



White Paper

Why Organizations Must Make Data Central To The Digital Commerce Landscape

Introduction

The foundation of commerce has not changed much in the past century. Whether it was strolling in and out of the stores on Main Street to find and purchase your weekly goods, dog-eared the toy catalog to ensure Santa brought all the right presents, or engaging in midnight online shopping sprees from your phone — the art of commerce has always relied on sellers attracting customers, customers finding products, and products getting delivered, be they by horse-drawn carriage, the US Postal Service, or the Fed Ex delivery van. How we ensure consumers find our products, buy and receive them has evolved rapidly in the past 20-25 years. As of 2023, the number of digital buyers stands at 2.64 billion, which equates to 33.3% of the global population ([eMarketer](#)). In this ever-growing and ever-evolving market, sellers like Amazon and Walmart have set the benchmark for market expectations.

Central to this evolving commerce ecosystem is data. The total volume of data worldwide is expected to reach 181 zettabytes by 2025 ([Statista](#)). If you can't get your head around that figure, understand this: the volume and velocity of data will continue to grow exponentially. To drive differentiation, you must find a way to manage data so that customers can easily find the products they need and trust the experience enough to complete the purchase journey. There needs to be more than current methods to collect data and effectively leverage it as an asset.

As organizations wrangle data for various functions, they pile on systems, such as ERPs, CRMs, and POSs. The data residing in these systems is usually not usable across departments. ERP data, for example, needs to be heavily curated and enriched before using it for customer-facing content. The data may be irrelevant, inconsistent and inaccurate. The data may also be neither interoperable nor portable, and staff may need to work long hours to move this data across silos and fine-tune it to meet cross-departmental requirements. Finally, as data volume builds, organizations often rush to tack on even more technology to handle the challenge, the solution is rarely fool-proof, and leads to more

technical debt — when organizations must repeatedly (and redundantly) work on fixes to ensure they get the data they need.

We often blame the data, but data is not the culprit. Instead, it's a matter of how the data is managed. This understanding sets the stage for a revolutionary approach to data management that puts data at the center, rather than the technology and software used to manage it.

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Opportunities Abound in Digital Commerce

Digital Commerce Will Continue To Accelerate

With the increasing speed of technological advancement, material science, computing, data management, quantum computing, and other variables that impact commerce, the growth we experienced in the past 25 years will repeat within the next 5-10 years. Most organizations are unprepared for a future that is approaching this fast and furious.

Even before the pandemic hit in 2019, the pace of digital commerce growth already seemed meteoric. eCommerce sales jumped to \$26.7 trillion in 2019, 4% more than in 2018 (UNCTAD). While this growth was inevitable, events like the pandemic accelerated the growth rate and elevated customer expectations. As businesses strive to provide frictionless commerce experiences to customers, the increasing gulf between customer demands and business capabilities to meet these demands will create even more friction for these businesses. As they deal with higher volumes of data and the need to meet customer expectations, they will acquire more technology, need more human resources, or both.

'Composable' Is Here to Stay

Composable technology is revolutionizing digital commerce from the inside out. As organizations look to increase agility and responsiveness to rapidly changing market demands, composable technology empowers them with modern, flexible, modular solutions. With the advent of paradigms such as MACH (Microservices, API-First, Cloud-Native, and Headless) architecture, the practicality of composable technology far outweighs that of monolithic systems. Composable will become an inevitability rather than an option, and data will continue to be the most critical and foundational driver of success.

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The Current State of Frictionless - Where Data Fits In

Though ripe with opportunities, the current state of digital commerce typically represents a system in transition. Customer expectations are increasing, and so are market sizes. Composability offers organizations a greater chance to fast-track their response to customer expectations. However, it also creates the possibility of knee-jerk reactions that only exacerbate business problems even further. Even without composable solutions, it's not unusual for organizations to strive to achieve frictionless — frictionless for their customers, but not necessarily for the organization itself.

