

From Intent to Action With Joule Work & Knowledge Graph

8th July 2026

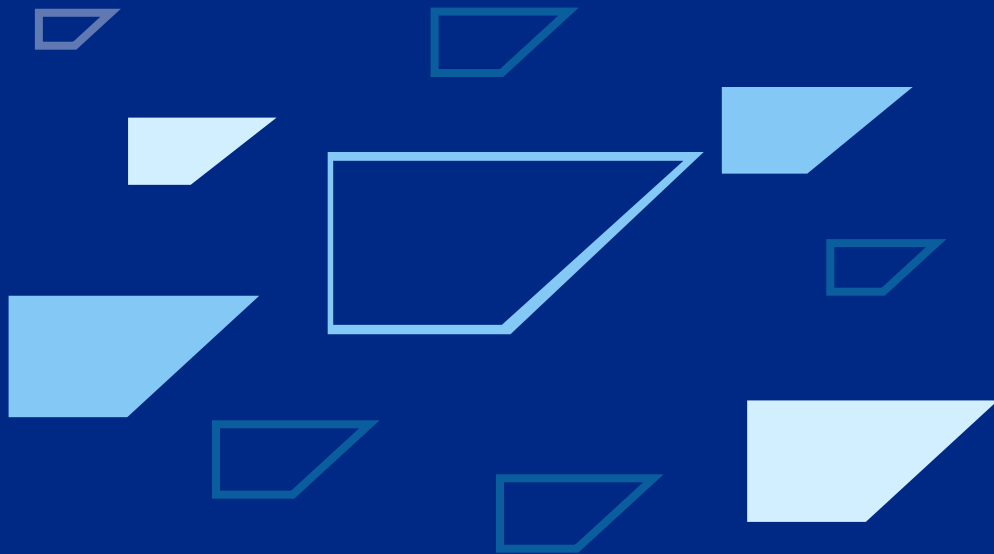
Global Enterprise Architecture Excellence Team



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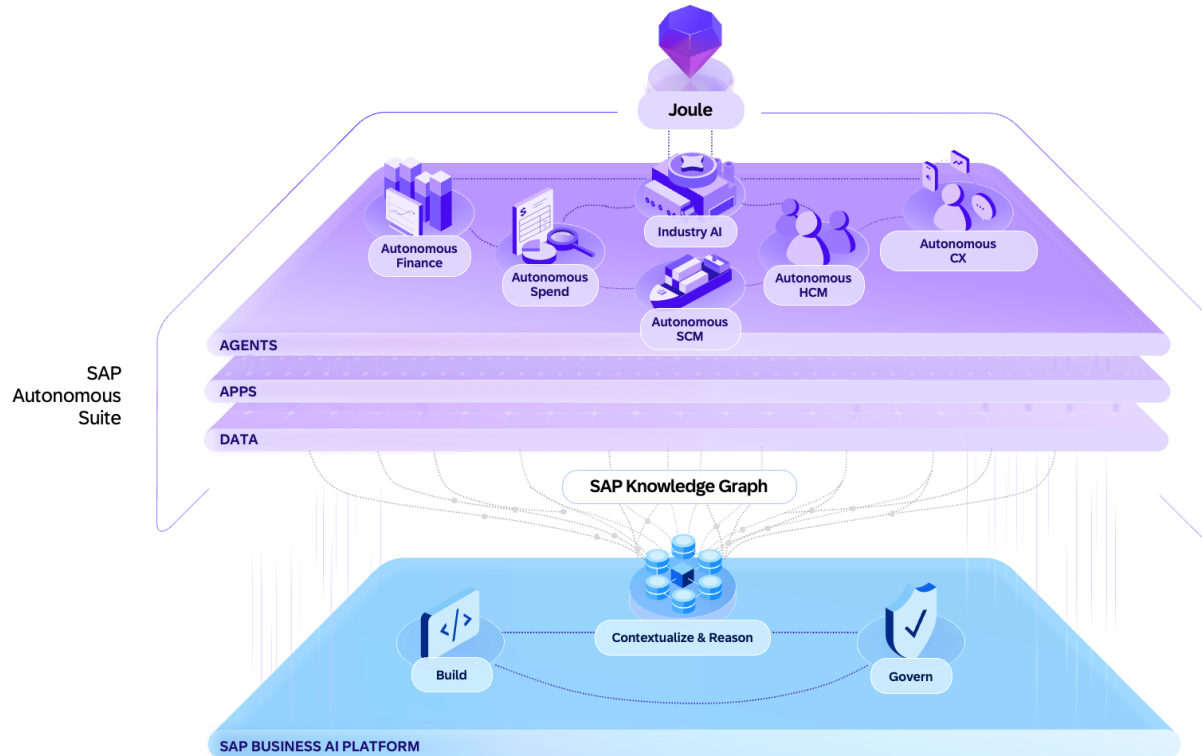
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SAP's Autonomous Enterprise vision empowers future-ready organizations with AI-driven process automation and intelligent business insights



- 1** **Joule** as the new engagement layer, bringing together data, workflows, and agents across SAP systems and beyond
- 2** **SAP Autonomous Suite** to reinvent how enterprises run, based on AI assistants and agents executing work E2E
- 3** **Industry AI** embeds the process knowledge, compliance rules, and data models specific to your industry
- 4** **SAP Business AI platform** delivering business context, unified data, models, and enterprise-grade governance
- 5** **Accelerate the evolution to an Autonomous Enterprise** with agent-led transformation, delivered through RISE and GROW.

Joule Assistants & Joule Agents

Collaborate with AI agents, automate routine tasks, and execute complex workflows — all with the business expertise and secure data grounding to act with confidence across every system.

What is Joule Work?

Joule Work is a new stand-alone dynamic workspace where people can execute business-wide workflows across SAP and non-SAP systems.

What is a Joule Assistant?

