



Enabling your own AI Agents with the SAP BTP AI Foundation

When you connect everything,
you can achieve anything.

Unleashed

AI+Data+Applications



Building AI Agents with AI Core, GenAI Hub and Joule Studio

Liam Mischewski - BTP AI Solution Advisor

Unrivaled Ai

Drive relevant outcomes

Trust reliable results

Adopt AI and scale responsibly

Signavio

LeanIX

WalkMe

AI-assisted Cloud Transformation

CALM

Joule for Consultants

and more

Joule

Joule Agents

Embedded AI

Financial
Management

Supply
Chain
Management

Human
Capital
Management

Spend
Management

Customer
Experience

Business
Technology
Platform

Customized AI
based on AI Foundation

AI Foundation

on Business Technology Platform

AI ecosystem partnerships and investments



ANTHROPIC



cohere

databricks

Google Cloud



Meta

Microsoft

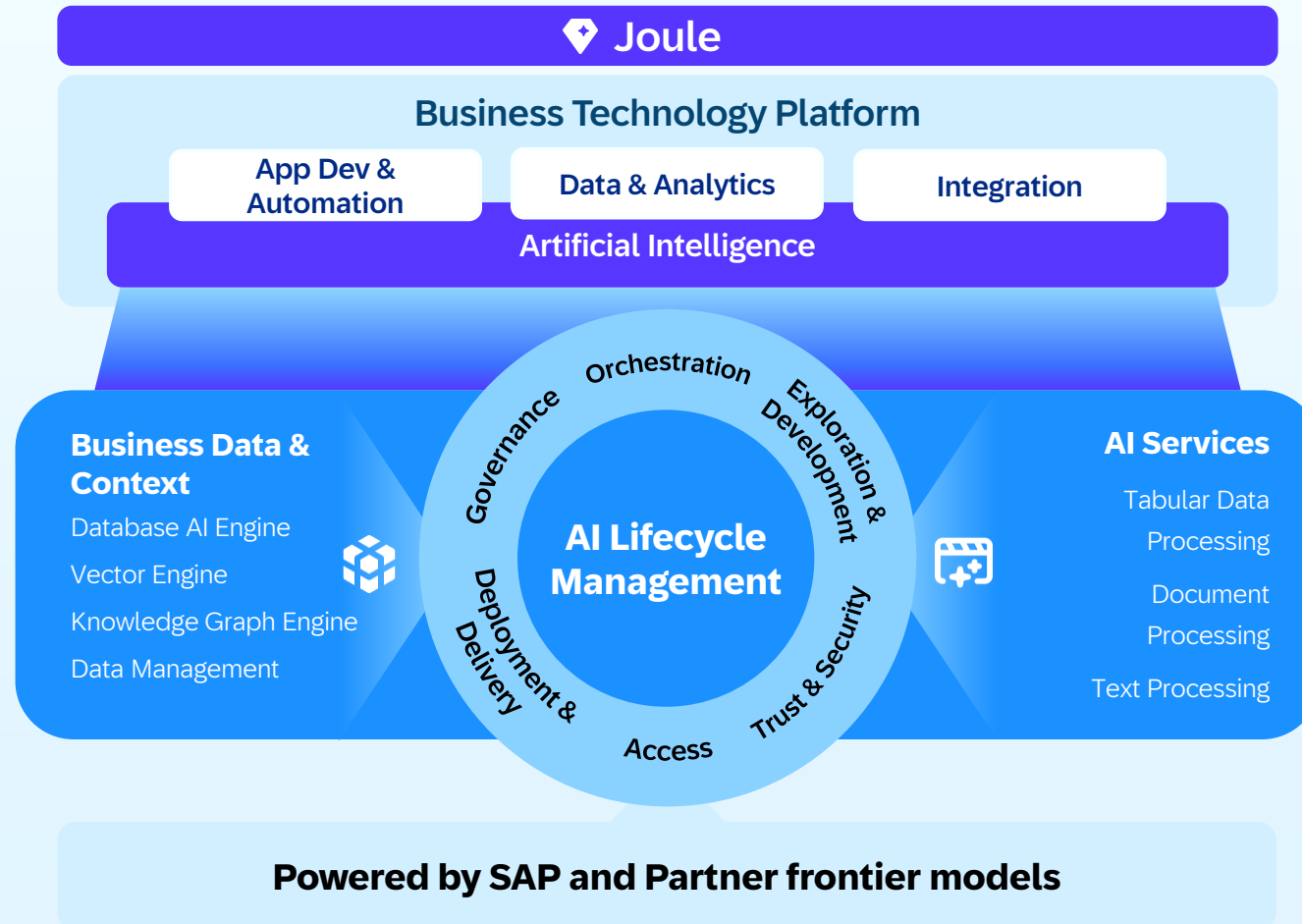
MISTRAL AI

NVIDIA



**SAP Business
Data Cloud**

AI Foundation is a complete set of services for AI developers on SAP BTP



Empower developers with managed and trusted access to LLMs

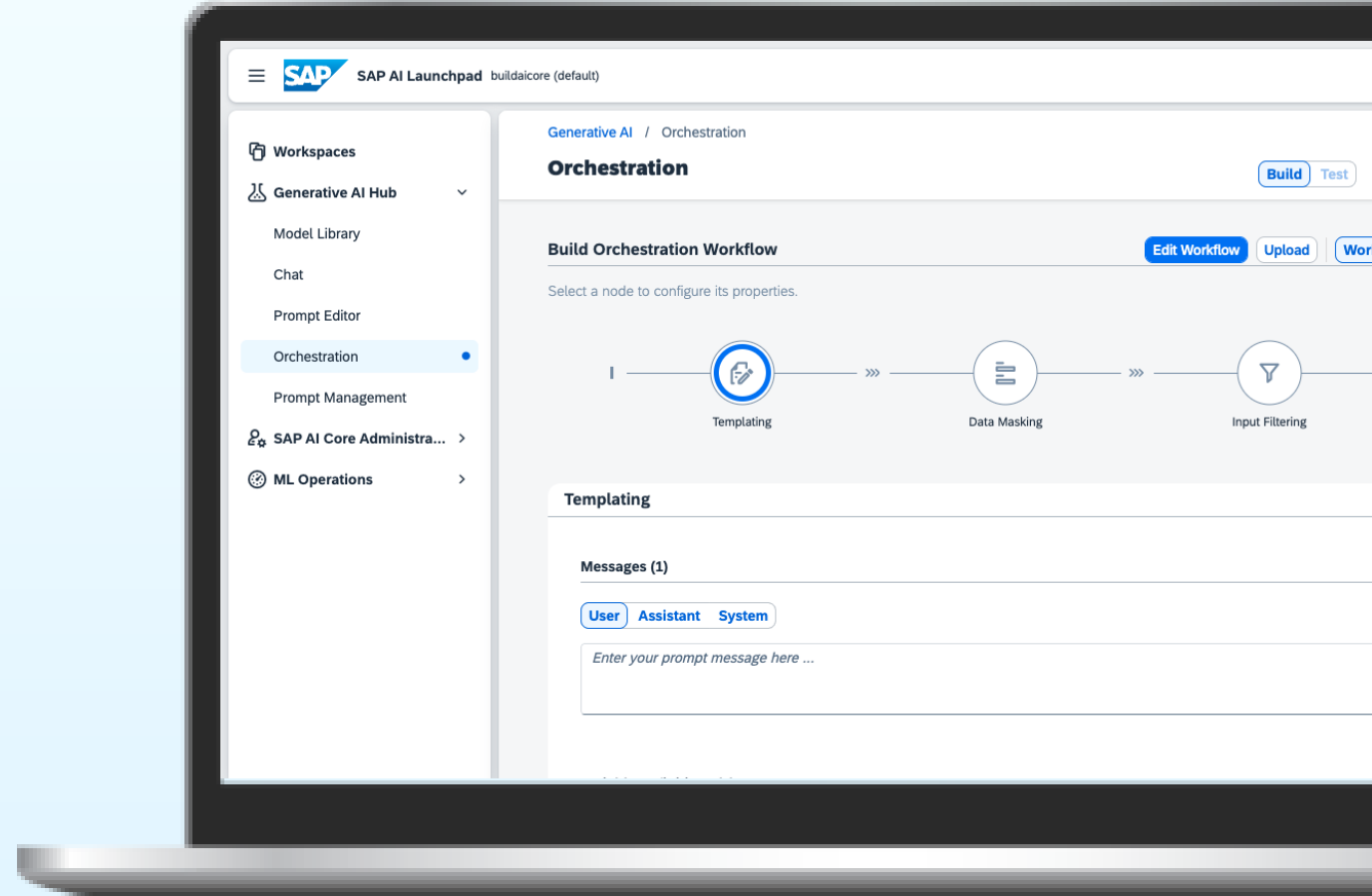
Connect seamlessly and securely to supported LLM models with GenAI Hub on SAP AI Core

Experiment using the prompt engineering playground

Enhance models response with grounding

Extend your solutions with generative AI capabilities

Accelerate adoption with managed legal and commercial framework



Anchor Data Apps in Your Business Context with SAP HANA Cloud Vector Engine

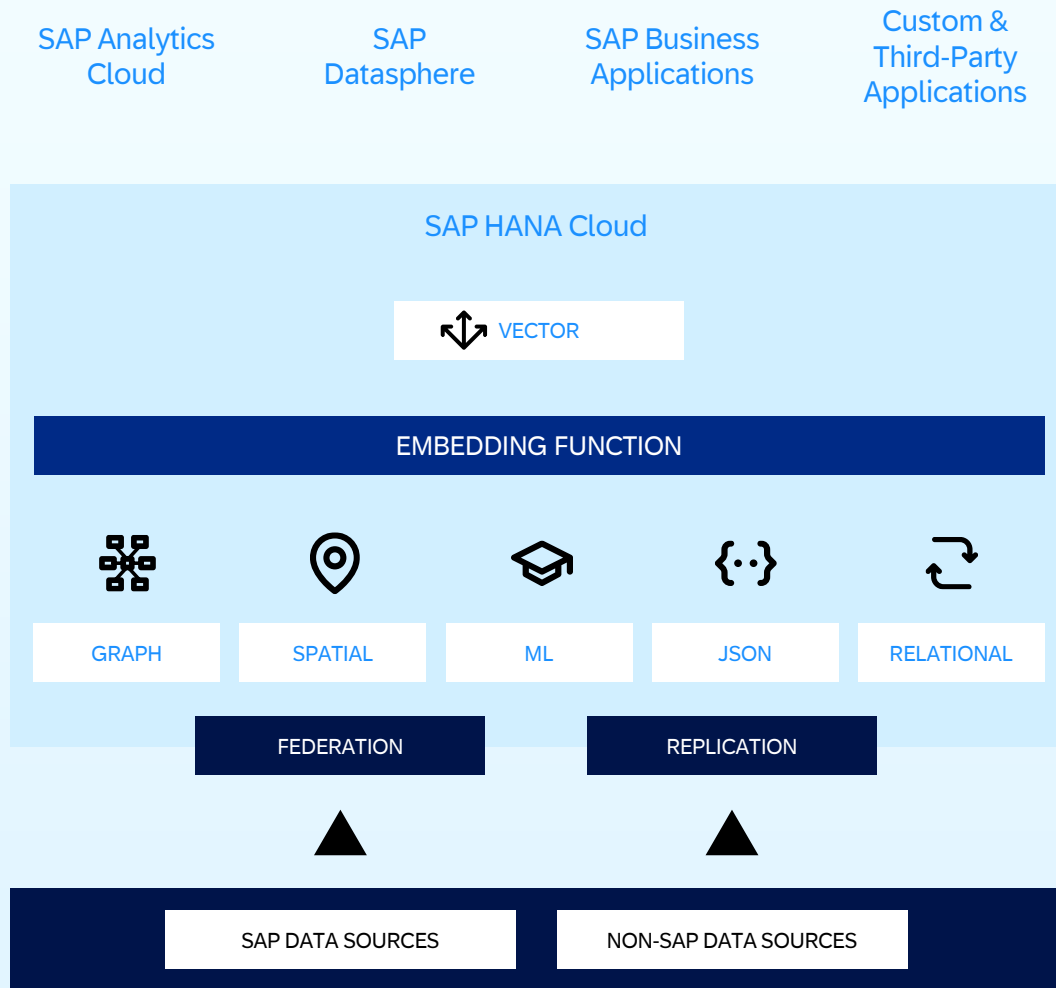
Store and retrieve complex data points represented in many dimensions on SAP HANA Cloud's Vector Engine

