

How order management is evolving to embrace agentic AI

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Rising product order complexity means a rethink of order management is overdue, and agentic AI is set to be at the heart of new developments.



Order management is a central cog in telco operations, decomposing orders into their constituent parts and ensuring their fulfillment and delivery as products and services. Until recently, operators had worked around order management challenges such as order fallout, an inability to support in-flight changes well, and poor control and visibility for customers in order commitments, status, dependencies, costs and timing.

But now the limitations of legacy order management are showing up as operators delay and become more ecosystem-oriented, product and service offerings broaden and become more complex, and customer experience expectations elevate. Experts within operators tasked with getting ahead of this challenge agree that agentic capabilities, applied appropriately, represent a sensible next step in order management's evolution.

Complex solutions meet fragmented fulfillment

Increasing complexity across B2C, B2B, and now B2B2X services, bundles and partner ecosystems is worsening order management's classic problems. Most order management systems are only designed for a few static services or service types, like fixed-line voice or consumer mobile. When stretched to manage a broader variety of products across several domains, and a growing variety of physical and digital product – such as consumer and business mobile, satellite connectivity, cloud and hyperscaler services, and token-based digital services – their inflexibility is magnified.

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Many operators are trying to deliver, or enable their partners to deliver, more bundled products, services, and solutions, but still rely on fragmented fulfillment systems and processes that differ across products and business units.

This fragmentation causes a variety of costly problems for operators:



Degrades customer experience and limits improvement

Operators may struggle to improve customer experiences because fragmentation prevents staff and customers from sharing visibility and traceability for every order through its lifecycle. This results in more customer effort and operator cost to exchange information and status; greater levels of customer uncertainty and dissatisfaction; and more risk of order abandonment, which can result in hard sunk costs for complex orders that require build and install timeframes.



Limits to on-demand service ordering

Fragmented fulfillment processes make it difficult for operators to bring on-demand provisioning capabilities to every service. From an order management perspective, most legacy systems were designed for static services with fulfillment timeframes measured in days or weeks. On-demand digital services, provisioned dynamically, and bundled with hard goods components like phones, cameras, sensors, and wearables, have become the norm. Providers need to meet expectations for on-demand responsiveness across growing product and partner catalogs.



Struggles to handle in-flight order changes

Customers expect immediacy, but also want to change their mind, see updates and have the bill reflect their ultimate choices. Fragmented fulfillment environments lead to rigid processes that resist change – once an order component is kicked off, the job is finished, stopped or restarted, but rarely edited in midstream. Legacy order management systems can be part of the problem when they provide no ability to orchestrate orders and manage dependencies across service and partner domains. Changes to in-flight orders can, as a result, kick off many new orders and exceptions resulting in poor customer experiences due to delays, confusing bills and messages, and escalating fulfillment costs per order.



Increasing order fallout rates

Fragmented fulfillment processes also result in increasing order fallout rates; there are simply more time-sensitive and dependent variables in the chain. With increasing order complexity, which asks more of stitched-together fulfillment landscapes, failed orders rise and exception queues fill. This runs counter to the zero-touch automation and cost reduction goals most operators share.

T Wholesale's two-sided business

These challenges with fragmented fulfillment processes are forcing operators and vendors to reconsider their approach to order management. Operator experts and TM Forum Catalyst projects are exploring and utilizing ways to apply conversational and agentic AI to modern order management to overcome these challenges. They aim to enable more fluid service environments that support ecosystems and multi-sided business models across markets, services, networks and geographies.

“The goal is to make the customer journey easier, more digital, and to avoid manual work.”

“Agentic AI is not a silver bullet to solve every problem,” says Karsten Thon, Senior Business Architect for T Wholesale, the wholesale arm of Deutsche Telekom, and previously a member of the TM Forum Catalyst project, *Broadband as a service: The future of wholesale broadband pricing – phase 2*. It does, however, have its uses in order management, he adds.

T Wholesale has been moving away from legacy systems to new approaches “using APIs, using AI and agentic workflows”, explains Thon, who manages responsibility for the interfaces between T Wholesale and its telco partners. The company operates a multi-sided business model in which it delivers components of services ranging from access (such as fiber-to-the-home) to leased line services (such as ethernet and VPNs).