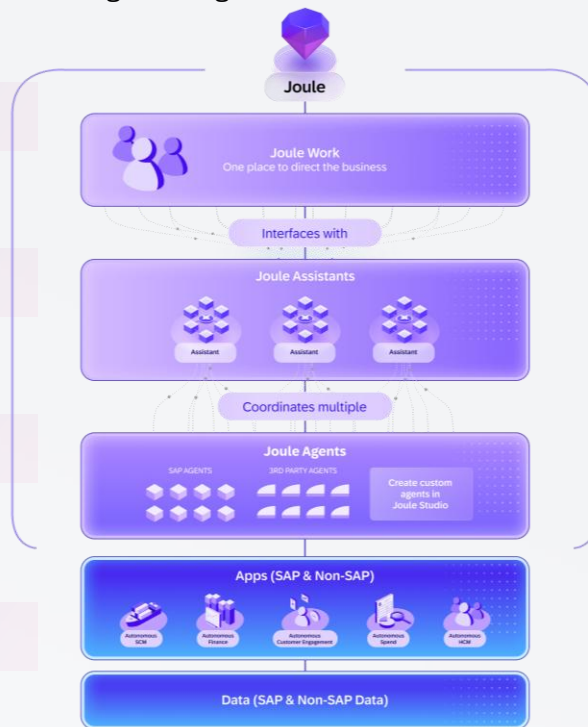
Assistants use deep role and process context to coordinate Joule Agents and autonomously execute complex workflows across the business, like smart teammates.

What is a Joule Agent?

Joule Agents are purpose-built AI agents with deep business process expertise, accessible through Joule Assistants, that automate well-defined, multi-step enterprise workflows so you can get more done.

What are skills?

Skills are specialized, atomic, and deterministic actions that enable Joule to execute specific, predefined tasks, such as retrieving data or triggering system transactions.



Visual represents a mix of current
& visionary product structure

Implications

Joule as a central enterprise interaction layer and define how it integrates across fragmented SAP and non-SAP landscapes:

- Establish **centralized identity, role, and access management** so AI agents only access authorized systems, data, and processes
- **Expose business capabilities** through secure, stable APIs and approved connectors to enable reliable agent orchestration across systems
- **Govern AI agents like enterprise products** with clear ownership, lifecycle management, monitoring, rollout controls, and measurable business value tracking.

One place to direct the entire business

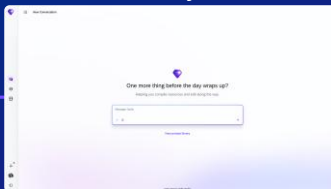
A new human advantage

Joule Work, beyond chat

Proactive. Faster action. Better decisions.

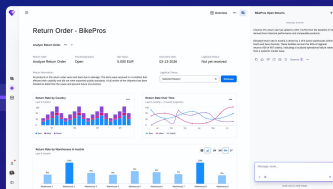
Conversations

Powered by Joule



Ask a question in plain language and get to action in one step

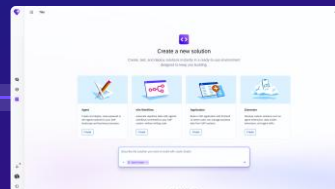
Spaces



Flexible AI-generated, spaces that adapt content dynamically based on user intent and context.

Develop

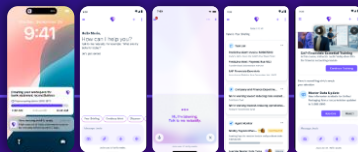
(Joule Studio)



Build custom apps and agents that extend Joule to your own work.