Generate coherent, fact-based responses

Limit model 'hallucination'

Integrate sensitive and customer-specific data

Leverage existing LLM training

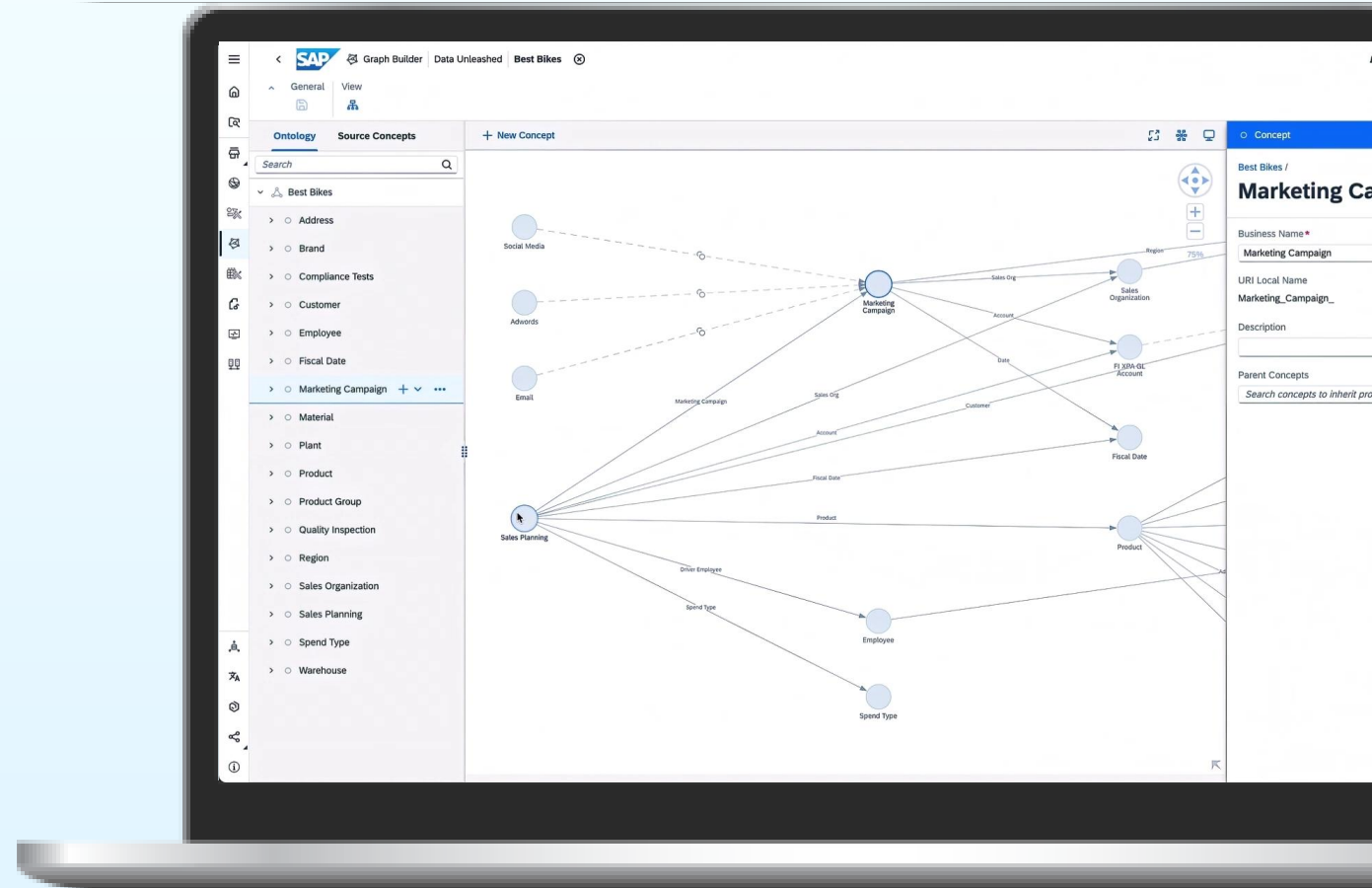


Harness Knowledge Graph to Enhance LLMs with SAP's Structured Data

Augment business context into ontologies traceable by LLMs for complex queries

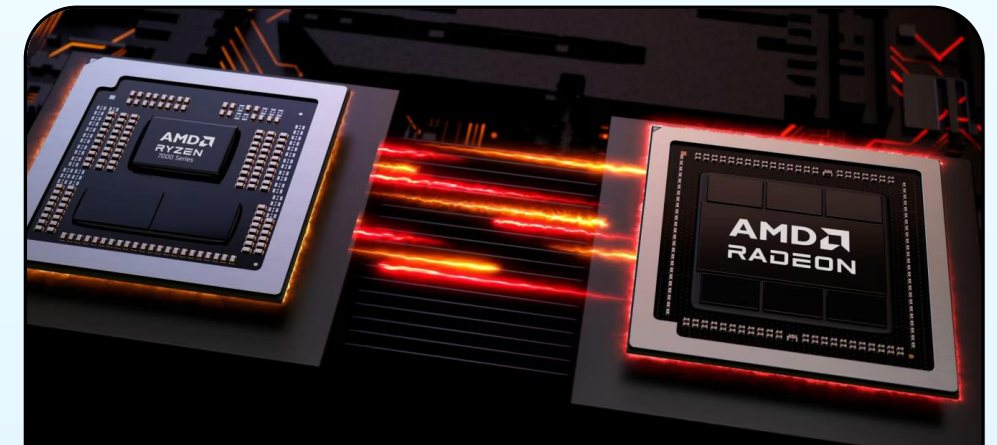
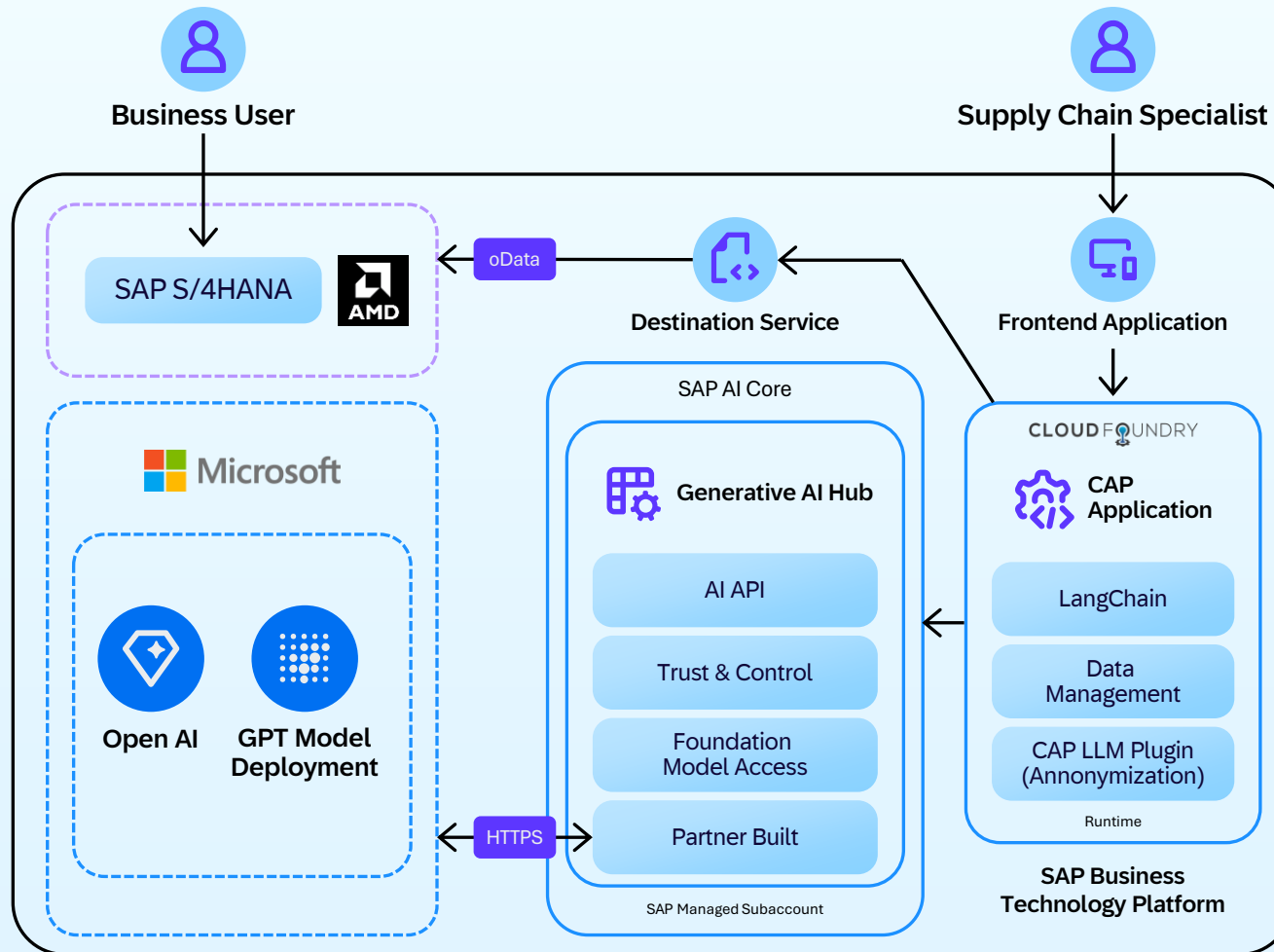
Validate results generated by LLMs to **prevent hallucinations**

Generate trustworthy, AI-powered insights with **traceable data lineage** to underlying enterprise data sources



AMD's Generative AI Supply Chain Troubleshooter

Code based AI Agent to determine reasons for order blocks



OUTCOMES

90%

Reduced manual effort

10400

Orders per year

3120

Hours of Productivity




AI Agents

redefining productivity and innovation

“
**up to 3x more
productivity ...**

The biggest opportunity is seamless
enterprise collaboration ...

[From Potential to Profit: Closing the AI Impact Gap](#)
[Boston Consulting Group, 2025](#)
(Source)



What is the difference?

Evolution of Capability



Joule Skills

"Tell me your task, and I'll take you on the path."



AI Agents

"Tell me the problem, and I'll figure out the best way to solve it."

Difference In Practice

Supply Chain & Logistics

“Retrieve warehouse stock levels.”



Joule Skills

“Predict inventory shortages and suggest reordering strategies.”



AI Agents

Difference In Practice

Customer Support

“Create a support ticket.”



Joule Skills

“Analyze previous issues, suggest solutions, and escalate if needed.”



AI Agents



What are AI Agents?

AI agents can autonomously interact with the environment and iteratively reason **through multistep tasks to achieve a goal.**

Key capabilities:

Planning

Agents plan out multiple steps to achieve a goal

Reflection

Agents self-correct and iteratively reason through problems

Tool usage

Agents gather data and affect changes by using tools like calculators, APIs, and more.

