

Make rapid, transformative impact a reality

with SAP Business AI and SAP Business Technology Platform

Jochen Schneider
Head of SAP BTP AI

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Agenda

- AI First, Suite First for SAP Business AI
- BTP AI Roadmap
- Deep Dive into self-optimizing software engineering
- Deep Dive into AI Agents
- The Future of AI





Unlock value for your Business

Everywhere

ERP and finance

Supply chain

Customer experience

Procurement

Human resources

IT and cross-function

with SAP Business AI

You are at the center of what we do

Each challenge is unique, yet you all demand more intelligent
and connected technology solutions to succeed



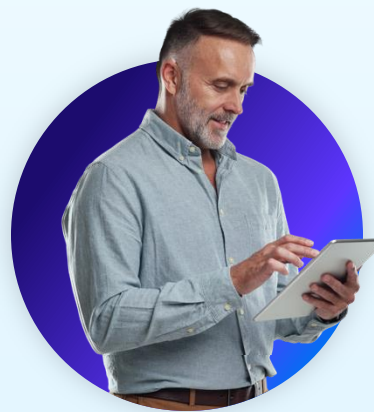
CFO



CPO



CHRO



COO



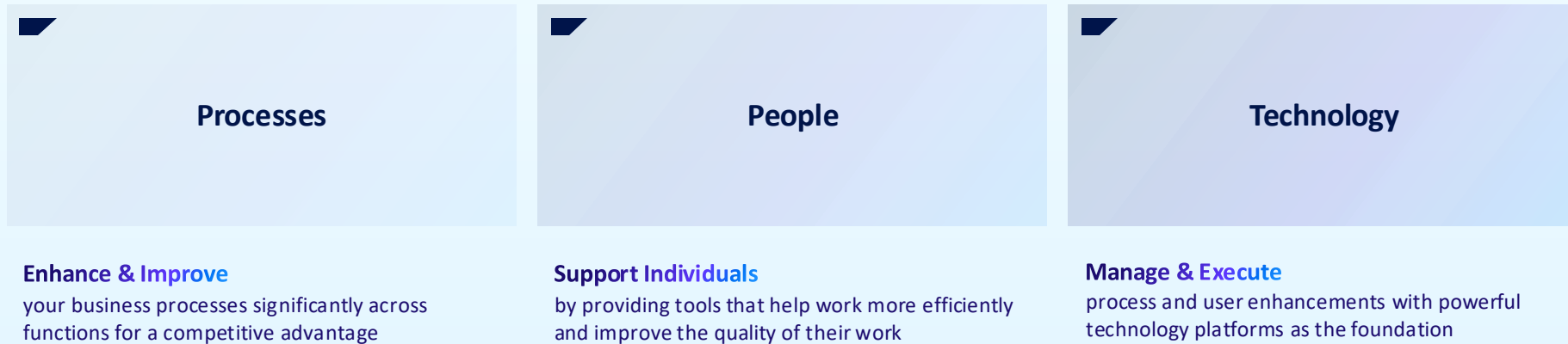
CIO



CRO

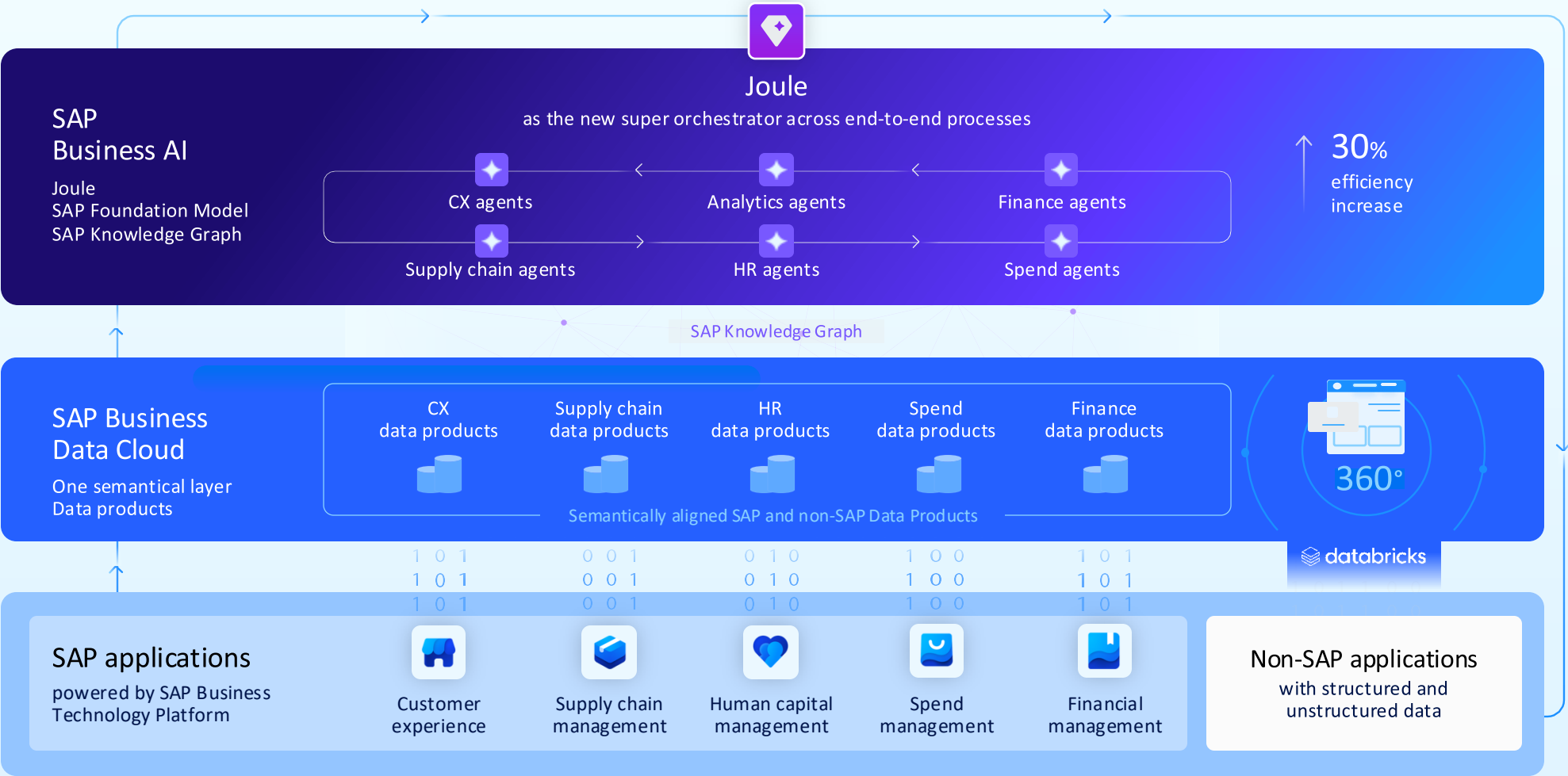
Make your organization run better

Key areas where you can benefit from Business AI



AI first and Suite first

SAP delivers market making innovation with SAP Business Suite



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 capabilities

Financial
Management

Supply Chain
Management

Human Capital
Management

Spend
Management

Customer
Experience

Business
Technology Platform

Customized AI
based on AI foundation

AI Foundation

on SAP Business Technology Platform

AI ecosystem partnerships and investments



ANTHROPIC



Google Cloud



**SAP Business
Data Cloud**

Joule goes agentic

SAP Agent Builder in Joule Studio