Cross OS Desktop Experience

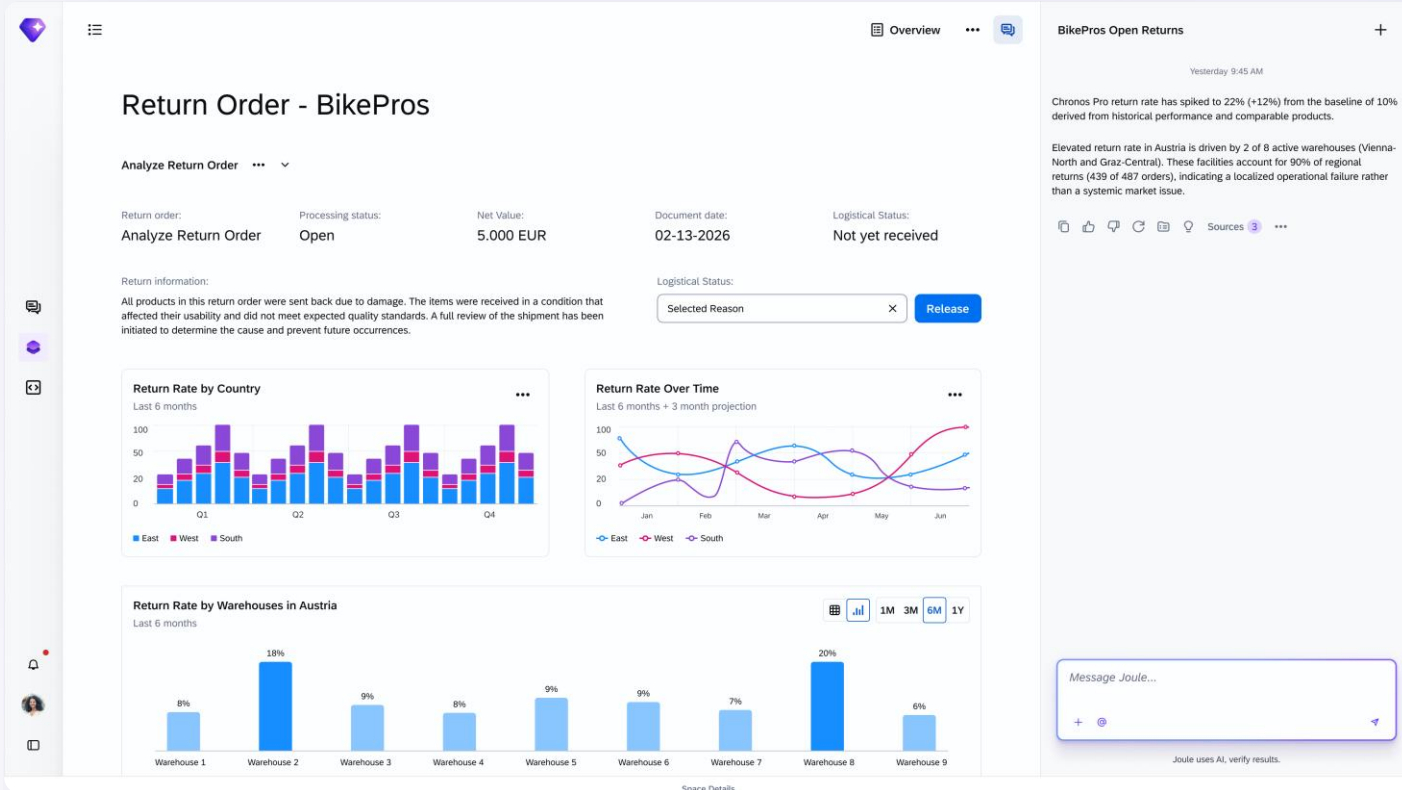


Available on Mobile, Cross-platform and multi-modal



Omnipresent: Browser-based Joule action bar

Dynamic, AI-generated workspaces for problem-solving.



Implications

- UX architectures will increasingly **abstract underlying applications** through AI-driven conversational orchestration
- AI interaction layers become the primary interface to underlying enterprise systems
- Partners must therefore **redesign engagement architectures** around AI orchestration – rethinking UX, process entry points, and information architecture around business tasks and outcomes rather than static application screens
- Joule Work **complements existing SAP UI technologies** (e.g. Fiori/UI5, CAP, Build Workzone)

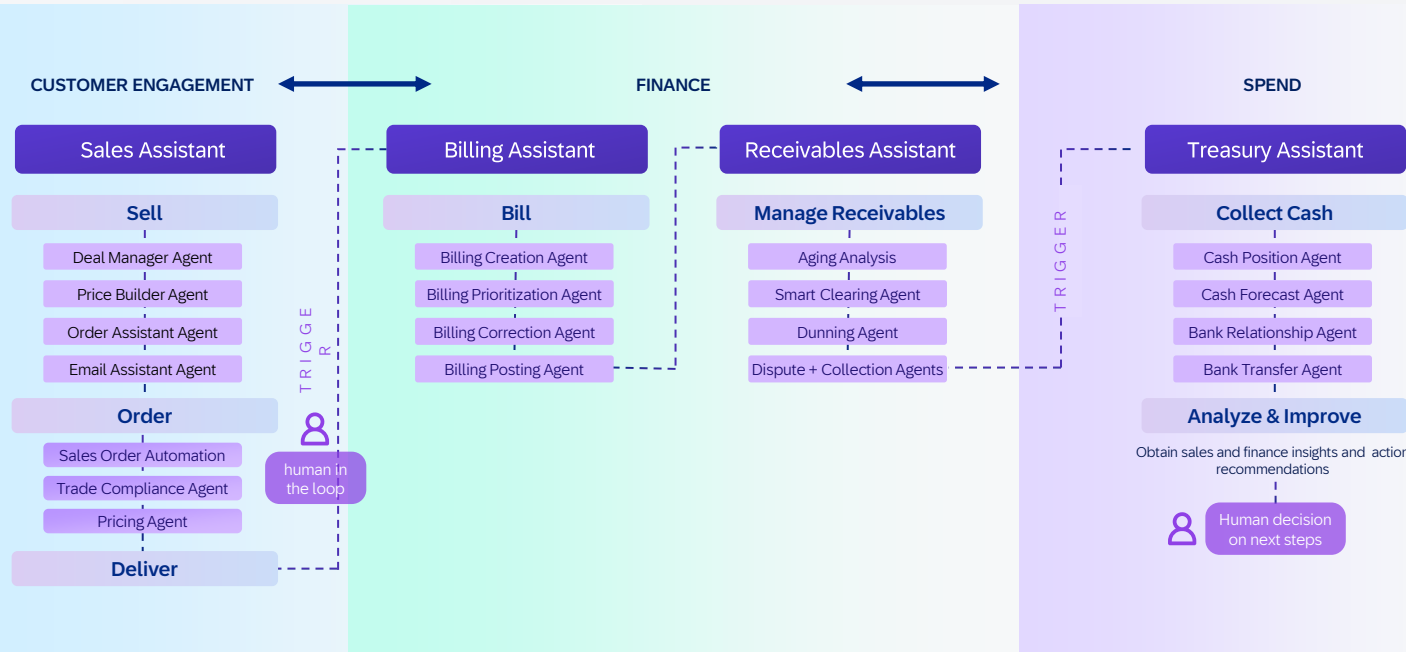
Transforming workflows with Joule

From lead to cash: Assistants and agents working seamlessly across:

One process.

Three domains.

One coordinated outcome.

