

AI & DISTRIBUTORS

The AI-Guided **Buying Gap**

What 37 of North America's Largest Distributors Reveal About the Next Era of B2B Commerce

McFadyen Digital's 2026 AI-Guided Buying Maturity Study



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Executive Summary

Between May and June 2026, McFadyen Digital assessed the AI-guided buying maturity of 37 of North America's largest distributors across nine sectors: pharmaceutical, foodservice, industrial MRO, technology, electrical and infrastructure, building products, HVAC and specialty, metals, and auto parts. Each company was scored on a 25-point index spanning five dimensions: assistant presence, product discovery intelligence, B2B workflow support, AI and digital innovation signaling, and enterprise readiness. Evidence came from public storefronts, investor materials, earnings transcripts, trade coverage, and vendor case studies; capabilities behind customer logins were scored only on announced and reported evidence.

The headline finding is a gap. Fifty-nine percent of the companies studied actively promote AI investment in investor materials and on earnings calls. Only 16%, or six companies, have built AI meaningfully into how customers find, evaluate, and purchase products. The average score is 14.2 out of 25, squarely in the "Modern B2B Commerce" tier: digitized transactions, intelligent almost nowhere. Roughly half the group is spending real money on AI, including demand forecasting, dynamic pricing, warehouse automation, and internal copilots, while their customers still buy through keyword search, static catalogs, and phone calls.

The leaders are Ingram Micro (24), W.W. Grainger (23), Watsco (22), and a three-way tie at 21 among Thermo Fisher Scientific, Sysco, and Ferguson. What separates them is not a chatbot. Each connected AI to the systems that power buying, including catalog, account pricing, inventory, order history, and quoting, and put it to work inside the purchase workflow. Ingram Micro's intelligent assistant converted more than 100,000 opportunities into orders in 2025, at three times the typical conversion rate, a multiple that reached nearly four times by mid-2026. Sysco attributes \$450 million in incremental sales to AI personalization in Sysco Shop. Thermo Fisher put a generative AI assistant directly on its product pages.

Five key takeaways

1.The gap is connection, not technology. Every leader wired AI into commerce data and workflows. The laggards have AI strategies; they do not have AI in the buying experience.

2.AI is reaching distribution through operations first, and stalling there. The most common pattern in the study: credible AI investment in forecasting, pricing, and logistics paired with a pre-AI storefront.

3.Embedded AI is outperforming visible AI. The largest measured returns come from invisible features such as personalization, recommendations, and intelligent search, not from chat windows.

4.The assistant era has begun in B2B. Roughly one in seven companies studied has a product-aware AI assistant in production. Their early metrics justify the move.

5.Agentic commerce will reward the prepared. Gartner expects 90% of B2B buying to be AI agent intermediated by 2028, pushing more than \$15 trillion of B2B spend through agent exchanges. Distributors whose product data and commerce APIs are agent-ready will capture that demand; the rest will be invisible to it.

THE CORE THESIS

A distributor does not need a chatbot. It needs an AI buying layer that understands products, customers, pricing, inventory, contracts, availability, and purchasing workflows. The gap is not in AI technology; it is in connecting AI to the commerce workflow.

SECTION 1

The State of AI-Guided Buying in B2B Distribution

What the Data Shows

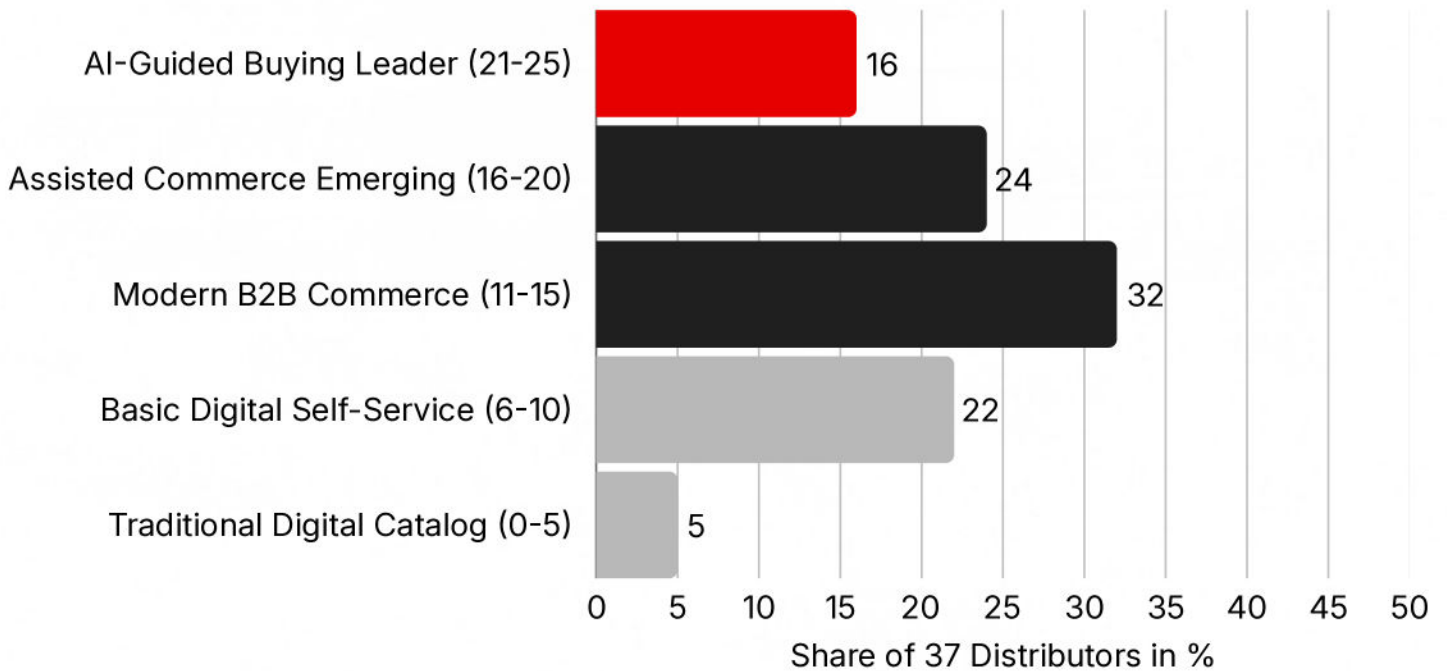
The 37 companies in the study sort into five maturity tiers. Six (16%) qualify as AI-Guided Buying Leaders, with verifiable AI embedded in the customer buying experience. Nine (24%) are in the Assisted Commerce Emerging tier: companies such as US Foods, Arrow Electronics, Henry Schein, MSC Industrial Direct, and Builders FirstSource that have shipped meaningful AI features or assistants in parts of their experience. Twelve (32%) operate Modern B2B Commerce: capable platforms with account pricing, reordering, and punchout, but little intelligence on top. The remaining ten (27%) are still in basic self-service or traditional catalog territory.