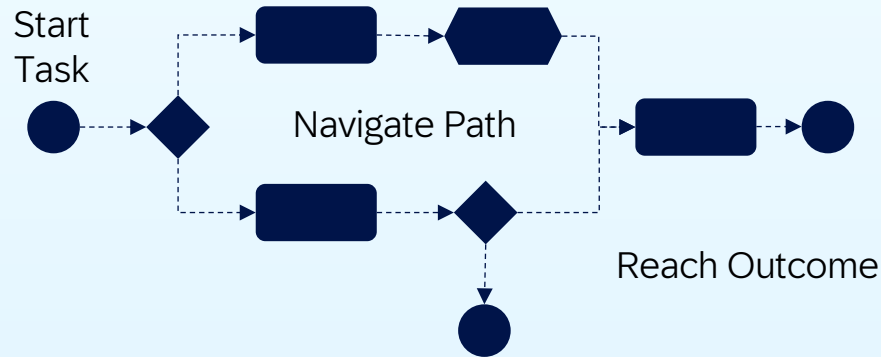
Collaboration and multiagent

Agents call other specialized agents (and interact with humans) to achieve task

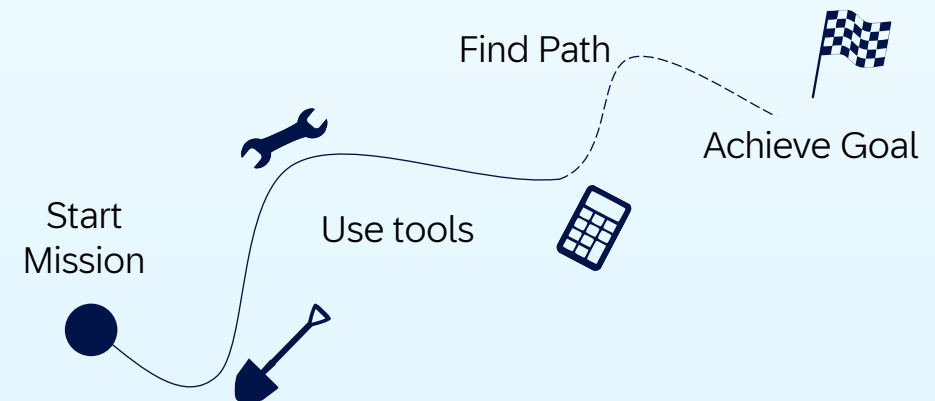
AI Agents for Business

AI Agents are the next evolutionary step towards automation in business contexts

from **modelling processes** with rules and conditions **ahead of time**



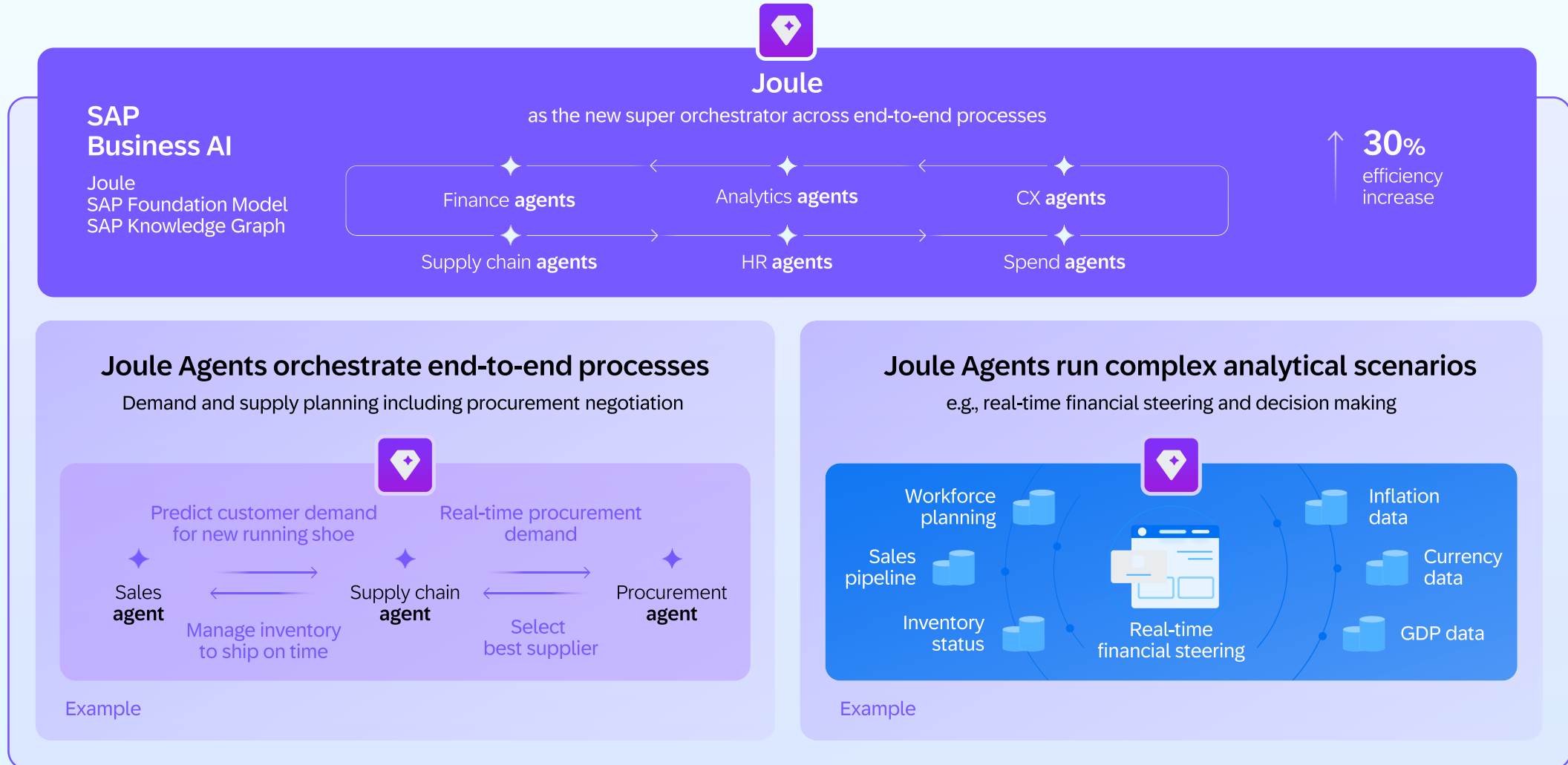
... to providing **tools and a mission** prompt for **dynamic problem solving**



SAP's goal is to **deliver the majority of agents**, i.e. mission prompts and tool definitions, **as content** and execute them **on a managed runtime** which is automatically **integrated with Joule** to quickly scale the number of agents across the SAP portfolio.