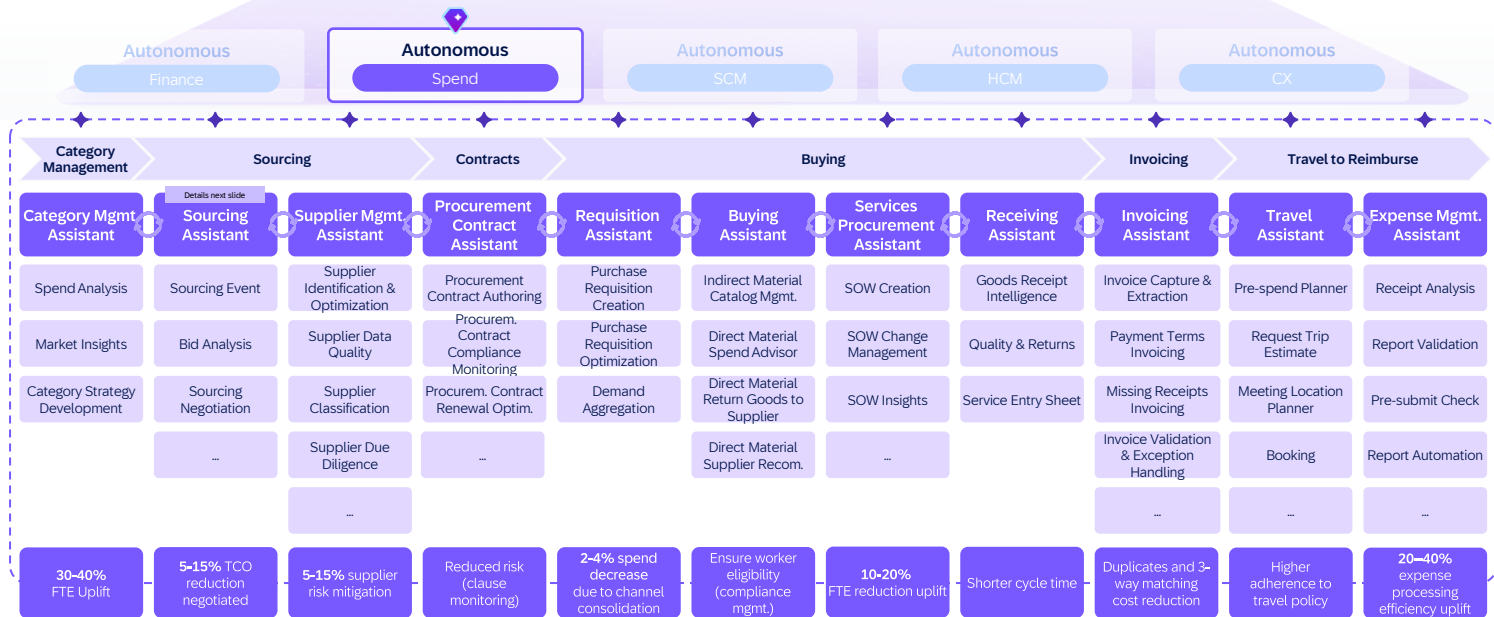


Implications

- Traditional batch interfaces and fragmented integrations will not support agent-based orchestration.
- All core processes are **accessible via realtime APIs or events** and expose required **metadata for semantics and context**
- Include AI agents and skills as **new architectural building blocks**
- Update your **enterprise integration strategy and patterns** as well as your architecture principles for agent integration (agent-to-system, agent-to-agent)
- Understand **interoperability standards** for AI agents

Assistants and agents ...