The most revealing split in the data is between dimension C (B2B workflow support) and dimension A (assistant presence). Sixty-two percent of the group scores 4 or 5 on workflow support: contract pricing, quick order, quoting, punchout, and vendor-managed inventory are largely solved problems. Only 14% scores 4 or 5 on assistant presence. Distribution has digitized its transactions without digitizing its judgment: the systems can take an order, but they cannot yet help a customer decide what to order.

THE GAP, MEASURED FROM THE BUYER'S SIDE

Deloitte's June 2026 study of 530 US B2B buyers and 530 US B2B suppliers found the same disconnect this study measures, in mirror image. Seventy-two percent of suppliers described their sales processes as mostly or highly automated. Only 47% of buyers agreed. Forty percent of buyers already use agentic AI in purchasing, against 24% of suppliers using agents in sales. The distributors in this study are not only behind their customers' expectations. Many do not know it.

Maturity Tier Distribution



Where the AI dollars actually go

The study found no shortage of AI investment; it found a misallocation of it relative to the customer. Several large healthcare distributors run AI centers of excellence and cite AI on every earnings call, yet their AI deployments target forecasting, automation, and internal productivity while their ordering platforms remain search-and-list experiences. Among electrical distributors, one has committed \$500 million to a multi-year digital program and another has appointed a vice president of AI. In both cases the near-term AI output is aimed at quoting tools and data backbones for internal teams, not the storefront. In building products, the loudest AI narrative in the industry is, so far, deployed almost entirely in dynamic pricing and demand forecasting. In metals, the frontier question is still whether a customer can transact online at all.

This produces a two-tier market. One tier converts catalog and customer data into AI-native buying experiences: Grainger runs retrieval augmented generative search across 2.5 million products with roughly 400,000 product updates per day; Ingram Micro's Xvantage platform embeds more than 400 AI and machine-learning models in the transaction path. The other tier treats "digital" as plumbing, meaning EDI, punchout, vending, and portals, and leaves product discovery essentially conventional. Both tiers tell investors they are investing in AI. Only one tier's customers can feel it.

THE SIGNALING GAP

59% of the 37 largest North American distributors actively signal AI investment in investor materials and earnings calls. 16% have built AI meaningfully into the buying experience. Roughly four in ten distributors talking about AI have none of it visible to their customers.

TWO RANKINGS, ONE GAP

In July 2026, Distribution Strategy Group published its AI Top 25, ranking distributors on verified production AI deployments and excluding pilots and announcements. Ingram Micro and Grainger placed in its top tier, as they lead this study. So did Wesco International and Fastenal, which score 14 out of 25 here. That is not a contradiction. It is the finding. DSG measured whether AI is in production anywhere in the business; this study measures whether AI is in the buying experience. Wesco's own 2026 commentary describes AI applied to its data lake and inventory cycles. Fastenal's describes work behind the scenes to make its people more productive. Graybar, ranked Gold by DSG, told an industry audience in June 2026 that customer-facing applications remain on its roadmap rather than in production. These are real AI programs delivering real returns, and they are invisible to the customer placing the order. Fifteen of the companies this study places in its bottom two tiers are absent from DSG's ranking entirely, which is the easier finding. The harder one is that being an AI leader in distribution today does not yet mean being an AI-guided buying leader.

Why the gap will not persist

Three forces are converging on the buying experience. The first is proof from B2C. Amazon's Rufus assistant reached 300 million customers in 2025, and Amazon reported that Rufus users were 60% more likely to complete a purchase. In May 2026 Amazon folded Rufus into Alexa for Shopping, an agentic assistant that can add to cart and complete purchases under customer-set conditions; by Amazon's Q2 2026 disclosure, active users had nearly doubled year over year and interactions were up more than fivefold. The trajectory is not a chat window. It is an agent. Every B2B buyer is also a consumer, and Amazon Business imports those expectations directly into procurement. It reached \$60 billion in annualized gross sales across more than 11 million organizations in July 2026, adding 1.8 million organizations in the first seven months of the year alone. It is also no longer only a competitor on price and selection: Amazon Business now ships a feature it calls Guided Buying, alongside an AI procurement assistant and its Alexa for Shopping agent. The category this paper describes is one Amazon has already named and begun selling.

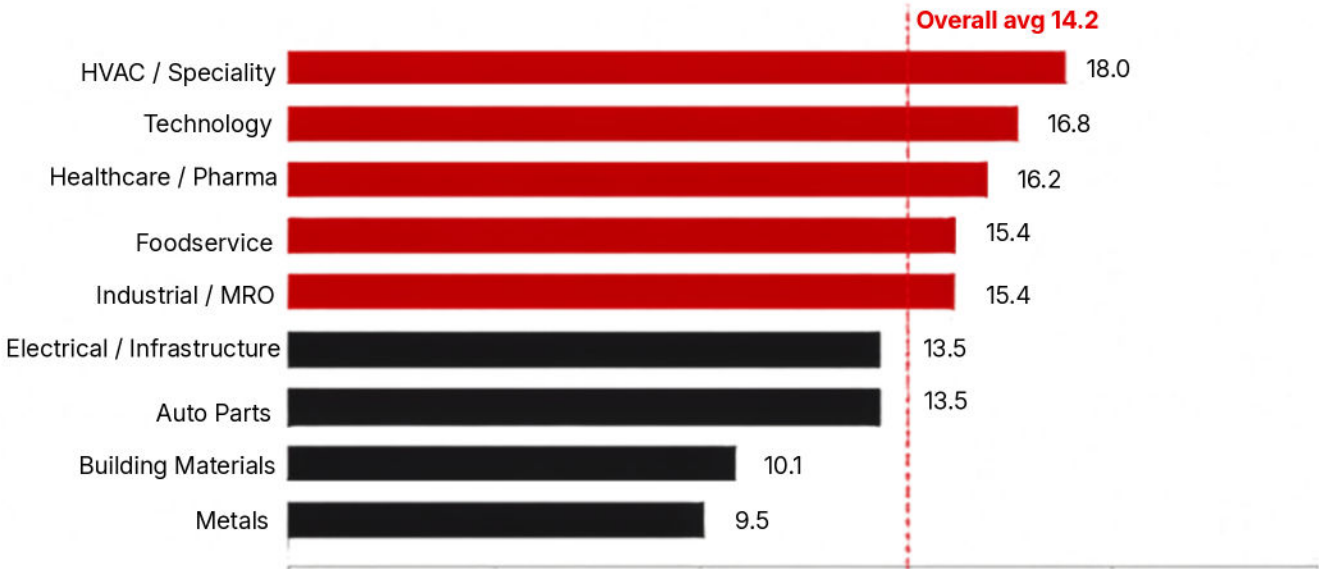
The second is the buyer. Gartner found that 67% of B2B buyers prefer a rep-free buying experience, up from 61% a year earlier in the same research program. Estimates of how many B2B buyers now use large language models in purchase research range from 45% in Gartner’s 2026 survey to 63% in TrustRadius’s 2026 report to 94% among the software buyers in 6sense’s 2025 study; the range reflects different populations and question wording, but the direction is not in dispute. Millennials and Gen Z made up 71% of B2B buyers in Forrester’s 2023 survey, and 64% of business buyers at manager level and above in its 2025 survey. These buyers do not experience a keyword search box as neutral; they experience it as friction.