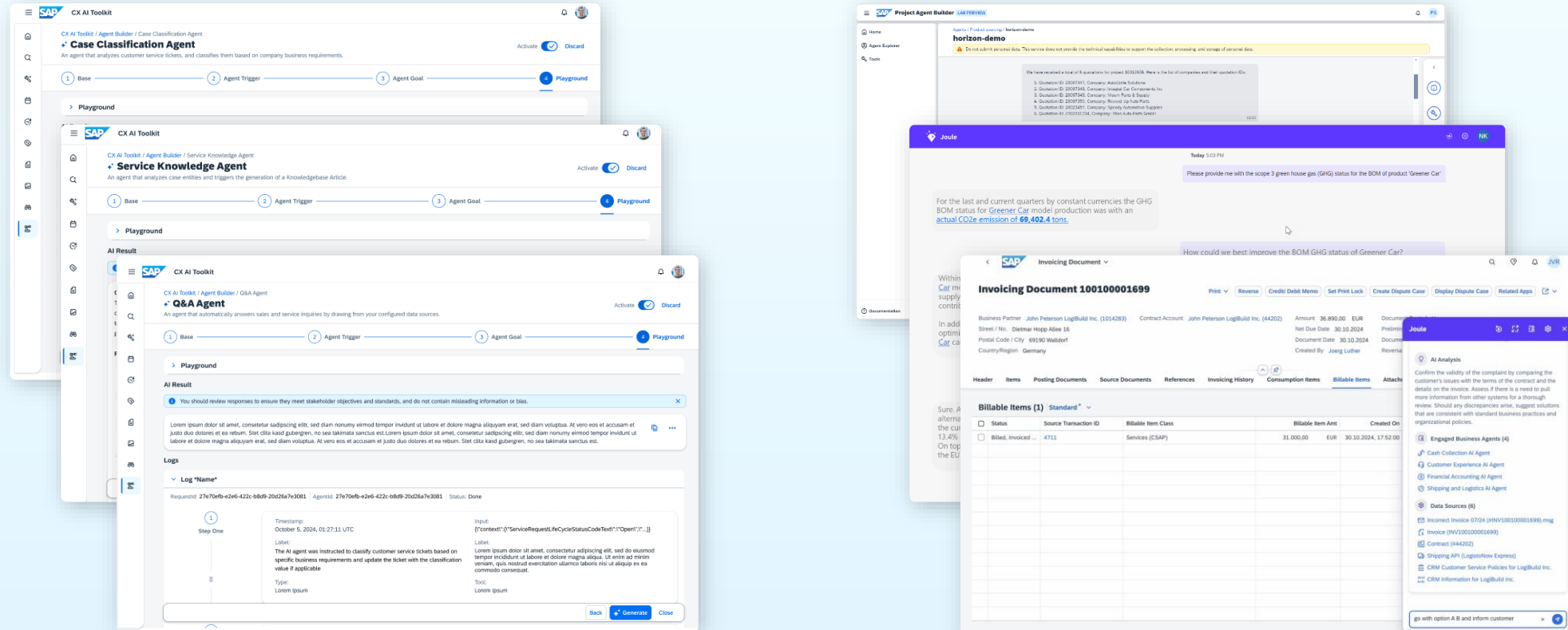
Joule Agent OS

Orchestrating across end-to-end processes and optimizing end-to-end planning



Leverage AI Agents across SAP

Examples



Customer Experience:
Case Classification, Service Knowledge and Q&A

Finance: Dispute Resolution Agent,
Sustainability: Emission factor mapping with AI,
Procurement: Quote Analysis & Scenario Recommendation