The **Autonomous Suite** is built around five autonomous business domains

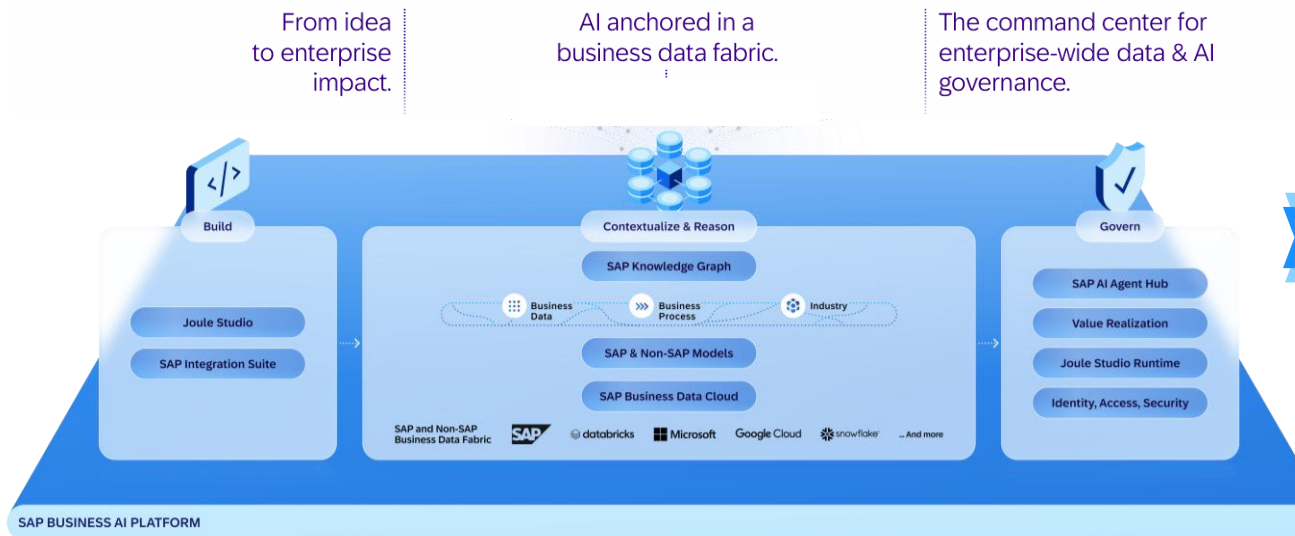


Standard agents consumed via AI Units per action

Business AI Platform now includes SAP Business Data Cloud

AI, data, governance, and runtime are now one platform

SAP Business AI Platform



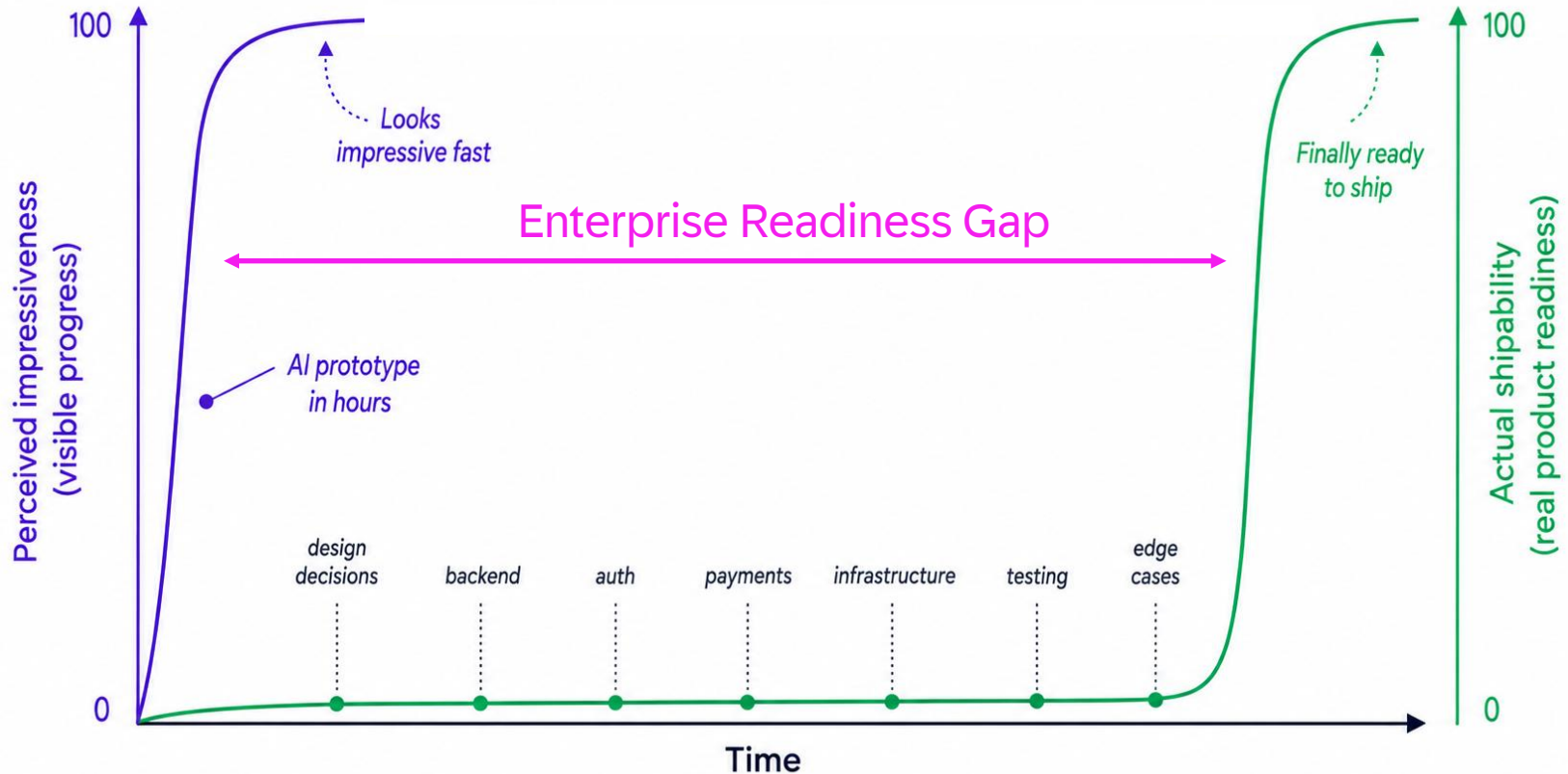
Implications

- SAP Business AI Platform is the **foundation** that brings together SAP solutions to **build, contextualize and govern end-2-end AI flows**
- SAP Business AI Platform **filters the AI-relevant capabilities** of the underlying solutions e.g. the "SAP AI Agent Hub" (a LeanIX use case) or "Joule Studio" (as part of the BTP Build aspect)
- Business AI Platform is **not a product** on the price list, instead use it as a strategic construct to highlight SAPs end-2-end AI capabilities
- Business AI Platform does (currently) not have a commercial impact and neither does it have an organizational impact

AI, data, governance, and runtime are now one platform

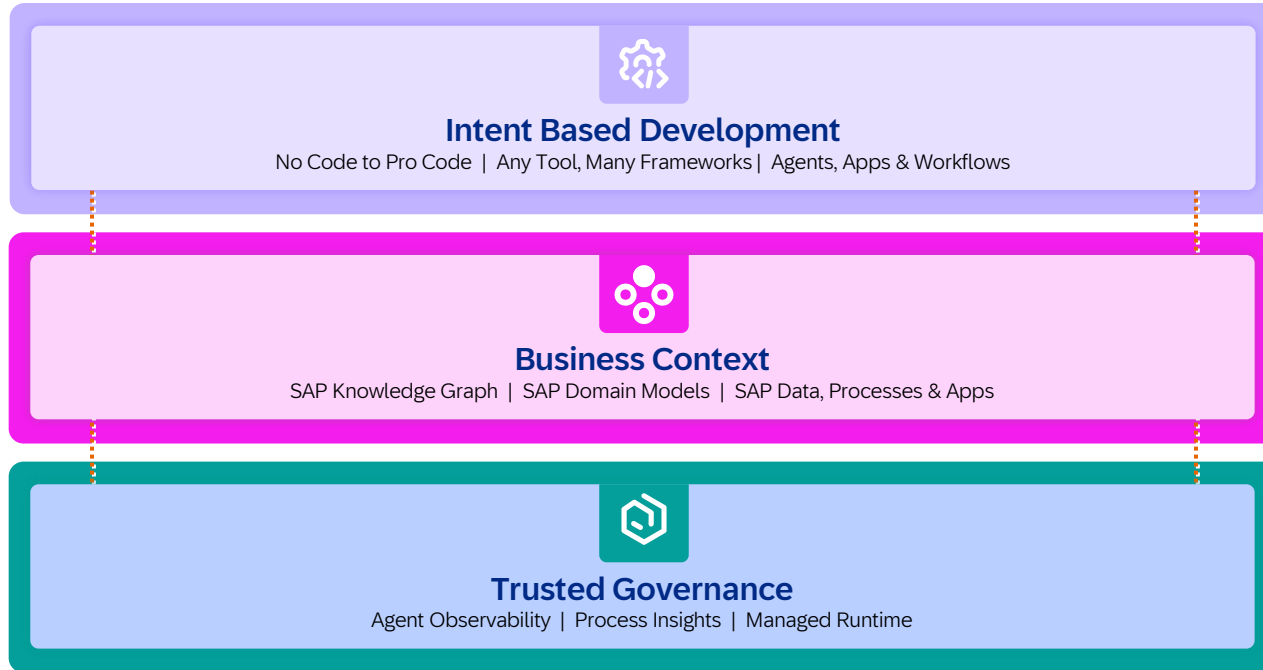
Aspect	Benefit description	Underlying solutions
Build	Unified solution to build AI agents, apps, and workflows grounded in business context, deploy them without operational overhead, and seamlessly integrate them to your systems.	• New Joule Studio → agent and extension development • Joule Studio Runtime → deploy custom agents, extension and workflows • SAP Integration Suite → connect agents, applications, processes and data
Context & Reason	AI that reasons with deep, universal business context, anchored in a data fabric that serves as the trusted knowledge core for every enterprise application and agent. SAP Domain Models deliver that context, and governed access to leading third-party models through SAP's generative AI hub ensures you always have the right model for the job. Business Data Cloud unifies SAP and third-party data, ensuring every AI initiative operates from the same trusted foundation.	• SAP Business Data Cloud → business context, governance across SAP and third-party data • SAP Knowledge Graph • SAP Predictive Models (SAP-RPT-1.5) • SAP Domain Models → models trained on SAP process, and industry knowledge • Generative AI hub → SAP and third-party model access and management.
Govern	The command center for enterprise-wide data & AI agent governance. With an AI Agent Hub that enables organizations to manage agents across their full lifecycle, from planning through decommissioning.	• SAP AI Agent Hub (LeanIX) → discover, manage & govern agents • SAP Signavio → supply agents with context, discover opportunities for agents • SAP LeanIX → align AI initiatives to business strategy