The third is the agent. Gartner projects that by 2028, 90% of B2B buying will be AI agent intermediated, pushing more than \$15 trillion of B2B spend through AI agent exchanges. Bain estimates US agentic commerce could reach \$200–500 billion by 2030 in retail alone, and expects specification-driven, repeat-purchase categories, the exact shape of distribution, to shift first. Meanwhile US B2B ecommerce grew 13% to \$2.93 trillion in 2025 while total B2B sales grew 0.4%: the digital channel is where all the growth already is. The same forecasting houses counsel caution: Gartner separately predicts that by 2030, 75% of B2B buyers will prefer sales experiences that prioritize human interaction over AI. Both can be true, and Section 4.3 takes up the implication.

Sector position varies widely, HVAC/specialty (average 18.0) and technology distribution (16.8) lead, both powered by proprietary platforms (Watsco’s contractor ecosystem and Ingram Micro’s Xvantage) where the distributor controls the full experience. Healthcare

2026 AI-GUIDED BUYING MATURITY STUDY

Average AI-guided buying maturity by sector (of 25)



(16.2), foodservice (15.4), and industrial MRO (15.4) follow, each with one or two standouts and a long tail. Electrical/Infrastructure (13.5) and auto parts (13.5) trail despite strong workflow plumbing. Building products (10.1) and metals (9.5) remain largely pre-AI.

SECTION 2

Design Approaches for AI-Guided Buying

There is no single architecture for AI-guided buying. The leaders in this study use six distinct design patterns, often in combination. Each has different technical requirements, integration dependencies, and risk profiles, and the right starting point depends on a distributor's data maturity, customer mix, and sales model.

Conversational product discovery assistant

A chat-style interface where buyers describe needs in natural language (for example, "I need a food-safe lubricant rated for -40°F") and the AI returns recommendations grounded in the actual catalog, pricing, and inventory through retrieval-augmented generation (RAG). This is the pattern most people picture when they hear "AI buying," and the one with the highest failure rate when attempted without grounding.

When to use it: large, technically complex catalogs where buyers struggle to translate application needs into product attributes. Requirements: a clean, attribute-rich product catalog; a vector or hybrid search index; real-time pricing and inventory APIs; session-level account context; and explicit guardrails against recommending products the model cannot verify. Thermo Fisher Scientific is the study's clearest example: its "Ask our AI about this Product" assistant, launched on product pages in August 2025, answers natural-language product questions inside the browsing experience, backed by an OpenAI partnership that explicitly covers customer engagement. Grainger has built the underlying machinery (RAG and vector search over 2.5 million products on Databricks) and deployed it agent-first, with ecommerce search as the stated next pillar.

Proactive buying agent

AI that acts before the customer asks: surfacing reorder prompts when consumption patterns predict a stockout, flagging substitutions when an item goes constrained, and pushing account-relevant recommendations triggered by inventory or price changes. The interaction model is notification and suggestion, not conversation.

When to use it: high-repeat-purchase businesses where the next order is predictable and the cost of a missed reorder is high. Requirements: account-level purchase history, event infrastructure that reacts to inventory and pricing changes, and a delivery surface (platform, email, rep alert). Ingram Micro's IDA is the benchmark: in 2025 it generated more than 500,000 proactive customer engagements, converted over 100,000 opportunities into orders, and IDA-supported transactions convert at three times the typical rate. Cencora's Cart Optimization, which makes automatic customized suggestions at checkout in ABC Order, is a lighter-weight version of the same idea.

PATTERN IN PRODUCTION

Ingram Micro's intelligent digital assistant (IDA) generated 500,000+ proactive engagements and converted 100,000+ opportunities into orders in 2025. By the second quarter of 2026, IDA-supported opportunities were converting at nearly four times the rate of traditional quotes, and IDA generated roughly \$1 billion in net revenue in that quarter alone, about 7% of the company total. Ingram still targets a double-digit revenue contribution by the end of 2026. Self-service orders reached 2.4 million in the quarter, 70% of order mix.

Guided selling and product finder flows

Structured, step-by-step flows where buyers answer application, specification, or job questions and the system narrows to the right products. No free-form conversation, just a decision tree with intelligence behind it.

This pattern beats open conversational AI in three situations: when the domain is bounded and specification-driven (a configured door unit, a compatible HVAC system); when wrong answers carry compliance or safety consequences, because a structured flow cannot hallucinate; and when buyers themselves do not know the right vocabulary, so guided questions outperform an empty chat box. Builders FirstSource runs AI-enabled product configuration through Paradigm Omni for exactly this reason: millwork and structural components are configured, not searched. Watsco's OnCallAir guided quoting platform, now at a \$1.8 billion gross merchandise value run-rate, shows the same pattern applied to HVAC system selection. Requirements are modest relative to conversational AI: structured product attributes, application logic encoded with category experts, and integration to quoting.

Sales rep copilot

AI that surfaces product information, pricing, availability, customer history, and next-best actions to sales reps in real time. The buyer never sees the AI; they just experience a rep who suddenly knows everything.

This is the pattern with the best risk-to-value ratio in the study, because it delivers AI value without putting a model in front of a customer. Sysco's AI360 copilot was used by roughly 90% of its sales consultants as of 2025 to answer customer questions and surface opportunities. Several other companies in the study, across electrical and technology distribution, are deploying agent-assist and quote-builder AI for internal teams as their first AI move. Requirements: CRM and order history integration, product and pricing data access, and workflow embedding in the tools reps already use. The copilot also generates the training data and organizational trust that customer-facing AI later depends on.

Embedded AI micro-features

AI woven into discrete moments of the existing buying flow: semantic autocomplete, machine-learning “customers also bought” modules, automatic substitution banners, AI-generated product comparisons, personalized reorder lists, natural-language filters. No assistant, no chat window, just a storefront that quietly gets smarter.

This invisible AI is the fastest path to measurable value in the study. Sysco’s personalization program in Sysco Shop was credited with \$450 million in incremental sales as of 2025, a figure Sysco has not refreshed since. US Foods reports its AI product recommendations in MOXē lift orders by roughly 1.5 cases on average, and its newest feature converts uploaded documents and photos directly into orders. Performance Food Group has deployed AI agents on its CustomerFirst platform that help customers and salespeople research items, recipes, and products to build a better order. MSC Industrial rebuilt its search algorithm in 2025 to understand product attributes, customer behavior, and industry terminology, and credits it with traffic and revenue gains. Each feature is discrete, testable, and measurable, which is why this pattern compounds while big-bang assistant projects stall.