Joule studio

in SAP Build

Joule studio

in SAP Build



1



Skill Builder

**Extend Joule
with Joule skills**



2



Agent Builder

**Build your own
AI Agents**



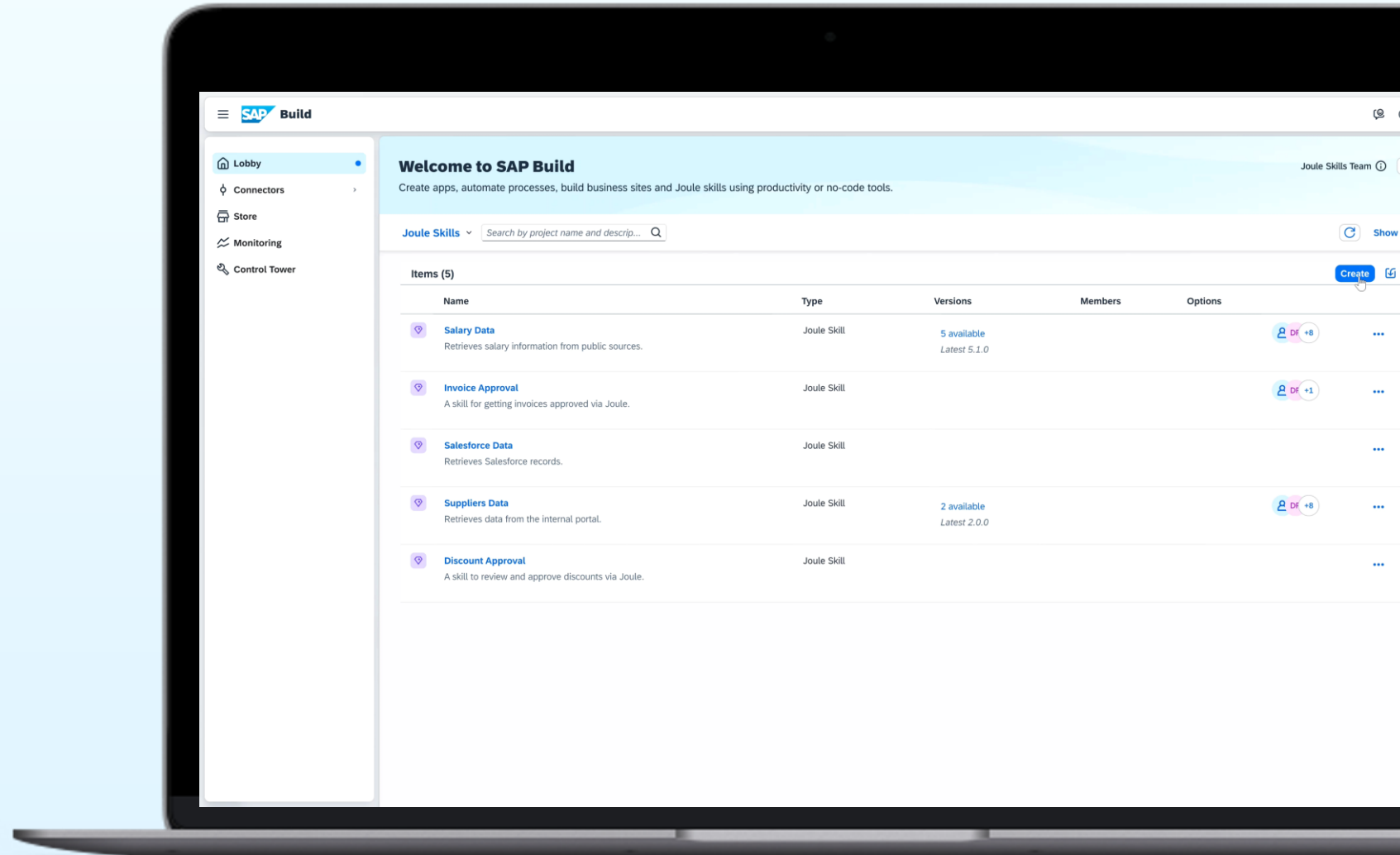
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice.
This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

Add new skills to Joule

Enhance Joule's out-of-the-box capabilities from SAP to support your organization-specific workflows

Create, deploy, monitor and manage your own Joule skills with **drag-and-drop** simplicity.

Integrate any **third-party system** into Joule for an entirely integrated conversational user experience



Build the most powerful agents for your business

Extend the Joule's library of ready-to-use agents with custom agents tailored to your business processes

Agent builder in Joule studio

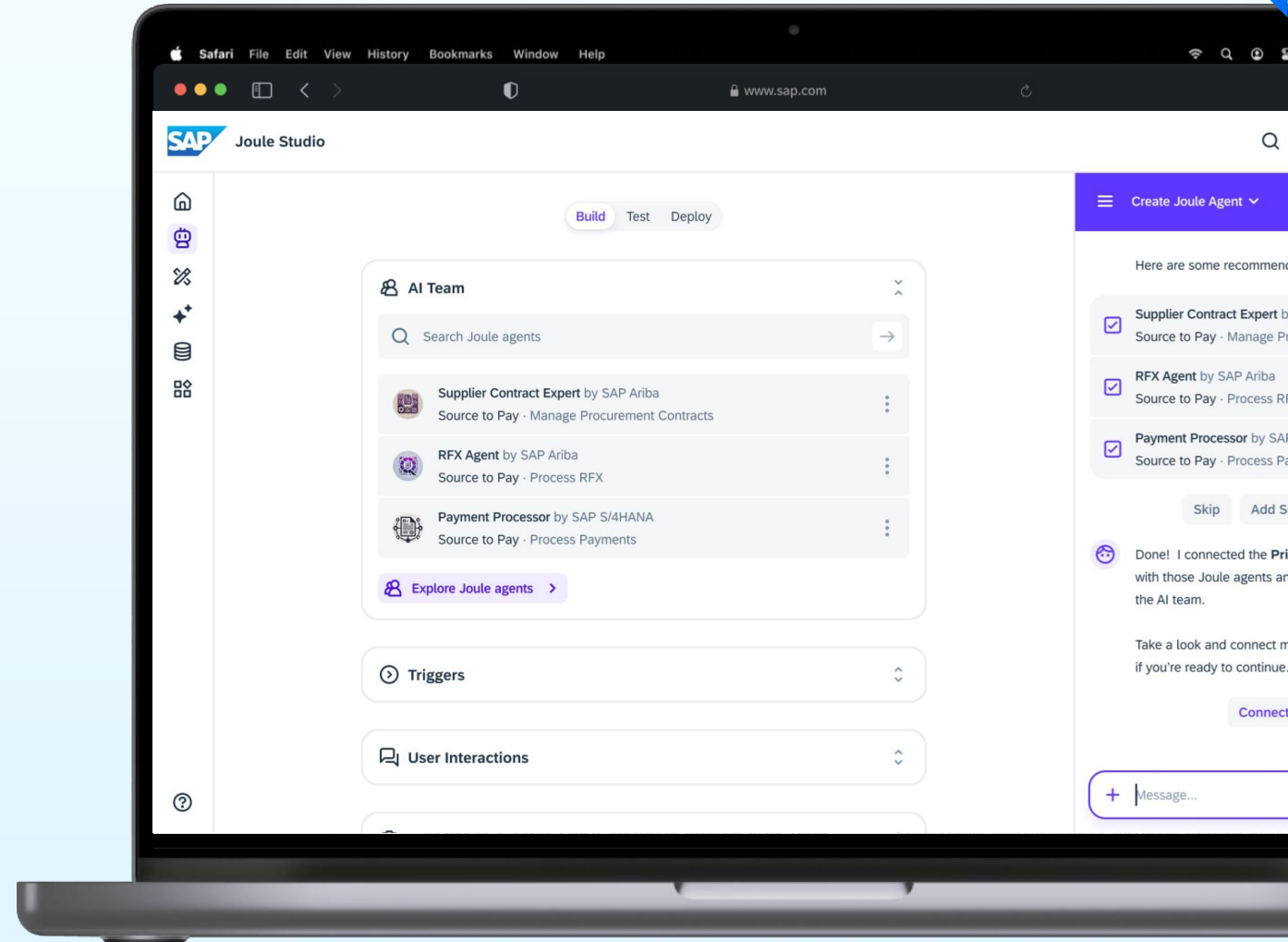
provides guided no-code workflows.