The Demo Is 10%. The Product Is the Other 90%.

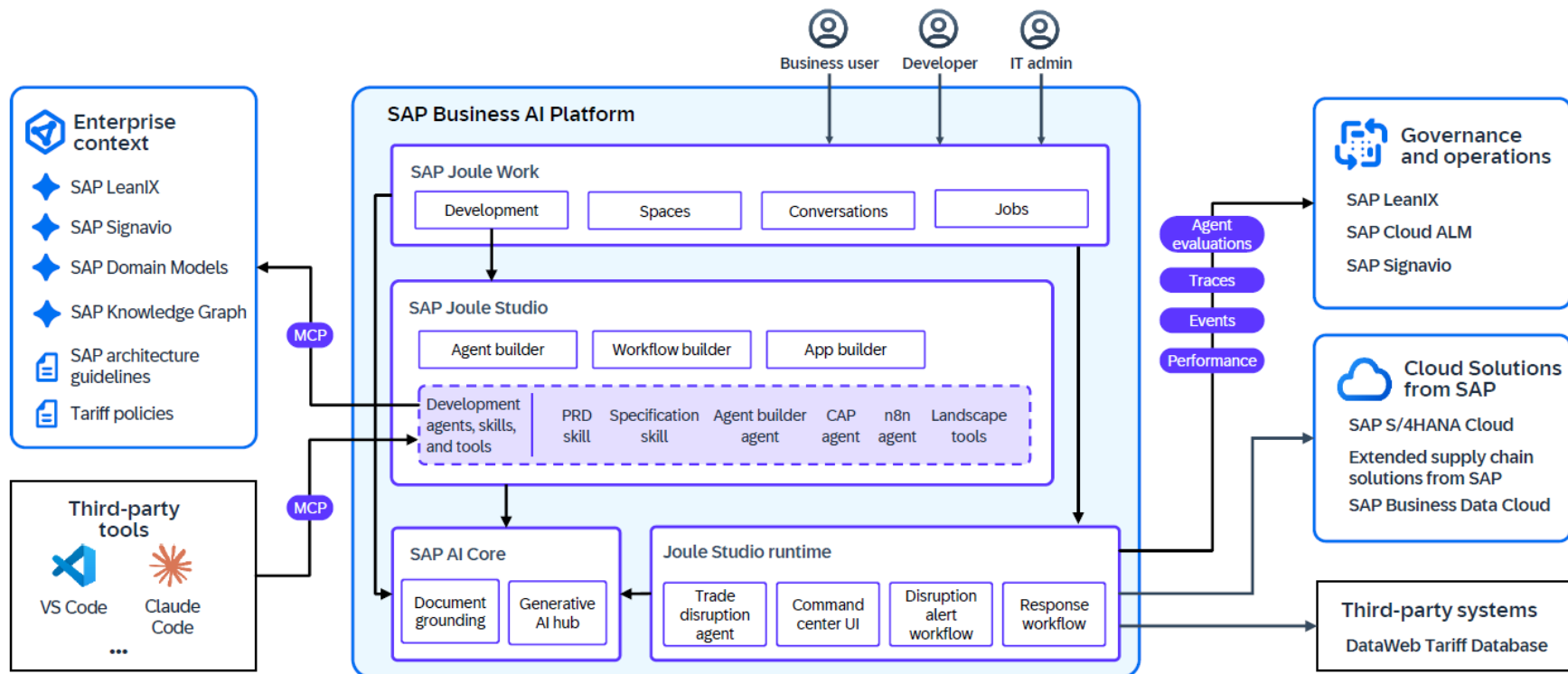


SAP's Right to Win with **Joule Studio**

Build - Deploy - Run - Manage Trusted Custom Agentic AI Solutions

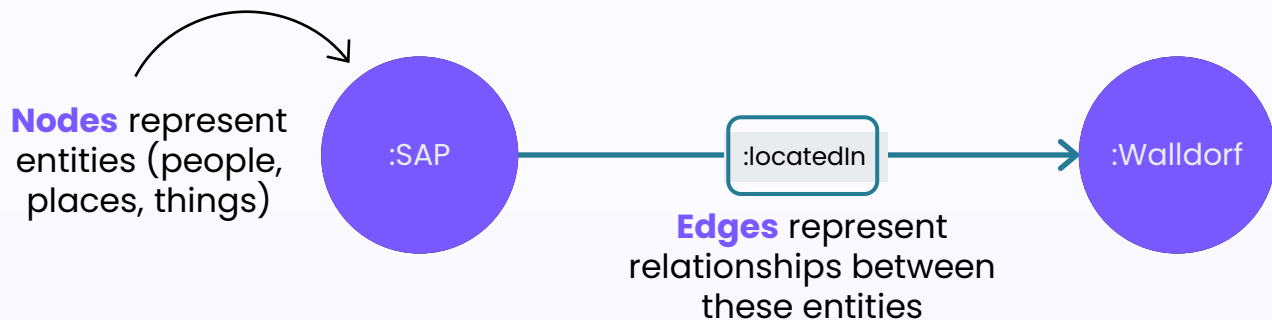


Solution architecture: Tariff disruption response solution



What is a Knowledge Graph?

It represents structured information in the form of a graph.



Components

Schema / Ontology

Defines the types of entities, their attributes and relationships between the entities

Instance Data

The instances that form the graph and follow the definitions of the schema

Graph Data Models

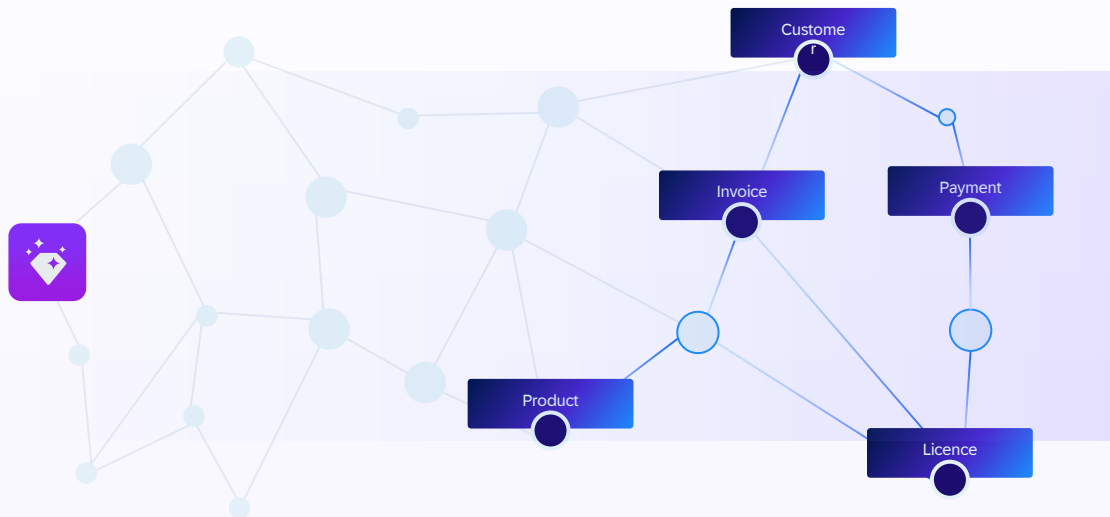
- *Labeled Property Graphs (LPG)*
- *Resource Description Framework (RDF)*
 - *Web standard*
 - *Schema-less*
 - *SPARQL*
 - *RDF Triples*

Knowledge Graph, a map of information

“

SAP S/4HANA business user

Do I have open
Purchase Orders?



Enhancing AI responses with SAP Knowledge Graph

Sample scenarios

Without SAP Knowledge Graph

With SAP Knowledge Graph

“

SAP S/4HANA business user

Do I have open
Purchase Orders?

Let me open the
Purchase Order app

You have 5 open purchase orders,
here is the list...

“

SAP Business Data Cloud analyst

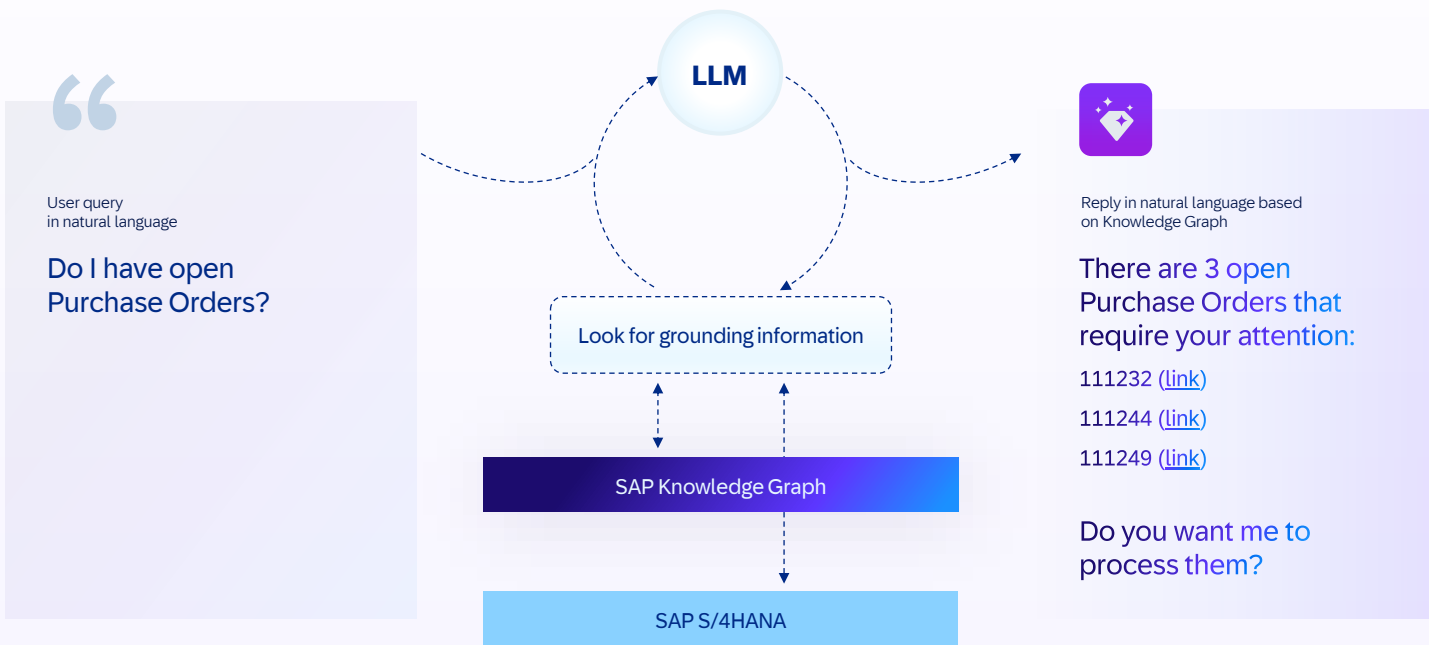
What analytic models
contain information
about product sales?