Agentic commerce

AI agents autonomously executing purchasing end-to-end: placing routine orders, navigating approvals, optimizing across suppliers, managing reorder schedules. The buyer sets policy; the agent transacts. The infrastructure began arriving in 2025 and has already been through one correction. OpenAI and Stripe’s Agentic Commerce Protocol shipped alongside an Instant Checkout capability that OpenAI wound down in March 2026, after in-chat conversion ran roughly three times below redirects to merchant sites; ACP survived the retreat and is now positioned as a discovery and enablement layer rather than a checkout intermediary. Google, Shopify and more than twenty partners launched a competing open standard, the Universal Commerce Protocol, in January 2026, and Google donated its Agent Payments Protocol to the FIDO Alliance in April 2026, adding a human-not-present mode for agents transacting on pre-authorization. Salesforce Agentforce passed \$1.2 billion in ARR, Amazon folded Rufus into an agentic Alexa for Shopping, and the Model Context Protocol became an industry standard under the Linux Foundation’s Agentic AI Foundation. The rails are being laid in public, and they are not yet settled.

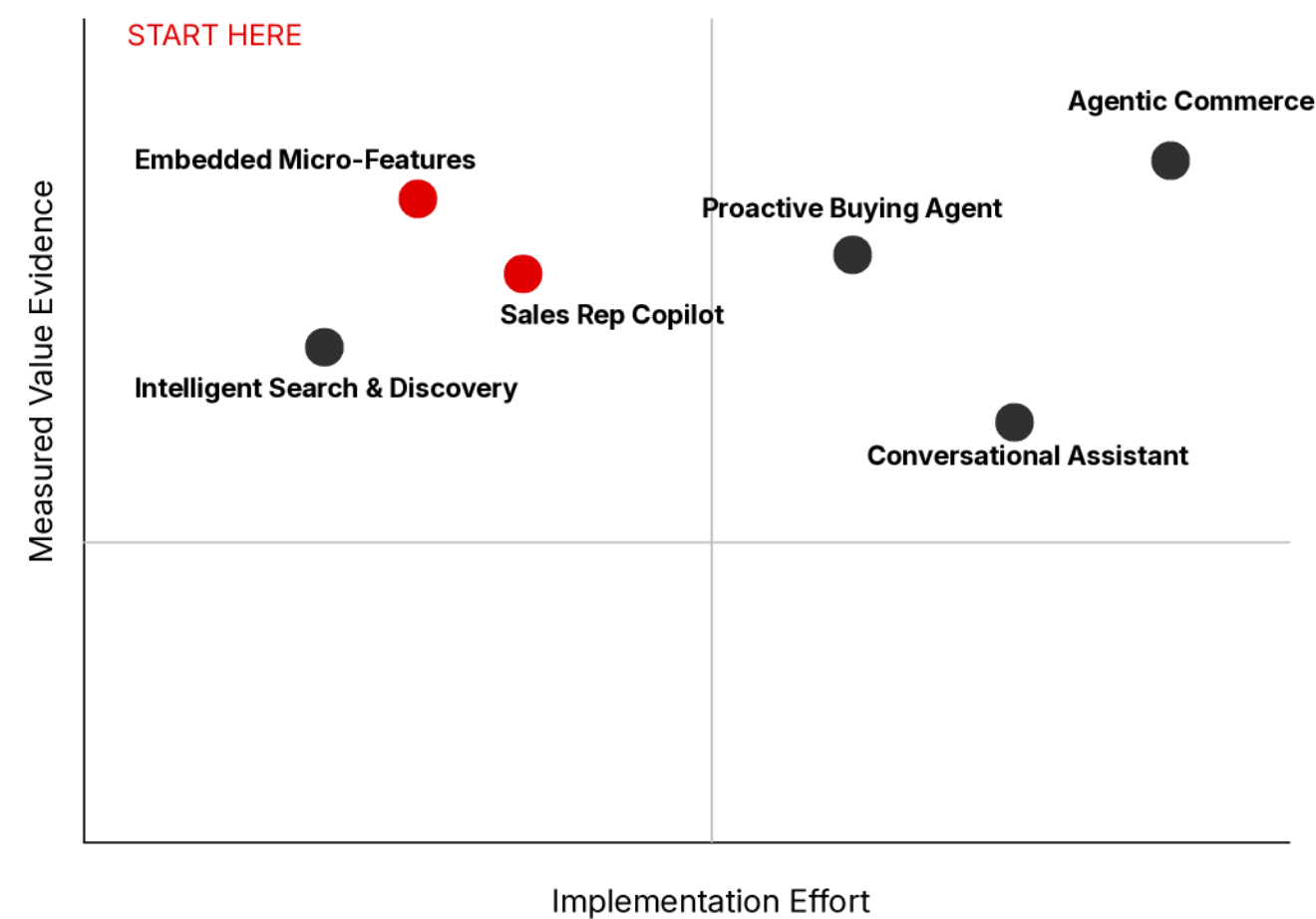
No distributor in the study has shipped autonomous purchasing, and the constraint is no longer capability. It is trust and settlement. Google and Shopify’s Universal Commerce Protocol reached 11,414 verified merchant stores by July 2026; more than 11,000 of them expose a checkout capability and exactly zero expose a payment capability. Every B2B commerce agent that shipped in the first half of 2026, from commercetools’ intake agent to Proton.ai’s quote entry to Amazon Business’s procurement assistant, requires a human to approve before anything is bought. The rails are staged and the last connection has not been made. Practical guardrails are emerging: hard spend limits per agent and per period, human approval gates above thresholds, full audit trails of agent reasoning, allow-listed catalogs and contract terms, and graceful handoff to humans on ambiguity. Regulation has begun to arrive alongside them: the EU AI Act’s transparency obligations took effect on August 2, 2026, requiring that customer-facing AI

systems be identified as such and that AI-generated content be disclosed. Gartner's caution applies, since it predicts over 40% of agentic AI projects will be canceled by end of 2027, but so does its forecast: 90% of B2B buying AI agent intermediated by 2028. The architectural decisions distributors make in the next two years determine whether their catalog, pricing, and availability are legible to those agents, or invisible.

One asymmetry deserves emphasis. While distributors debate assistants, their customers' procurement platforms have already shipped agents. Coupa launched a no-code agent studio and more than twenty specialized procurement agents in May 2026. SAP made Ariba's Joule agents generally available in June, handling conversational requisition intake with compliance checking. Amazon Business began rolling out Amazon Quick, an AI procurement assistant, at the end of June. None of these places an autonomous order yet; all require human approval. But all of them read supplier catalogs, and all of them are being configured now by the same enterprise buyers distributors are trying to serve. A distributor can decline to build an assistant. It cannot decline to be read by its customer's agent. It can only be legible or invisible.

2026 AI-GUIDED BUYING MATURITY STUDY

Where the value is: six design patterns by effort vs. evidence



SECTION 3

The Technology Landscape for AI-Guided Buying

The AI-guided buying stack has six layers. This section orients rather than ranks: the right combination depends on existing platform commitments, catalog complexity, and build-versus-buy posture. What follows reflects the vendor landscape as of mid-2026, including pairings verified in this study's research.