SAP Knowledge Graph integration

recommends process and data grounding.

Your agents do more for your business

by leveraging Joule skills and collaborating with other Joule agents.



Vision of Bespoke AI Agents

The screenshot displays the SAP Joule Studio interface. On the left is a sidebar with navigation links: Home, Agents, Skills, Models, Data, Integrations, and Help. The main area features a large purple banner with the text "Build a Joule Agent perfect for the job" and a "Create Agent" button. Below this are two agent templates: "Service Classification Agent" (blue) and "Pricing Negotiator" (pink). A chat window on the right shows a conversation where the user provides a purpose for the agent, and the system suggests a name, "Pricing Negotiator".

SAP Joule Studio

Home Agents Skills Models Data Integrations Help

Build a Joule Agent perfect for the job

+ Create Agent

Service Classification Agent
By SAP · Customer Experience

Enhance customer service with AI that routes cases as intelligently as your best service expert. This agent is available in the CX AI

Pricing Negotiator

Accelerate sales and service with AI that connects questions to answers. This agent is available in the CX AI

Create Joule Agent

With this example in mind, **please briefly describe your agent's purpose.**

The purpose for this agent is to help procurement managers develop their strategy to negotiate better pricing, warranty terms, delivery timelines, support services, and payment terms with our suppliers.

Now, let's give your Joule Agent a name to make it easier for you and your colleagues to work with them. Try to keep the name short and I'll check its availability. Select one of these ideas or feel free to write your own!

Pricing Negotiator

Excellent! I have what I need to help you build your **Pricing Negotiator** Joule Agent. Let me take you to the Build page...

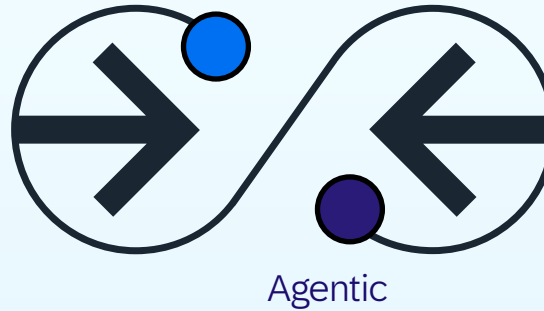
+ Message...

Joule Studio With Process Automation

Build AI agents in Joule Studio and bring them to your process automations

**SAP Build
Process Automation**
Repetitive tasks and
process automations

Deterministic



Joule Studio
LLM-based planning,
automation and decisions



Leverage existing automations
and pre-build content



Human in the
loop



Low-code AI agent
development



Automation of
unpredictable and long-
tail scenarios



Automations based on
unstructured documents

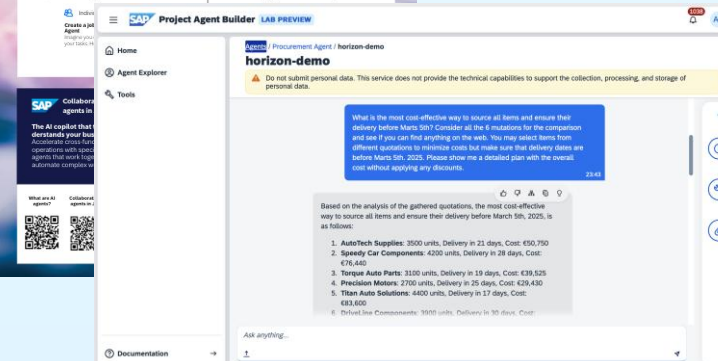
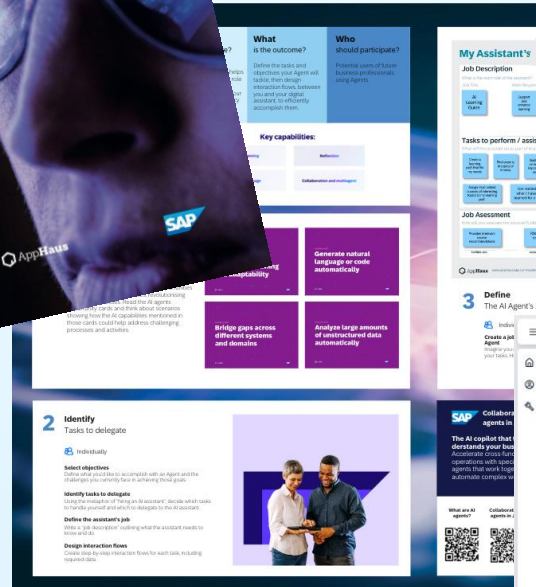


Automation of error
handlings



AI Agents Workshop

Unlocking true business value.



Practicalities

Audience: Executive, Business and IT Stakeholders.

Workshop Format: Group discussions plus curated content.

Scalable Delivery: Usually half day and 5+ Participants

Support Material We Bring: AI Agent Inspiration cards, Job Profile Template, AI Agent Lab Preview.

Thank you



Liam Mischewski

BTP AI Solution Advisor

Liam.Mischewski@SAP.com

