three partners said they benefited from, what consistently stood out was the unwavering support they received from InterSystems.

Graeme recounted an instance where InterSystems pulled out all the stops for CDS. *"We host open days from time to time at CDS, to present our roadmap to existing and prospective clients and to reinforce the value in partnering with us.*

During preparation for one such event, it became clear that key decision makers in some of our larger clients had no prior exposure to InterSystems. Understanding the importance of their role in our partnership, InterSystems flew in a senior executive and one of their top software architects from the States to provide support for the event, which proved instrumental in providing confidence in our data platform and in further galvanising important client relationships."

Paul hasn't encountered such a situation, but he expresses great satisfaction with the reliable and appropriate support help received. *"We know that InterSystems are there when we need them."* Rounding off, Jonathan wanted to call out InterSystems line of business focus. He put it very simply. *"These guys know supply chain!"*

> " Our customers have been able to cut inventory by 10% and improve customer service by 15%. Nobody understands the power of predictive analytics better than InterSystems. "

The bottom line

At Bloor, we believe that this combination of technical excellence, a strong support culture and real supply chain knowledge and experience should give ISVs and SIs looking to deal with all the rapid changes in global supply chains and new technologies, confidence in the abilities of InterSystems to deliver.

" InterSystems technology really serves as the brain behind UST Omni. "

About the author

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Navigator,
Research Director: IT Infrastructure

Paul has had a 40-year career in industry that started in logistics with a variety of operational management roles. For the last 33 years he has worked in the IT industry, mostly in sales and marketing, covering everything from mainframes to personal computers, development tools to specific industry applications, IT services and outsourcing. In the last few years he has been a keen commentator and analyst of the data centre and cloud world. Until recently he was also a non-executive director in an NHS Clinical Commissioning Group.

Paul has a deep knowledge and understanding about the IT services market and is particularly interested in the impact of Cloud, Software Defined infrastructure, OpenStack, the Open Compute Project and new data centre models on both business users and IT vendors. His mix of business and IT experience, allied to a passionate belief in customer focus and "grown-up" marketing, has given him a particular capability in understanding and articulating the business benefits of technology. This enables him to advise businesses on the impact and benefits of particular technologies and services, and to help IT vendors position and promote their offerings more effectively.

Bloor overview

Technology is enabling rapid business evolution. The opportunities are immense but if you do not adapt then you will not survive. So in the age of Mutable business Evolution is Essential to your success.

We'll show you the future and help you deliver it.

Bloor brings fresh technological thinking to help you navigate complex business situations, converting challenges into new opportunities for real growth, profitability and impact.

We provide actionable strategic insight through our innovative independent technology research, advisory and consulting services. We assist companies throughout their transformation journeys to stay relevant, bringing fresh thinking to complex business situations and turning challenges into new opportunities for real growth and profitability.

For over 25 years, Bloor has assisted companies to intelligently evolve: by embracing technology to adjust their strategies and achieve the best possible outcomes. At Bloor, we will help you challenge assumptions to consistently improve and succeed.

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