Sorry, I cannot
answer this question

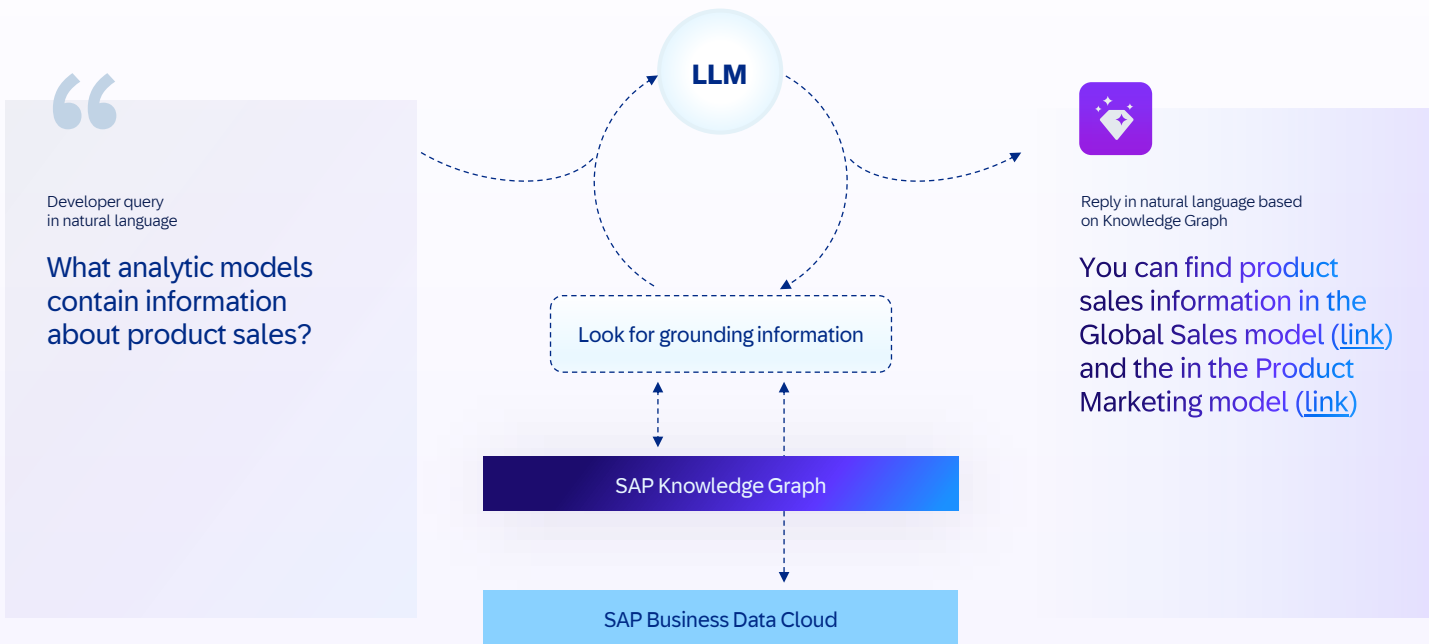
Consider tables dealing with sales order
and invoices, here are the links...



The SAP Knowledge Graph grounds LLM's with business context for accurate answers



The SAP Knowledge Graph enables exploration of data and metadata



Demo – SAP Knowledge Graph

Vector Embedding + Knowledge Graph

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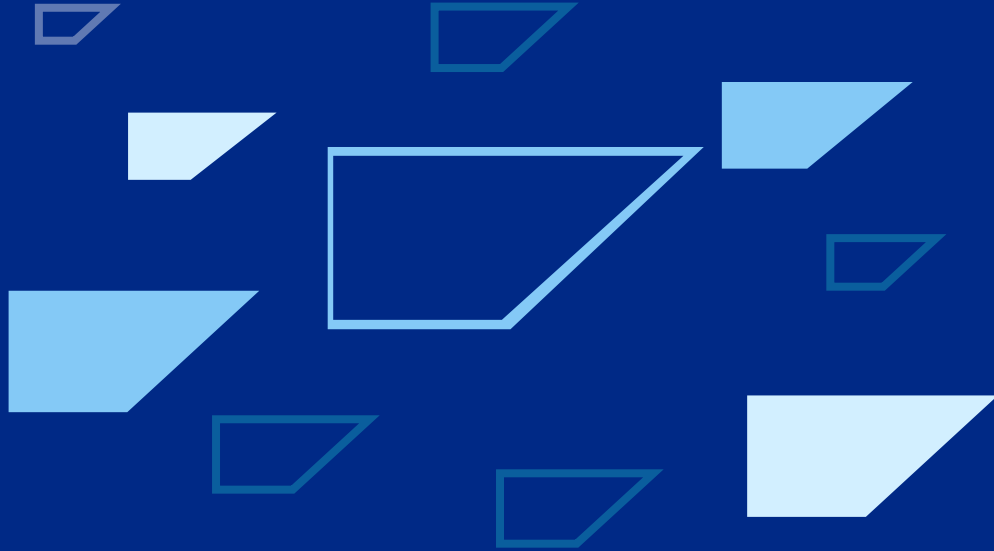
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