



AI is exposing fashion's data problem



K3 Fashion
Solutions

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Introduction

AI is well and truly here, delivering on many of the promises fashion has heard over the last several years. Virtual try-ons are creating more personalised shopping experiences, agentic commerce is shortening the journey between discovery and checkout, and LLMs are becoming a genuine source of referral traffic for brands.

Such developments show how quickly AI is moving from experimentation into something capable of producing tangible commercial outcomes. They also give fashion businesses good reason to explore what the technology could do elsewhere.

The next wave of applications will likely reach further inside the business, helping companies reduce costs and improve how work gets done. Realising that potential, however, will depend on having the right data available for AI to work with.

Behind every collection sits an enormous amount of operational data, including product attributes, size curves, suppliers, landed costs, wholesale commitments, and replenishment rules. Much of it is spread across multiple systems and teams.

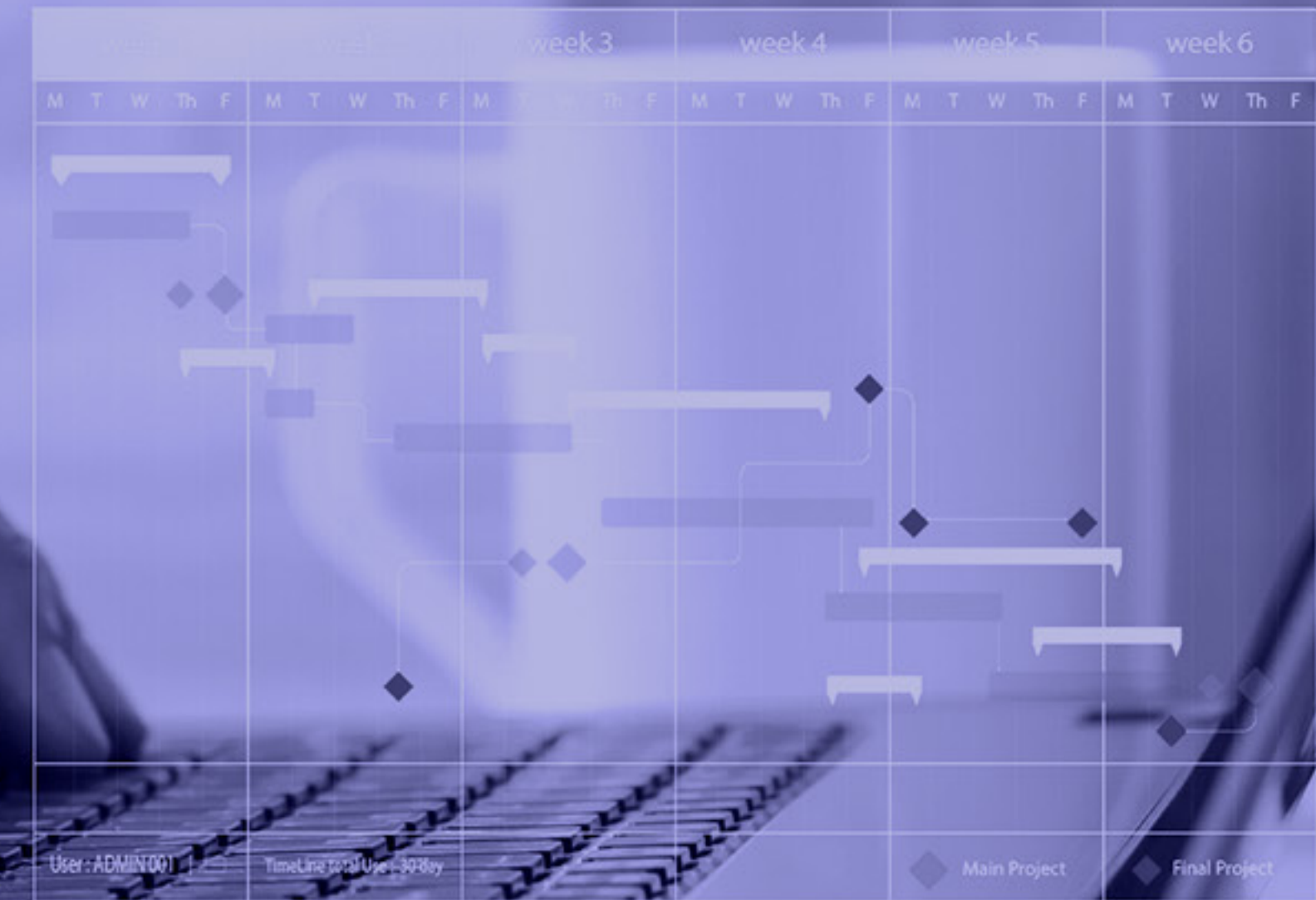
None of this is new, but the growing use of AI is making the consequences much harder to ignore. For all its potential, the technology depends on the right data foundations. Without them, businesses will find it considerably harder to gain the edge they are looking for.