Whereas in the past the wholesale business may have focused on delivering connections against a contract, Thon says T Wholesale is now focused on its wholesale customers and their end customers' experiences. “The goal is to make the customer journey easier, more digital, and to avoid manual work during the customer journey, because manual work means failures... and at the end this is related with a bit of cost,” Thon says.

To improve customer experiences and ordering processes, there are several areas where agentic AI may be applied, explains Thon.



Exception handling

Increasingly, service complexity means more order components to fulfil. This can easily increase order fallout and exception volumes, and those cases need follow-up handling. “You can kick back to customers and say ‘your data isn’t valid’, or you can work on processes internally to handle exceptions... and you can use agentic very well in these cases,” says Thon.

Those internal processes include steps like retrying an order; resetting a workflow; or changing, adding or correcting data – all things agentic AI is well suited to do.



Customer communications

Customer communications can become email-heavy, particularly with disconnected legacy B2B, partner-centric and wholesale service fulfillment processes. “You can use agentic AI to reduce your manual effort in handling those emails and move the chat into an automated process,” like automatically issuing a trouble ticket based on the content of an email reporting a problem, says Thon.



Partner integration

For large wholesale partners, says Thon, the cost of a full-scale integration of relevant operations systems and processes to deliver services jointly and to each other can be justified. But when an operator partners with “smaller carriers that don’t have the internal resources or order volume to invest in a full effort around this”, agentic AI provides an option, he says.

“You can set up MCP servers for each API and orchestrate workflow using an agentic approach,” Thon says. (MCP – Model Context Protocol – is an open standard that gives AI agents a unified way to interact with tools, services and data.)

Expanding and diversifying a partner ecosystem would necessitate a lighter-weight approach such as this to cater to a broader range of large and small suppliers and innovators.



Conversational AI

Thon says agentic AI can also be used to give partners and customers a conversational way to interact with order management processes. Through chat, they could check the status of an order, request changes or provide additional information, with agents translating those requests into actions within the order management process. This can be particularly valuable for managing in-flight orders, where changes need to be coordinated across multiple fulfillment tasks and dependencies.

Applying intent to dynamic order management

Richard Keele, Product Owner at Telstra, is a member of the the TM Forum *Agentic I2O: Intent to Outcome* Catalyst project project team, which includes solutions from Amdocs, Infosys and ServiceNow and experts from BT, PLDT, Smart and Australian telco Telstra. The Catalyst demonstrates how agentic AI and intent can be applied to order management, enabling changing requirements to be translated into actions across downstream systems so that orders can be fulfilled and commitments managed throughout the service lifecycle. As Keele explains, this “changes the way you talk to downstream systems to fulfill orders and meet commitments throughout each service’s lifecycle”.

In-flight order changes are the new normal

Once an order is in progress, customers increasingly expect the flexibility to change their requirements without cancelling and restarting the entire process. Through conversational and agentic interfaces, customers or partners can request changes to an in-flight order, with agents interpreting the updated requirement and determining the actions needed across downstream fulfillment systems.

Agents can then adjust and re-orchestrate fulfilment tasks, dependencies and processes to reflect the change. This allows in-flight order changes to be managed dynamically throughout the service lifecycle, making change part of the normal order management process rather than an exception.

Orchestrating service complexity

As products and services become more complex, a single customer order can span multiple products, fulfilment domains and ecosystem partners. Agentic AI can help order management respond dynamically when requirements change, determining which fulfilment tasks and dependencies are affected and coordinating the actions needed across the order.

Agent-driven order management can orchestrate these changes across product and partner domains, maintain visibility into dependencies and status, and ensure that the components of the order continue to be fulfilled against the customer's updated requirements.

Reducing rework

Applying agents to order management also can overcome order failure and exceptions common to legacy processes. Rework relating to orders "costs us money" because "we put in an order... and we have to go back and change it", says Keele. The potential underlying problems are vast too, from basic data transposition errors to a lack of service availability, or simply "customers changing their mind", Keele says.

Capturing and translating intents and using agentic automation to fulfill the subsequent orders will also reduce rework, says Keele, "because all you've got to do is capture that intent properly and then how you order it is up to us now". The burden is no longer on the customer to "set that order perfectly" so there are no longer order formatting errors to ingest from customers, he explains.