AI search and product discovery

Coveo, Algolia, Bloomreach, Constructor, and Lucidworks lead the dedicated discovery layer: semantic and hybrid search, ML ranking, personalization, and increasingly generative answers over the catalog. Verified distribution deployments include Watsco, which used Bloomreach to rebuild site search with ML-driven personalization, and heavy-duty parts distributor FleetPride on Coveo. Algolia's 2026 survey found that 71% of B2B businesses are using AI technology for ecommerce, up from 67% a year earlier, and that 83% are more likely to select a search and discovery solution with AI capabilities. Gartner's 2026 Magic Quadrant for Search and Product Discovery named Coveo, Algolia and Constructor as Leaders. The alternative is building in-house on a data platform: Grainger built its RAG and vector search on Databricks rather than buying a discovery product, a path that requires genuine data-engineering depth but yields a proprietary asset.

Commerce platforms with AI capabilities

commercetools, Adobe Commerce, Salesforce Commerce Cloud, SAP Commerce Cloud, and BigCommerce are converging on the same promise from different directions. All five went agent-native between April and July 2026. Salesforce made three Agentforce Commerce agents generally available in June 2026, including a Buyer Agent for B2B procurement over WhatsApp and SMS, alongside B2B headless commerce and B2B search; its earlier Agentforce work is what resolved roughly 70% of service chats in Henry Schein's Australian business in 2025 using live ERP order data. Adobe shipped a Commerce MCP Server at Adobe Summit in April 2026, giving agents real-time access to catalog, cart, pricing, inventory and checkout, plus B2B drop-ins for company accounts, negotiable quotes, requisition lists and purchase order workflows. BigCommerce's parent launched an Agentic Commerce Framework spanning ChatGPT, Gemini, Copilot and Perplexity in April 2026. SAP Commerce Cloud powers a Gemini-integrated shopping assistant in an agentic architecture SAP deployed with Google Cloud in June 2026, though that work is business-to-consumer and SAP's B2B AI still arrives largely through partners. commercetools holds the composable position, with an API-first architecture (MACH) that makes every commerce capability individually callable by whatever AI layer a distributor builds or buys, and it has begun shipping vertical agents of its own: a B2B Intake Agent, co-designed with Mirion Technologies and released in June 2026, ingests emails, PDFs and spreadsheets and generates draft quotes and carts.

iMicrosoft put a Dynamics 365 Commerce MCP server into public preview the same month. For distributors planning multi-year AI roadmaps, platform extensibility matters more than any single bundled feature, because the AI layer will change faster than the platform.

Conversational AI and agent platforms

The conversation layer splits into hyperscaler tooling (AWS agentic shopping and Bedrock AgentCore, Google Vertex AI Agent Builder, Microsoft Copilot Studio), frontier model APIs (OpenAI, Anthropic Claude), and enterprise conversational platforms (Kore.ai, Yellow.ai). The build-versus-buy tradeoff is concrete: building on model APIs delivers control of grounding, tone, and data flows (Thermo Fisher's OpenAI-backed product assistant is the template), but requires sustained engineering investment. Buying a conversational platform accelerates deployment and brings prebuilt connectors, at the cost of differentiation and sometimes of grounding depth. The decisive question for either path is unglamorous: can the assistant read your contract pricing, your real-time inventory, and your customer's order history? If not, it is a toy.

PIM and product data platforms

Salsify, Akeneo, Pimcore, and Syndigo manage the asset every pattern in Section 2 depends on: structured, complete, attribute-rich product data. AI cannot recommend products it does not understand. A model grounded in a catalog where half the SKUs lack application attributes will answer half of buyer questions wrong, confidently. This is why product data quality appears as Phase 0 in Section 5, and why the leaders' investments look unglamorous up close: Grainger processes roughly 400,000 product content updates per day. Distributors consistently underestimate this layer; it is the most common root cause when AI pilots disappoint. The vendor side moved in 2026: Syndigo's Synapse, Salsify's SalsifyIQ and Akeneo's agentic Ziggy all now sell agent-readiness directly, aimed at making catalogs legible to AI agents rather than only to shoppers. Agent-readiness has become a purchasable product category.

THE PREREQUISITE

AI cannot recommend products it doesn't understand. The most common root cause of failed AI commerce pilots in distribution is not the model, it is incomplete, unstructured product data. As of 2026 that deficit is measurable: Mirakl's assessment of product pages found an average agent-readiness score of 48 out of 100 against a competitive threshold of 61, fewer than one percent of pages scoring above 80, and just 9% exposing machine-readable data structures at all. IDC puts the consequence plainly: agents evaluate structured product data, inventory and pricing, not visual design or branding.

Marketplace platforms

Mirakl and Marketplacer expand the catalog the AI can work with. A marketplace turns a distributor's assortment from what it stocks into what its customers need. Cencora's AB Marketplace, built on Mirakl, extended its ordering platform from roughly 20,000 stocked SKUs to 55,000 more through third-party sellers. For AI-guided buying, that breadth changes the assistant's answer from "we don't carry that" to a fulfillable recommendation. Marketplace product data arrives from many sellers, which raises the stakes on the PIM layer, and makes automated, AI-assisted catalog onboarding part of the same investment.

Integration and orchestration

MuleSoft, Boomi, Celigo, and Workato connect the AI layer to the systems where truth lives: ERP for orders and contract pricing, OMS for fulfillment, CRM for account context, pricing engines, and inventory. This layer is the difference between an AI that talks about products and an AI that transacts. Every leader in this study runs on deep integration: Ingram Micro's 400-model platform is, at bottom, a real-time data mesh; Henry Schein's agent works because it reads the ERP. Distributors that treat integration as an afterthought will discover that their assistant can chat but cannot quote, check stock, or honor a contract price, which customers experience as worse than no assistant at all.

SECTION 4

Who Owns AI-Guided Buying?

AI-guided buying sits at the intersection of ecommerce, product data, sales, customer experience, IT, and data science. In most distributors, no single function owns that intersection, and the study suggests this ownership vacuum, not technology, is the biggest barrier between AI strategy and AI in the buying experience. The pattern repeats: companies with active AI centers of excellence and AI executives still ship nothing customer-facing, because the team that owns the models does not own the storefront, and the team that owns the storefront does not own the data.

Five ownership models

Digital commerce team ownership puts AI where the customer is. Strength: revenue accountability and proximity to the buying experience. Weakness: commerce teams rarely have ML engineering depth, so initiatives become vendor-dependent.

IT/engineering ownership brings integration capability and architectural discipline. Strength: these are integration projects, and IT owns the systems. Weakness: without commercial accountability, projects optimize for technical completion over conversion.

Data science/AI team ownership delivers modeling depth. Strength: capability to build rather than rent. Weakness: distance from the customer; the study's most common failure mode is an AI team shipping operational wins (forecasting, pricing) indefinitely because the commerce backlog belongs to someone else.

Chief digital or chief commercial officer ownership provides executive authority across functions. Strength: can force cross-P&L decisions. Weakness: executive ownership without a dedicated delivery team produces strategy decks, not features.