As a result, one begins to encounter "data problems." These problems appear as symptoms in the customer and organizational experience, including:

- Poor findability
- High product returns
- Inability to meet customer demands
- Presence of useless, inconsistent, or untraceable data that fails to facilitate the buying journey
- Absence of a single source of truth
- Absence of business insights

The problem here is not the data, but how we manage it. In most cases, data is managed by multiple departments and users, and it resides in many systems. Keeping track of it is not easy. The challenge compounds when organizations want to scale. As they ramp up technology to deal with this high volume of data, the solutions are not always right, leading to the continuous need to fix and fine-tune data for better efficacy.

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Identifying Friction In The Data Value Chain

So where do the problems start? Is it data ingestion? Or is it poor enrichment practices? Some may also argue that the true challenge lies in distribution. Organizations rely on systems to get data and then fix this data for business requirements. That said, these systems are not designed for data management; instead, these systems fulfill the needs of specific functions. For example, a PIM creates content, an ERP manages compliance and risk management, accounting, project management, etc., and a CRM manages customer relations. When these systems create data, it usually reflects the tenets of the function using it.

Friction #1 Siloed Data

When data resides in different silos and departments, there isn't a single source of truth. For example, when the content teams pull data from ERPs or spreadsheets, it usually involves a high degree of normalization and fine-tuning to prepare this data for a customer-facing platform; the effort is repetitive, time-consuming, and highly redundant. Business functions face challenges with both availability and accessibility. Even when they get their hands on data, there are always concerns about this data's quality, completeness, and consistency.

Friction #2 Lack of Interoperability And Portability

When data is not centralized and governed, business functions and systems cannot easily share information while maintaining referential integrity. Altering data to fit design or functional requirements also leads to more time spent cleaning and curating data, security and regulatory risks, and delayed time-to-value. In other words, organizations cannot create, exchange, and consume data while maintaining clear shared expectations for the shared data's content, meaning, and context.

Friction #3 Burgeoning Technical Debt

For most organizations in the digital commerce ecosystem, data is constantly growing and evolving, as are the applications of this data. Most monolithic technology solutions used to manage this data focus on functions (for example, CRM data is all about customer relations, while PIM data serves customer-facing channels). When the response to growing data problems is to tack on even more technology and "quick fixes," businesses find themselves stuck in redundancies with time and cost implications, implications that organizations tend to accept as an inevitability that can take as long as 10 years to retire. Studies suggest that organizations spend between 23%-42% of their development time tackling technical debt. Another McKinsey study indicates that the cost of technical debt can range from 15%-60% of every dollar spent.

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Get Straight to The Data, With Pivotree DaaS