And that is precisely why the industry needs to look inward and address the elephant in the room: the state of its data.



Chapter 1

Everyone's skipped the boring bit



The possibilities of AI seem almost endless. Everyone wants a piece of the pie. It's no wonder, then, that organisations across the globe are clamouring to gain an edge over the competition, especially in fashion where time to market and speed to value are vital to commercial success.

There are abundant developments already driving tangible outcomes, ranging from AI-driven forecasting and automated buying recommendations through to smarter replenishment, digital product workflows, and agentic operations.

Each one holds the potential to reduce costs, improve decisions, or remove hours of manual work; however, none of these use cases change the fact that rushing headfirst into AI projects without first doing the groundwork is a mistake.

You only need to look at the tech stacks used across a given organisation to see where the pitfalls surface. At the enterprise end in particular, it's not uncommon for businesses to rely on ERP, PLM, WMS, POS, portals, spreadsheets, and other systems from different vendors.

Rarely does one tech provider cover everything those systems are used for, hence reliance on multiple platforms grows as a company scales and its needs become more complex.

This is fine in principle, even if it poses challenges around where data lives and which version is actually correct. AI can, in theory, be used with them all. Take Microsoft as an example.

Copilot and agentic capabilities are already being introduced across Dynamics 365 to help users summarise information, automate tasks, and respond to events within the system.

It works... to a point.

The distinction lies between asking AI to complete a task inside one system and asking





it to understand a process that runs through several. Summarising a purchase order held in an ERP is relatively contained, while working out what a supplier delay means for stock availability, wholesale commitments, delivery dates, and margin is something else entirely.

The task may begin in the ERP, but the answer could depend on information held elsewhere. AI needs access to each relevant part of that process, alongside some understanding of how one change affects the next. Without it, an agent might complete the task it was given 'perfectly' while still producing an answer that makes little sense for the wider business.

The more disconnected the data is, the harder it becomes to generate actionable intelligence on what to do next. AI may well recommend dropping the RRP based on sales data, but if the cost to produce an item makes that infeasible, the recommendation is useless.

The reverse could also happen. It might suggest increasing the retail price to improve margins, but if customers won't pay it, the business could wind up with stock it cannot clear before being forced into discounting.

These are intentionally high-level examples to show what could happen when AI is expected to shape decisions based on information spread across different places. They're not meant to perfectly encapsulate why it is so specifically challenging for fashion.

For that, we need to look deeper at why the industry has such a problem with data to begin with.

Chapter 2

Fashion data comes in many different shapes and sizes



You could pick almost any product in fashion and it would take mere seconds to see just how much information is attached to it.

A t-shirt, for example, is never just a t-shirt. It is designed, created, and sold across multiple colours, sizes, and fits, each carrying its own SKU and sitting within a particular collection or season. It is then sold through retail, eCommerce, and wholesale in various regions.

Behind the product itself sits another ginormous layer of data. The fabric used could be sourced from one country, dyed in another, and assembled somewhere else entirely. Different variants may require different components, suppliers, or production methods. Duties, freight costs, and surcharges alter the landed cost, while minimum order quantities and pack configurations determine how much can be bought and where it can be allocated.

Some of that information will be recorded in the PLM, with costs and purchase orders sitting in the ERP, sales flowing through the POS, and warehouse availability kept in the WMS. Supplier updates may then arrive through third-party portals, emails or spreadsheets, depending on how each supplier prefers to work.

If it sounds complicated, it's because it is. Yet people have learnt to operate this way regardless. A buyer may know that the figures in one report are several days behind, just as a merchandiser might cross-reference two spreadsheets before trusting a stock position or a sourcing team might know which supplier lead times can be taken at face value and which can't be.

AI, on the other hand, knows none of that unless it is explicitly told.