A cross-functional product squad (a dedicated product owner with embedded engineers, a data scientist, a product data specialist, and a sales liaison) combines accountability with capability. Its weakness is that it must be deliberately constructed and protected; it does not emerge organically from an org chart.

The recommended model

The evidence favors the cross-functional squad, embedded in digital commerce, with dotted lines to sales and the data/AI organization. Commerce embedding keeps the work pointed at conversion and order economics rather than model elegance. The dedicated product owner matters more than any reporting line: AI-guided buying is a product, with a roadmap and success metrics, not a project with an

end date. Watsco's pattern is instructive: roughly 300 technologists and a sustained ~\$60 million annual technology run-rate, governed as a portfolio of named products (HVAC Pro+, OnCallAir, AL.watsco) rather than an IT program.

Executive sponsorship and the sales question

This work needs C-suite cover for three structural reasons: it touches multiple P&Ls (digital revenue, branch revenue, rep commissions); it requires unglamorous product data investment that no single function will fund voluntarily; and it will meet sales resistance. That resistance deserves a direct answer, not management around it. The winning framing, and the one the leaders actually use, is AI as a force multiplier for reps, not a replacement. Sysco rolled out AI360 to its sales consultants before scaling customer-facing AI; adoption reached roughly 90% of the salesforce because the tool made reps measurably better in front of customers. Performance Food Group positions its AI agents as a “digital partner” for customers and salespeople alike. The data supports the framing: even as 67% of buyers prefer rep-free transactions, Gartner finds 69% of B2B buyers turn to sales reps to validate AI-generated insights. The rep's job is shifting from order-taker to trusted validator, and reps equipped with copilots get there first.

THE FRAMING THAT WORKS

AI as sales rep force multiplier, not sales rep replacement. Sysco's AI360 copilot reached ~90% adoption among sales consultants by 2025, before the company scaled customer-facing AI.

SECTION 5

Prioritization Framework for Sequencing Investments

The leaders in this study did not start with assistants. They sequenced: data foundations, then intelligent discovery, then embedded features, then internal copilots, then customer-facing AI. The framework below reflects that observed order. Phases overlap in practice, but skipping ahead, most commonly by launching a conversational assistant on top of weak product data, is the failure pattern behind most stalled pilots.

Phase	Focus	Typical timeline	Risk level	Key dependency
Phase 0	Product data quality + platform extensibility	3–9 months	Low	PIM discipline, API-first commerce platform
Phase 1	Intelligent search and discovery	3–6 months	Low	Phase 0 data; search/discovery
Phase 2	Embedded AI micro-features	Rolling, 2–4 mo. each	Low–medium	Order history, behavioral
Phase 3	Sales rep and service copilots	4–8 months	Medium	CRM/ERP integration, rep
Phase 4	Conversational buying assistant	6–12 months	Medium–high	Phases 0–3; pricing/inventory
Phase 5	Agentic commerce	2027+ for most	High	Agent-readable APIs, governance,

Phase 0: Foundation (not optional)

Product data quality and commerce platform extensibility. Success metrics: attribute completeness by category, catalog update latency, API coverage of pricing and inventory. Required integrations: PIM to commerce platform; ERP item master governance. Every subsequent phase consumes this one. Grainger's 400,000 daily product updates and Ingram Micro's real-time data mesh are Phase 0 done at scale; neither company's assistant would work without it.

Phase 1: Intelligent search and discovery

Semantic and NLP search, contextual autocomplete, attribute-aware ranking. This is the highest-ROI first move in the study: MSC Industrial's 2025 search rebuild, designed to understand product attributes, customer behavior, and industry terminology, was credited by executives with traffic and revenue gains within two quarters, alongside a checkout redesign that cut clicks roughly in half. Success metrics: search conversion, null-result rate, search-to-order time. Risk is low because search improvements are invisible when wrong and measurable when right.

Phase 2: Embedded AI micro-features

ML recommendations, substitution prompts, AI comparisons, personalized reorder suggestions, each discrete, testable, and measurable. Evidence: Sysco's \$450 million personalization program; US Foods' recommendations adding ~1.5 cases per order; Cencora's checkout Cart Optimization. Success metrics: attach rate, cases or lines per order, reorder cycle time. Run these as an experiment portfolio with holdout groups, not a platform program.

Phase 3: Sales rep and service copilots

Internal AI before customer-facing AI: lower risk, faster trust, and it generates the interaction data that customer-facing AI later needs. Evidence: Sysco AI360 at ~90% of sales consultants; Grainger deploying its generative product search to call-center agents first; agent-assist deployments across technology and electrical distribution. Success metrics: rep questions answered without escalation, quote turnaround time, rep-attributed cross-sell. Integration requirements: CRM, order history, pricing, and embedding inside existing rep tools, because a copilot in a separate tab is a copilot unused.

Phase 4: Conversational buying assistant

Customer-facing, RAG-grounded in product data, connected to live pricing and inventory, with human handoff. This is the assistant moment for B2B, the phase where Phases 0–3 pay off or their absence becomes public. Thermo Fisher's product-page assistant, launched in August 2025, shows the pattern: scoped launches (product Q&A first, transactions later), grounded in proprietary data, framed to customers as expertise on demand. Success metrics: assistant-assisted conversion versus control, containment with satisfaction (not containment alone), and influenced revenue. Amazon's benchmark, assistant users 60% more likely to purchase, is the bar B2B buyers will arrive expecting, and Amazon has since moved that bar from an assistant to an agent.

Phase 5: Agentic commerce

Autonomous purchasing agents executing routine orders under policy. Two to three years out for most distributors, but the architectural decisions in Phases 0–4 either enable it or block it. Agent-readable catalogs, API-exposed contract pricing, machine-verifiable availability, and audit infrastructure are the entry tickets; distributors without them will be unreadable to the buying agents Gartner expects to handle 90% of B2B transactions by 2028. Approach with both ambition and Gartner's caution that over 40% of agentic AI projects will be canceled by 2027: pilot with a handful of trusted accounts on bounded replenishment scenarios, with hard spend limits and human approval gates.

WHY SEQUENCING MATTERS

Distribution Strategy Group's 2026 State of AI in Distribution found that 63% of distributors remain in exploring or piloting stages, and just 4% describe AI as integrated into company strategy. Modern Distribution Management's April 2026 survey of more than 400 distribution leaders found the same shape from the other direction: nearly nine in ten are actively pursuing AI, 73% have expectations for it, and 16% have achieved them. The blocker is rarely ambition. It is foundations.

SECTION 6

The McFadyen Digital Perspective

The opportunity in front of distribution is unusually legible. The demand signal is measured: buyers prefer digital self-service by a two-to-one margin, research with LLMs almost universally, and convert dramatically better when AI assists the purchase. The proof exists inside the industry, not just at Amazon: Ingram Micro's assistant converts at nearly four times baseline; Sysco's personalization carries a \$450 million attribution; US Foods turns photos into orders. And the field is open: 84% of the largest distributors in North America have not yet built AI meaningfully into their buying experience. In most sectors, including electrical, building products, metals, auto parts, and large parts of healthcare, the first credible AI-guided buying experience is still unclaimed.