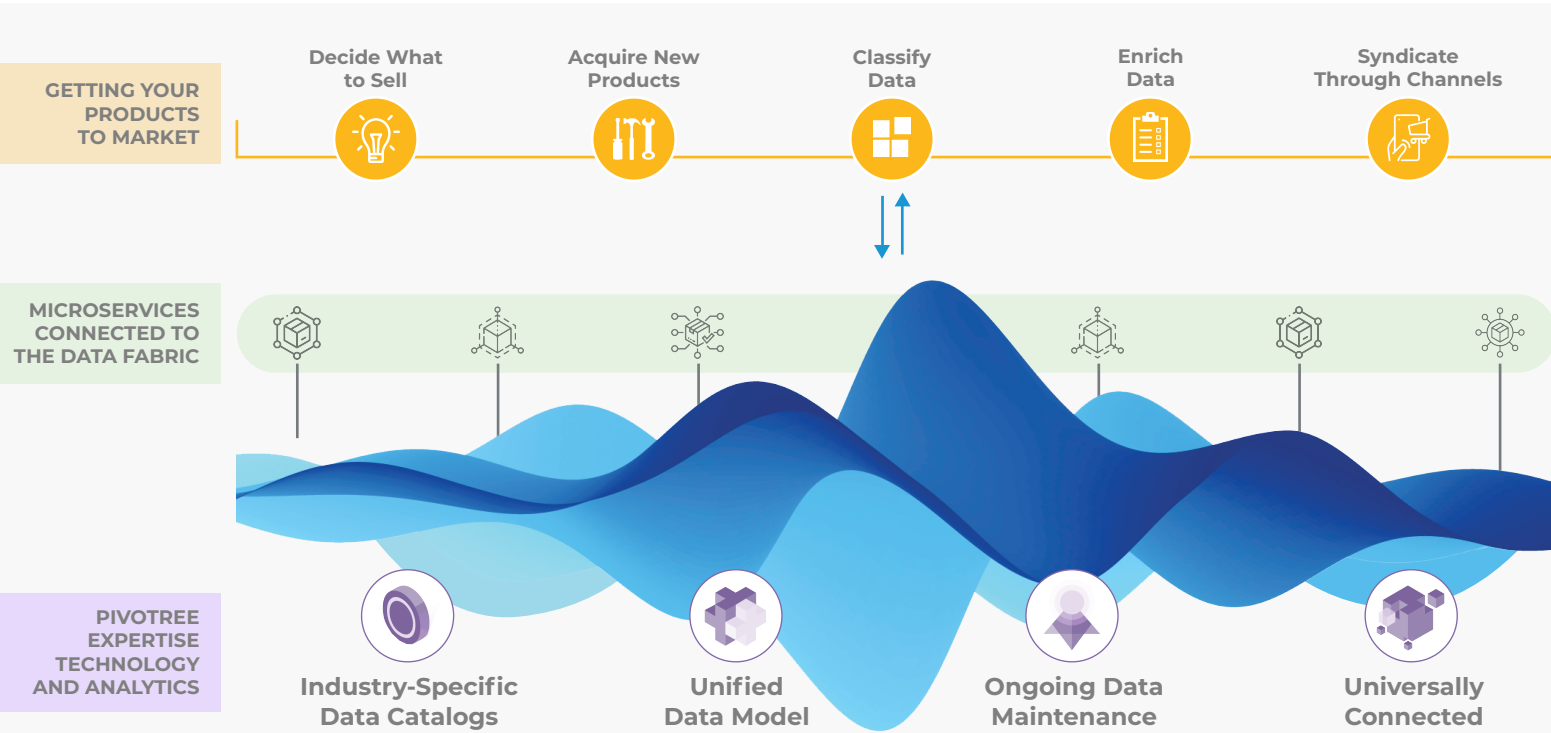
While organizations spend endless amounts of time and resources trying to fix their data with technology solutions, Pivotree Data-as-a-Service (DaaS) circumvents this need. DaaS is an end-to-end solution that streamlines the data supply chain, reducing friction at every step of the data journey — from onboarding and enrichment through distribution. Driven by automation and machine learning and built on the foundation of enterprise governance and data stewardship, DaaS powers organizations to remain agile through evolving commerce ecosystems and changing customer expectations.

Built on a flexible data fabric with integrated API microservices, DaaS makes it easy to put your data to work without investing in another new system or platform. DaaS is a turnkey composable managed service to ensure speed-to-market, scalability, and access to business insights. From product acquisition — knowing what to buy and sell — to quickly classifying, enriching, and optimizing your product descriptions and ensuring sales channel readiness, this data-as-a-service offering allows your data to work for you.

Pivotree DaaS uses out-of-the-box frameworks for taxonomy, schema, core attribution, and other aspects of data management, along with plug-in integrations, so data can freely flow through the systems and processes that need it. It allows our clients to customize the output and leverage this "ready" data as a strategic differentiator. By applying automation at every process step, organizations can cut out most menial work (~80%) and leverage headcount to engage in thought leadership rather than having an army of staff dedicated to producing and managing data. Using AI and ML ensures speed and scale and drives quality and governance with ongoing learning and improvement.

How Does The DaaS Data Fabric Work

With Pivotree DaaS, you get a *data fabric* — an architecture of data services that drive capabilities across multiple endpoints spanning a variety of environments. This data fabric allows organizations to manage and monitor data, and related applications, regardless of where they reside in the commerce ecosystem.