Think about how most people already interact with tools such as ChatGPT, Claude or Gemini. If these models are given a vague prompt, the result is usually vague in equal measure. The technology can also make things up and





present its responses with enough conviction to make them sound plausible. The same principle applies when AI is put to work across a fashion business, except the consequences go far beyond receiving a mediocre answer to a prompt.

If a system is asked to recommend how much of a product to buy, the answer will depend on more than historic sales. It may need to know current stock, existing orders, expected demand, and whether certain sizes were unavailable during the period analysed. A product selling poorly could simply have spent most of the season without the sizes customers wanted. Those details can completely change the recommendation AI makes, which is why it's essential that it's fed properly.

The last thing any organisation wants is its buyers ordering too much of a product because the system mistook markdown-driven sales for genuine demand, or merchandisers sending the wrong stock to the wrong stores because local size preferences weren't included in the analysis. The recommendations can be

logical based on individual datasets, while still being completely wrong in the grander scheme of things.

Fashion has to bear this in mind. It's not simply a case of slapping AI on top of operations and expecting magical results. There is a considerable amount of groundwork that must first take place to ensure data from across a business is usable together for AI.

Chapter 3

Data models are where technology becomes useful for fashion



If you're sat there wondering what exactly making "fashion data work together" looks like, consider that a designer may initially work with a tech pack in a PLM or ERP before sourcing works with suppliers to determine how and where the garment can be made.

Afterwards, buyers place orders, finance monitors the costs, warehouses receive the stock, and merchandisers decide where each size and colour should go. Each team works with the same item's data, just with individual pieces of information stored in different places.

Since AI cannot work that way, the data needs to be brought under one umbrella so that it is structured and accessible. One way to think about that is a fashion data model.

Rather than having each strand of information isolated within the system that created it, the

model allows data from across the business to be accessed and understood together.

This enables the technology to generate richer insights and recommendations, while also providing the foundation for future experimentation. Companies can introduce new agents and explore different use cases without first spending months rebuilding the same underlying connections and configurations needed to get an AI initiative off the ground.

Once that work is done, the potential use cases start to stack up. A pricing strategy agent, for example, could monitor sales and purchase prices to identify where margins are being squeezed, alert teams to changes and suggest updated price lists. Instead of solely assessing sales performance, it accounts for what products cost before making recommendations.

Demand and supply agents could go further by modelling the impact of delays or sudden changes in demand. Imagine a heatwave is approaching and a retailer wants to expedite a





AIR FREIGHT
BATCH: #07JH29



shipment of swimwear. Sending it by air might get the stock into stores while demand is high, though the additional logistics costs could wipe out the margin entirely. An agent working across product, sales, supply chain, and financial data could model the available delivery options and show how each affects the timing and profitability before anyone commits.

Alternatively, you could look at agents that reduce the work involved in creating BOMs. If a new t-shirt is almost identical to one sold last season, there is little value in rebuilding everything from scratch. AI could identify the closest existing product, carry over the relevant details, and leave teams to manage whatever has actually changed.

These potential use cases could provide substantial time and cost savings for businesses, but they will depend on fashion data being structured and accessible enough for AI to understand the decisions it is being asked to support and the tasks it is being asked to perform.

In the end, there will always be another agent, model, or emerging capability around the corner. The important thing to remember is that companies won't get far with any of them until their underlying data is in order. Sort that first, and AI becomes far better placed to deliver on its potential across the fashion business.

SEA FREIGHT
BATCH: #07JH31



Thanks for reading!



Wondering who we are? We build the fashion-specific functionality and data structures that make Microsoft's Dynamics 365 ERPs work for the industry.

Our solutions create a connected fashion data model that supports how businesses create, plan, buy, sell, and deliver, while giving new AI capabilities the grounding they need to be effective.

If that sounds relevant to where your business is heading, we'd be happy to talk.

K3 Fashion Solutions helps fashion and lifestyle brands simplify complexity, make better decisions, and respond faster to change.

Built natively in Microsoft Dynamics 365, its solutions deliver the fashion-specific data model and functionality required to manage collections, products, sourcing, inventory, finance, wholesale, retail, and eCommerce within a single operating platform and source of truth.

This connected platform powers automation, AI, and intelligent agents, enabling organisations to work more efficiently, gain deeper insights, and adapt with confidence. Through a global network of certified partners, K3 Fashion Solutions helps fashion and lifestyle brands worldwide operate with confidence, respond to change, and scale for the future.