THE PERFORMANCE SPLIT

McKinsey's June 2026 B2B Pulse, its tenth, surveyed nearly 4,000 decision-makers across 13 countries. Market leaders were more than twice as likely as their peers to have implemented generative AI in buying and selling: 44% against 22%. Seventy-one percent of strong performers had increased AI investment at double-digit rates, against 25% of everyone else. And 58% of buyers now say they trust AI-enabled search and assistants to help them learn about products, putting AI roughly level with search engines and peer recommendations as a source they rely on.

The thesis of this study bears restating plainly. A distributor does not need a chatbot. It needs an AI buying layer that understands products, customers, pricing, inventory, contracts, availability, and purchasing workflows. The gap is not in AI technology; the models are commodities and improving monthly. The gap is in connecting AI to the commerce workflow: to the PIM that describes products, the ERP that holds contract prices, the OMS that knows what can ship today, the CRM that remembers the account, and the sales processes that close. That is systems work. It is also precisely the work distributors' existing vendors are least incentivized to scope honestly.

This is the work McFadyen Digital does. As a B2B commerce consultancy specializing in marketplace and enterprise commerce architecture, with deep partnerships across Mirakl, commercetools, and Adobe Commerce, McFadyen helps distributors move from AI experiments to operationalized AI commerce: assessing product data readiness, architecting the integration layer between AI and commerce systems, sequencing the investment roadmap, and building the guided buying experiences themselves. The firm's position in this market is the same as this study's method: evidence over hype, architecture over demos.

Amazon showed the direction of travel for AI-assisted shopping, and then showed it again by replacing its own assistant with an agent. But B2B distribution has more complex, higher-value use cases: technical product discovery, substitution, reordering, quoting, and account-aware buying. The next wave of digital commerce will not be generic chatbots. It will be AI-guided buying embedded into enterprise commerce workflows.

Distributors that want to know where they stand can start with an AI-guided buying assessment, a structured review of product data readiness, commerce architecture extensibility, and the highest-value first moves for their sector, benchmarked against the maturity index in this study. To arrange one, or to request the full study data, contact McFadyen Digital.

About McFadyen Digital

McFadyen Digital is a global digital commerce consultancy that has helped the world's leading brands and distributors design, build, and operate enterprise commerce and marketplace platforms for over 35 years. As a leading partner of Mirakl, commercetools, Akeneo, Algolia and Adobe Commerce, McFadyen specializes in B2B commerce architecture, online marketplaces, and connecting AI to the systems that power buying: ecommerce platforms, PIM, ERP, CRM, OMS, pricing engines, inventory systems, and sales workflows. Learn more at mcfadyen.com.

APPENDIX

Methodology and Selected Sources

The five dimensions, defined:

Assistant presence. Whether the distributor offers a customer-facing AI assistant inside the buying experience, and how product- and account-aware it is. Tested on live storefronts and against verified announcements; a generic support bot scored low, while a product-aware assistant grounded in catalog, pricing, and order history scored high.

Product discovery intelligence. How intelligent the path is from a stated need to the right product: natural-language and semantic search, attribute-aware ranking, AI recommendations, and substitution suggestions. Measured by testing search and browse on public sites and reviewing documented search and recommendation deployments.

B2B workflow support. The transactional plumbing that business buying requires: contract and account-specific pricing, quick order, reordering, quoting, punchout, and vendor-managed inventory. Scored from observable site capabilities and company disclosures. It is the dimension where most distributors are already strong.

AI and digital innovation signaling. How actively and credibly the company invests in and communicates an AI and digital roadmap, through investor materials, earnings calls, press, and named initiatives. It measures stated intent, not what a customer can actually use.

Enterprise readiness. The foundation that determines whether AI can be connected at all: platform and architecture maturity, integration depth across ERP, PIM, OMS, and CRM, product-data quality, and operating scale. Measured from platform disclosures, vendor case studies, and observable site behavior.

McFadyen Digital's 2026 AI-Guided Buying Maturity Study assessed 37 leading North American distributors between May and June 2026. Each company was scored 0–5 on five dimensions (assistant presence, product discovery intelligence, B2B workflow support, AI/digital innovation signaling, and enterprise readiness) for a 25-point index, then classified into five maturity tiers. Evidence sources included public ecommerce sites; press releases and investor materials; earnings call transcripts; coverage in Digital Commerce 360, Distribution Strategy Group, and Modern Distribution Management; and technology vendor case studies. Evidence was tagged as directly observed, publicly announced, third-party reported, or inferred; capabilities behind customer logins were marked not publicly observable and scored only on announced or reported evidence. Company-specific figures cited in this paper trace to: Ingram Micro Q4 2025 earnings (via Digital Commerce 360, March 2026); Grainger/Databricks published case study; Watsco Q2 2025 results release; Thermo Fisher product announcements (August 2025) and

OpenAI partnership release (October 2025); Sysco disclosures via Digital Commerce 360 (October 2025) and Distribution Strategy Group (April 2026); US Foods Q4 2025 earnings via Digital Commerce 360 (February 2026); Henry Schein/Salesforce partner case study; MSC Industrial via Distribution Strategy Group; Cencora/Mirakl published case study; Performance Food Group fiscal Q3 2026 earnings transcript. Industry benchmarks: Gartner press releases and Digital Commerce 360 reporting (2025–2026); Forrester Predictions 2025; McKinsey B2B Pulse 2024; Bain (December 2025); Distribution Strategy Group 2025 State of AI in Distribution; MDM AI benchmark series; 6sense 2025 Buyer Experience Report; Amazon disclosures via earnings coverage (Fortune, November 2025). A full citation appendix is available with the study dataset on request.

Appendix A: Full 37-Company Scoring (as scored May–June 2026)

Each company was scored 0–5 on five dimensions for a 25-point total. Ties share a rank; rank order follows total score.