Solve complex business problems

Planning

Self-reflection

Reasoning

Collaboration

/available

Q2/2025

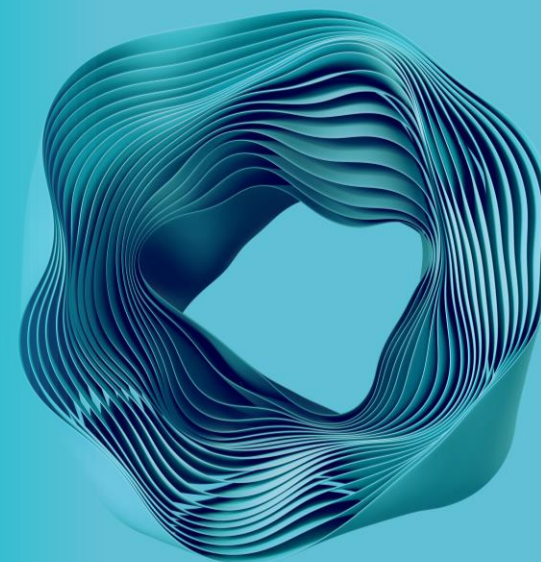
SAP Build

Joule for Developers

Enhancing developer efficiency

/available

Q1/2025



AI Foundation

On SAP BTP



Integrating AI into your everyday work



Foundational models from top providers



One legal & commercial framework

SAP HANA Cloud

Knowledge graph engine

Harness the power of structured & unstructured data

/available

Q1/2025



SAP BTP

Generative AI toolkit

Kick-Start GenAI app development in BTP

/available

Q2/2024



Self optimizing software engineering





GenAI Starter Kit

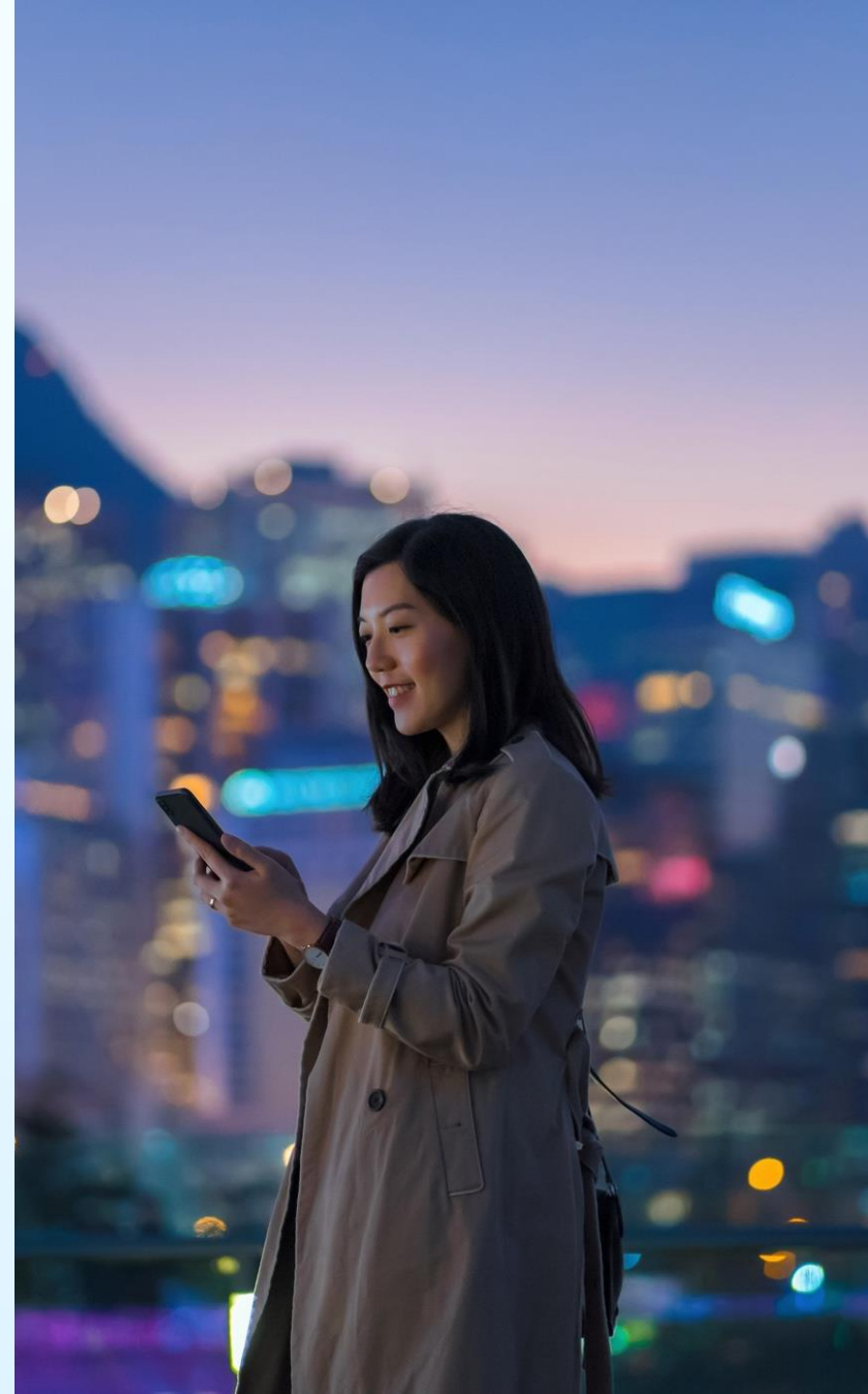
How can we be more efficient building Gen AI Apps?