The greater goal is to shift ordering experiences away from today's series of disjointed tasks, conversations, emails, chats and informal status communications. "We don't want that for product experiences anymore. We want customers to know the products that they are getting," Keele says.

Agent-driven order orchestration can manage changing requirements across products, partners and fulfilment domains while shielding customers from back-end complexity.

Where doesn't agentic AI make sense?

While agentic AI clearly has useful applications in order management, there are places it may not belong and instances where a human in the loop is beneficial. Here are three to consider:



Deterministic processes

"If you have a strongly deterministic process, it does not make sense to implement artificial intelligence," says Thon. For example, Infracos that provide facility services on a non-dynamic, contracted basis may rely on deterministic processes, which are changed carefully and only periodically, to achieve their operational efficiency goals.



Workflow design

Some experts object to using agentic AI in workflow design, arguing its probabilistic nature is not suited to repeatable, predictable, deterministic processes. Traditional tools that leverage the Business Process Model and Notation (BPMN) standard are adequate for this cohort.

Keele argues that while this last objection is valid, the role for agentic AI is not in workflow design. Rather, he suggests smaller workflows can be defined in BPMN tools for agentic AI to trigger and orchestrate to fulfill orders. “String them together to meet the customer intent at the time, depending on that particular customer,” advises Keele. This approach, he says, can enable “special versions” of services for customers as well, without having to go through a customization process.

New requirements for modern order management

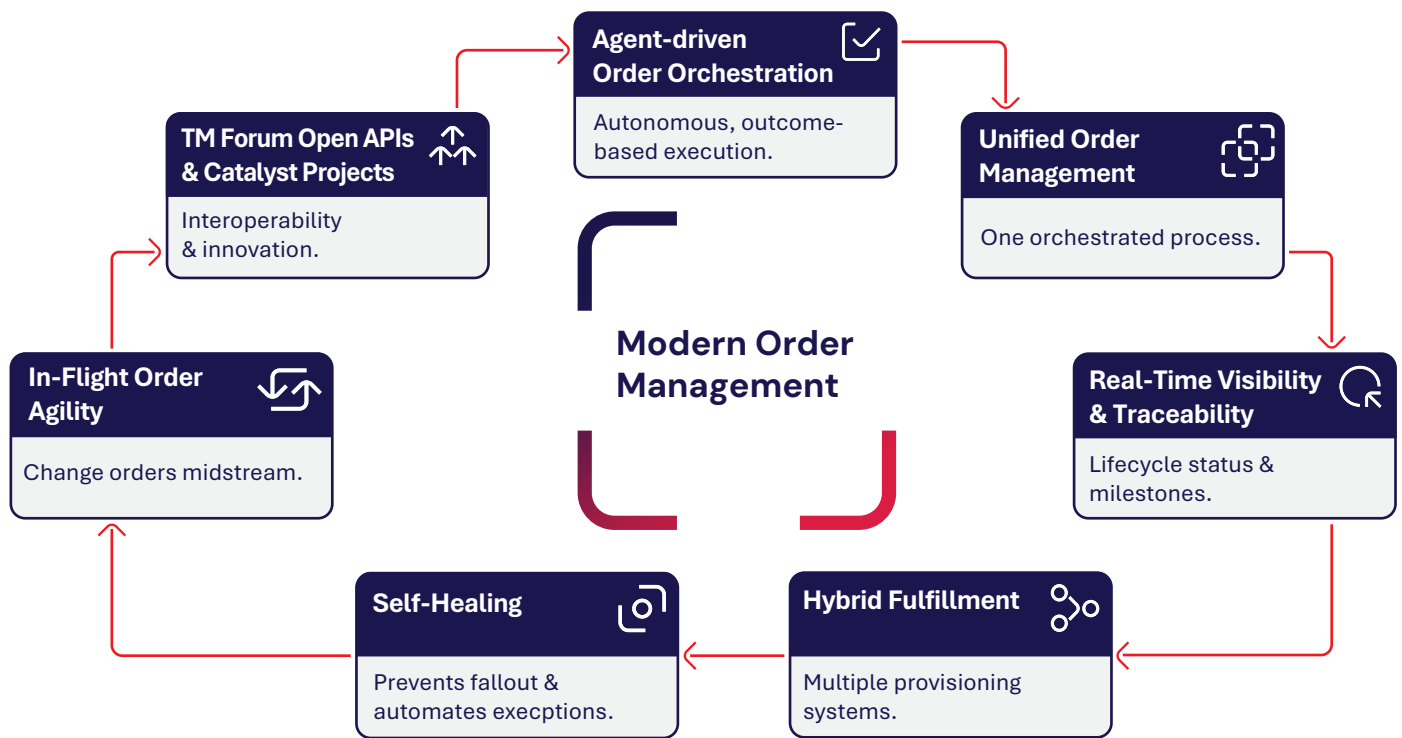
The role of agentic technology in order management is not primarily to design workflows or processes themselves, but to interpret changing requirements and coordinate the actions needed to fulfil orders practically, efficiently and continuously. As demonstrated in the I2O Catalyst, agents can work across downstream systems and processes to help ensure the required outcome continues to be delivered as an order progresses.