Machine Learning Accelerates Data Onboarding

Built on the tenets of technology, expertise, and analytics, the fabric leverages various microservices to connect different moving parts in the data lifecycle: deciding what to sell, product acquisition, data classification, data

enrichment, and channel sales. When a process or system needs data, it's simply "dropped" into this fabric, with AI and ML facilitating unique data requirements.



Data That's Ready to Serve

With Pivotree DaaS, organizations get more than a one-and-done solution to "fix" data at any given touchpoint. DaaS is end-to-end, which drives data availability, usability, interoperability, and integrity through the value chain.

Right from ingestion and enrichment through distribution, followed by insights about your business and your results, Pivotree DaaS is focused on giving organizations ready-to-use data assets.

Fuels Commerce

Accelerates product onboarding from weeks to days*

Reduces SKU costs by 75%*

Ensures enterprise data stewardship governance across the board.

Boosts Supply Chain

Improves revenues

Minimizes returns

Enhances customer experience and loyalty with clean, curated, and enriched data

Drives Insight

Integrates your systems and your data

Provides business-ready insights to drive thought leadership

Powers Speed To Market

Automates manual processes to gain efficiencies, lowering costs and shedding weeks from getting your products channel ready

*All results from actual clients using DaaS

Conclusion

When the Information Age (the Digital Age, Computer Age, or Silicone Age) began in the mid-20th century, there was widespread optimism about how technology would revolutionize world poverty, disease, environmental concerns, etc. So when the commerce industry began to leverage technology, it wasn't surprising that the impact was monumental. However, it's become increasingly evident that we need more than technology to achieve better business outcomes.

Undoubtedly, technology has ensured that digital commerce has reached critical mass in the past decade or so. In fact, according to estimates: the digital commerce market is expected to grow at a CAGR of 27.15% from 2022 to 2027, with the market size forecast to increase by USD 12,951.56 billion. With a growing market, organizations must also deal with increasing complexity in the commerce ecosystem and an ever-growing tapestry of technology options and advancements. Nowadays, the challenge is not the absence of technology but the preparedness to make the most of it.

It's essential, therefore, that we circle home to data. Organizations continue to invest heavily in new technologies to solve old data problems. That's like moving into a new home and filling it with rickety, old furniture. In an ecosystem driven by a technology feeding frenzy, we often overlook the need for innovation. Because the terms 'technology' and 'innovation' are used interchangeably, the true value of the latter gets lost in translation.

DaaS is all about bringing organizations what they need the most — ready-to-use data.

Innovation breeds technology but is not limited to it. In fact, from the commerce industry point of view, innovation enables organizations to break free from the shackles of limiting technology and surge forward while reducing technical debt. Pivotree Data-as-a-Service (DaaS) and the data fabric provide a means to create data as an asset in perpetuity. Irrespective of the systems dropped into this fabric or the outcomes required, the data fabric moves to fit functional requirements (with automation, AI, and ML) and returns to its original state of flexibility while acting as a centralized source of truth. So, when parallel innovations such as "composable technologies" are the order of the day, organizations are not left wrangling with even more data complexity to fulfill the ever-increasing number of silos.

DaaS is all about cutting out the technology/software middleman and bringing organizations what they need the most — ready-to-use data. This data will not be a flash in the pan or a one-and-done solution requiring constant system updates. Once in place, Pivotree DaaS will enable you to stay agile and flexible to keep pace with ever-evolving commerce dynamics.

Why Pivotree

Pivotree designs, builds, and manages frictionless commerce experiences for brands and their customers around the world. When customers trust they can find, buy and get the products they want, when and how they want — we call that experience frictionless commerce. And Pivotree is leading the way. As a global collective of talented people passionate about shaping the future of frictionless commerce, Pivotree provides end-to-end solutions and services in Commerce, Data Management, and Supply Chain for hundreds of brands worldwide.

Contact us for more information on how we can help solve your data challenges.
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