Rank	Company	Sector	A	B	C	D	E	Total	Tier
1	Ingram Micro	Technology	5	4	5	5	5	24	Leader
2	W.W. Grainger	Industrial / MRO	3	5	5	5	5	23	Leader
3	Watsco	HVAC / Specialty	4	4	4	5	5	22	Leader
4 (t)	Thermo Fisher Scientific	Healthcare / Pharma	4	4	4	4	5	21	Leader
4 (t)	Sysco	Foodservice	3	4	4	5	5	21	Leader
4 (t)	Ferguson	Electrical / Infrastructure	3	4	5	4	5	21	Leader
7 (t)	US Foods	Foodservice	3	4	4	4	5	20	Assisted

Rank	Company	Sector	A	B	C	D	E	Total	Tier
7 (t)	Arrow Electronics	Technology	4	3	5	4	4	20	Assisted
9	Henry Schein	Healthcare / Pharma	4	3	4	4	4	19	Assisted
10 (t)	MSC Industrial Direct	Industrial / MRO	2	4	4	4	4	18	Assisted
10 (t)	Builders FirstSource	Building Products	2	4	4	4	4	18	Assisted
12	Genuine Parts (NAPA)	Auto Parts	2	3	4	4	4	17	Assisted
25 (t)	DNOW	Industrial / MRO (Energy)	1	2	4	2	3	12	Modern
27	UNFI	Foodservice	1	2	3	2	3	11	Modern
13 (t)	TD SYNNEX	Technology	3	2	4	4	3	16	Assisted
16 (t)	Cardinal Health	Healthcare / Pharma	2	2	4	3	4	15	Modern
16 (t)	Avnet	Technology	3	3	3	3	3	15	Modern
18 (t)	Wesco International	Electrical / Infrastructure	1	2	4	4	3	14	Modern

Rank	Company	Sector	A	B	C	D	E	Total	Tier
18 (t)	Fastenal	Industrial / MRO	1	2	5	2	4	14	Modern
18 (t)	Pool Corp	HVAC / Specialty	1	3	4	3	3	14	Modern
18 (t)	Ryerson Holding	Metals	1	3	4	2	4	14	Modern
22 (t)	Cencora	Healthcare / Pharma	1	3	4	2	3	13	Modern
22 (t)	McKesson	Healthcare / Pharma	1	2	4	2	4	13	Modern
22 (t)	SiteOne Landscape Supply	Building Products	1	2	4	3	3	13	Modern
25 (t)	Graybar	Electrical / Infrastructure	1	2	3	4	2	12	Modern
25 (t)	DNOW	Industrial / MRO (Energy)	1	2	4	2	3	12	Modern
27	UNFI	Foodservice	1	2	3	2	3	11	Modern
28 (t)	Applied Industrial Technologies	Industrial / MRO	1	1	3	3	2	10	Basic
28 (t)	LKQ	Auto Parts	0	2	3	2	3	10	Basic
30 (t)	Chefs' Warehouse	Foodservice	0	2	3	1	3	9	Basic
30 (t)	ScanSource	Technology	1	1	3	2	2	9	Basic

Rank	Company	Sector	A	B	C	D	E	Total	Tier
32 (t)	Core & Main	Electrical / Infrastructure	0	1	3	1	2	7	Basic
32 (t)	Boise Cascade	Building Products	0	1	3	1	2	7	Basic
34 (t)	TopBuild (acquired by QXO, July 1, 2026)	Building Products	0	1	2	1	2	6	Basic
34 (t)	BlueLinx	Building Products	0	1	2	2	1	6	Basic
36 (t)	Reliance Inc	Metals	0	1	1	1	2	5	Traditional
36 (t)	UFP Industries	Building Products	0	1	1	2	1	5	Traditional

Dimensions (scored 0–5 each): A = Assistant presence; B = Product discovery intelligence; C = B2B workflow support; D = AI & digital innovation signaling; E = Enterprise readiness. Tiers: Leader = AI-Guided Buying Leader (21–25); Assisted = Assisted Commerce Emerging (16–20); Modern = Modern B2B Commerce (11–15); Basic = Basic Digital Self-Service (6–10); Traditional = Traditional Digital Catalog (0–5).

Appendix B: Sector and Tier Benchmarks

Average maturity by sector (of 25).

Sector	Average score (of 25)	Sector leader
HVAC / Specialty	18.0	Watsco (22)
Technology	16.8	Ingram Micro (24)
Healthcare / Pharma	16.2	Thermo Fisher (21)
Foodservice	15.4	Sysco (21)
Industrial / MRO (incl. DNOW)	15.4	Grainger (23)
Electrical / Infrastructure	13.5	Ferguson (21)
Auto Parts	13.5	Genuine Parts (17)
Building Products	10.1	Builders FirstSource (18)
Metals	9.5	Ryerson (14)
All 37 (overall average)	14.2	—

Distribution across the five maturity tiers.

Maturity tier	Score range	Companies	Share
AI-Guided Buying Leader	21–25	6	16%
Assisted Commerce Emerging	16–20	9	24%
Modern B2B Commerce	11–15	12	32%
Basic Digital Self-Service	6–10	8	22%
Traditional Digital Catalog	0–5	2	5%

Appendix C: Research Limitations and Evidence Notes

The findings in this paper are offered in good faith and grounded in the best public evidence available during the research window. As with any market study, several limitations apply, and we state them plainly so readers can weigh the conclusions accordingly.

Point-in-time snapshot. The study reflects evidence available in May–June 2026. AI capabilities in distribution are changing quickly, and several companies have advanced since the assessment window (for example, Sysco’s rep-copilot adoption rose above 95% weekly by early 2026, and Salesforce’s Agentforce reached \$1.2 billion in ARR by May 2026). The industry also consolidated: TopBuild, ranked 34th here, was acquired by QXO and delisted on July 1, 2026. Two further notes on the leaders: Grainger’s stated next step of bringing generative search to ecommerce remained unshipped as of August 2026, and Thermo Fisher’s product-page assistant dates to August 2025 with no subsequent adoption disclosure, its 2026 OpenAI activity being clinical rather than commercial. Genuine Parts eliminated its chief information and digital officer role in April 2026, the same month Sysco’s chief information and digital officer resigned. Scores should be read as a snapshot, not a permanent ranking.

Public evidence only. Many distributor ordering platforms sit behind a customer login (for example MOXē, Sysco Shop, Xvantage, POOL360, and ECExpress). Capabilities behind those logins were scored only on what companies announced or what credible third parties reported, which may understate true in-platform functionality.

Structured judgment, not an audited benchmark. The five-dimension index reflects McFadyen Digital's framework and our interpretation of available evidence. It is an analytical assessment; reasonable observers could score individual companies differently, and the scores are not independently audited or endorsed by the companies named.

Differing definitions across sources. Figures drawn from earnings calls, press releases, and vendor case studies reflect each issuer's own definitions and framing, notably terms such as "digital sales" versus "digitally influenced sales," which are not directly comparable across companies.

Secondary-source and self-reported metrics. Certain figures come from trade press rather than company filings and are attributed as reported rather than independently verified. Such figures are flagged in context.

Specific figures we could not independently verify. Two company metrics could not be corroborated against a primary source and are presented with that caveat or softened accordingly: Sysco's approximate share of independent-customer volume that is digital, and a reported share of Performance Food Group customers adding cases from AI-suggested items.

Forward-looking projections. Third-party forecasts cited in this paper, including Gartner's projection that 90% of B2B buying will be AI agent intermediated by 2028 and Bain's agentic-commerce estimates, are projections, not guarantees, and reflect the issuing firm's assumptions.

Scope boundary. Coverage is limited to 37 large, predominantly publicly traded North American distributors across nine sectors. It is not exhaustive of the industry; many private, regional, and non-North-American distributors are out of scope, and sector groupings involve judgment (for example, DNOW is grouped with Industrial / MRO for sector averages).