As part of this agentic fulfillment chain, a modern order management system or component will need to deliver on a variety of requirements that are either wholly new or reflect a major update to order management’s traditional roles. Those requirements are set out in the graphic on the next page and the text that follows it.

About Amdocs Order Management

Amdocs Order Management, powered by the Amdocs aOS agentic operating system, is redefining how CSPs orchestrate, fulfill and evolve services across increasingly dynamic service ecosystems. As CSPs expand across B2C, B2B and partner-led business models, traditional order management approaches struggle to cope with fragmented fulfillment, siloed domains and growing service demands. Amdocs addresses these challenges with a unified order management platform that orchestrates any product, any customer and any transaction across a single, catalog-driven foundation. Orders are dynamically decomposed and orchestrated across legacy and modern environments, providing real-time visibility into milestones, dependencies and lifecycle status, while enabling seamless coordination across networks, IT systems, partners and channels. The result is a modern order management capability that simplifies complexity, accelerates innovation and enables CSPs to deliver differentiated experiences at scale.

As the industry advances toward autonomous operations, Amdocs is taking order management beyond orchestration to intelligent, outcome-based execution. Embedded within the broader Amdocs agent ecosystem, specialized AI agents collaborate across customer engagement, commerce, ordering, assurance and network operations to automate decision-making, orchestrate processes and drive intelligent outcomes. Within order management, AI agents help predict order duration, proactively identify and prevent fallout, optimize fulfillment paths across OSS and partner ecosystems, and automate exception handling through self-healing execution flows. Multi-domain services, in-flight order changes and dynamic customer scenarios can be managed with greater agility, resilience and operational efficiency, without compromising customer experience. Built on TM Forum-aligned open standards, Amdocs’ Order Management combines telecom expertise with agentic innovation to help CSPs move beyond fragmented fulfillment and embrace the next era of intelligent, autonomous service delivery.



Agent-driven order orchestration

Enables autonomous, outcome-based execution of all orders, from simple to complex. Addresses fulfillment fragmentation to reduce order fallout and improve customer experience (CX).



Unified order management

Moves ordering for all products, services and customer types to an orchestrated process. Addresses order fallout and improves CX with better order execution.



Real-time visibility and traceability

Throughout the order lifecycle, real-time status and tracking is provided into each of the sub-orders, dependencies and milestones for operators' staff, partners and customers.



Hybrid fulfillment

Complex product and service orders require orchestration of hybrid fulfillment processes to sequence the delivery of dependent order components and fulfill them accurately, on time, and with useful visibility and notifications for customers.



Self-healing

Process self-healing is needed to identify, prevent and address order fallout and automate exception management. This protects CX and supports autonomous network goals.



In-flight order agility

Having the agility to change orders in-flight through orchestration, parallel execution and change management provides substantial CX and operational benefits.



TM Forum Open APIs and Catalyst projects

TM Forum Open APIs are crucial to ensuring interoperability and readiness. Projects like the Agentic AI: I2O Catalyst use these APIs and complementary TM Forum assets to prove what's possible when using agentic AI for core operations processes like service ordering.