Vision

- Simple and time efficient way to kickstart your Gen AI development
- Automated provisioning of necessary infrastructure components

Business value

- Fast and automated provisioning of GenAI Infrastructure on BTP
- Accelerated development of common enterprise RAG application on SAP BTP Stack
- Enterprise grade foundation for compliant and scalable GenAI initiatives



How can we be more efficient building Gen AI Apps?

Three step approach to kickstart GenAI app development on BTP with ready-to-use code

Step 1

⌚ 6–12 minutes

Setup necessary **infrastructure** with Terraform script

Step 2

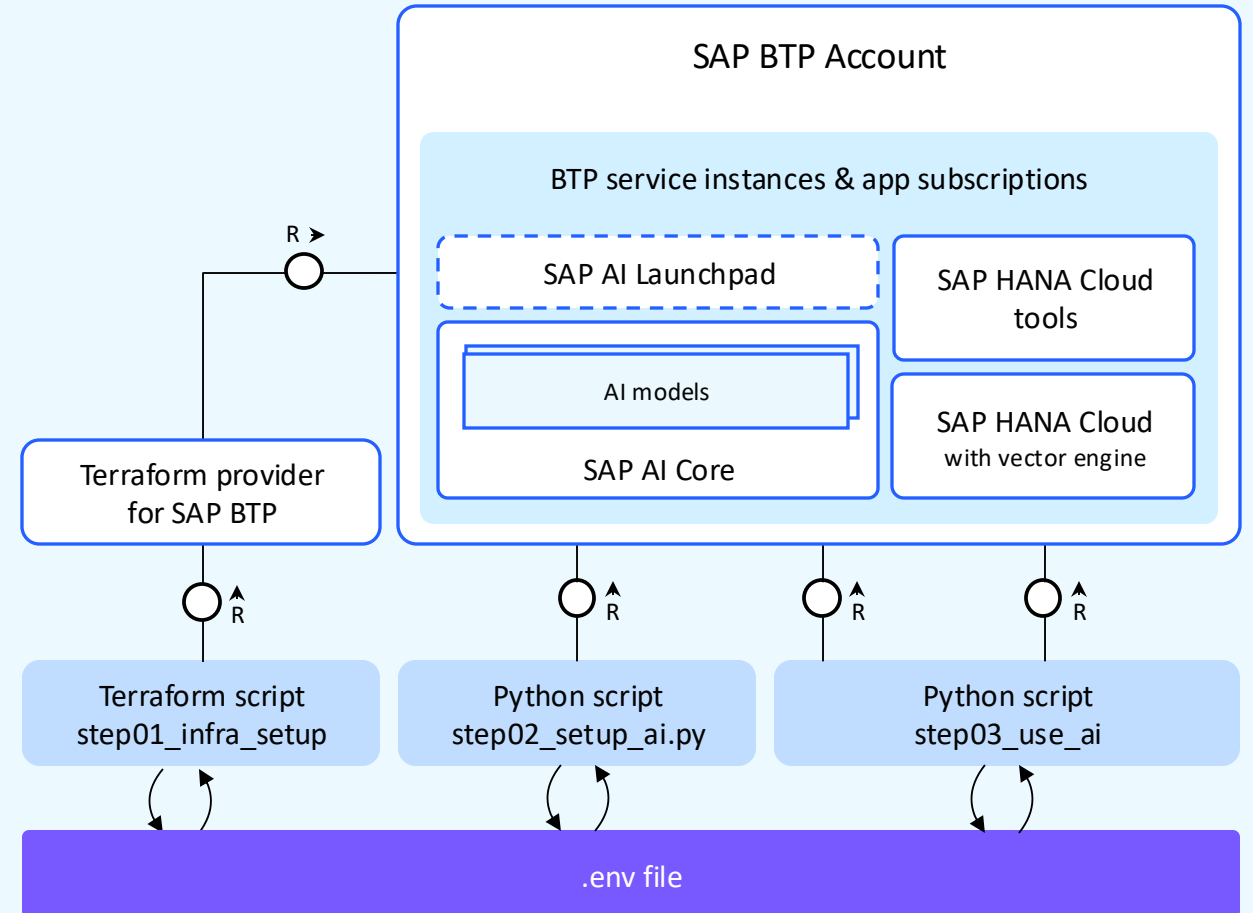
⌚ 4–5 minutes

Configure AI Core service for usage of specific AI models

Step 3

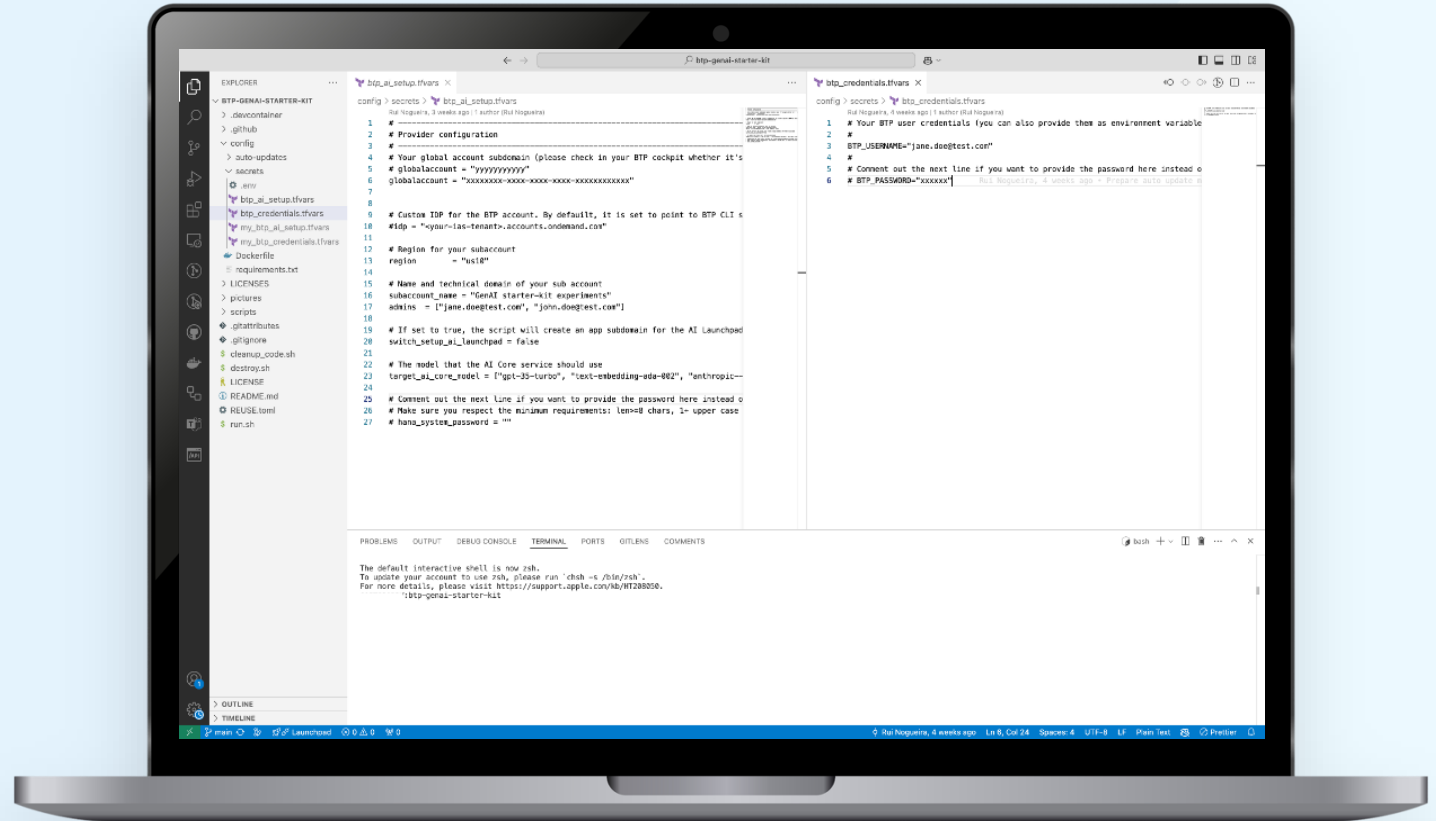
⌚ < 1 minute

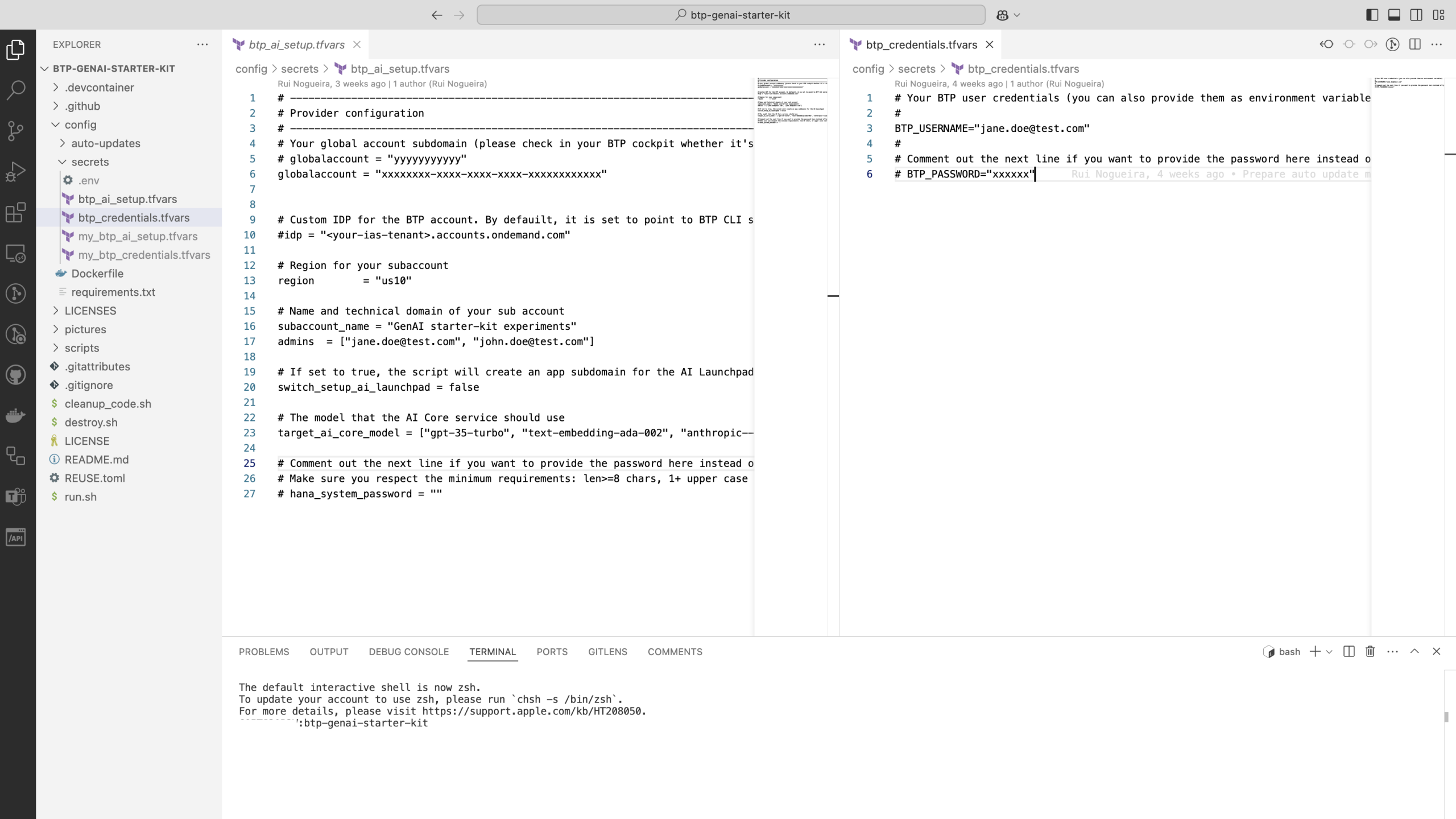
Apply RAG (retrieval augmented generation) **pattern** with HANA DB vector engine and the used AI models

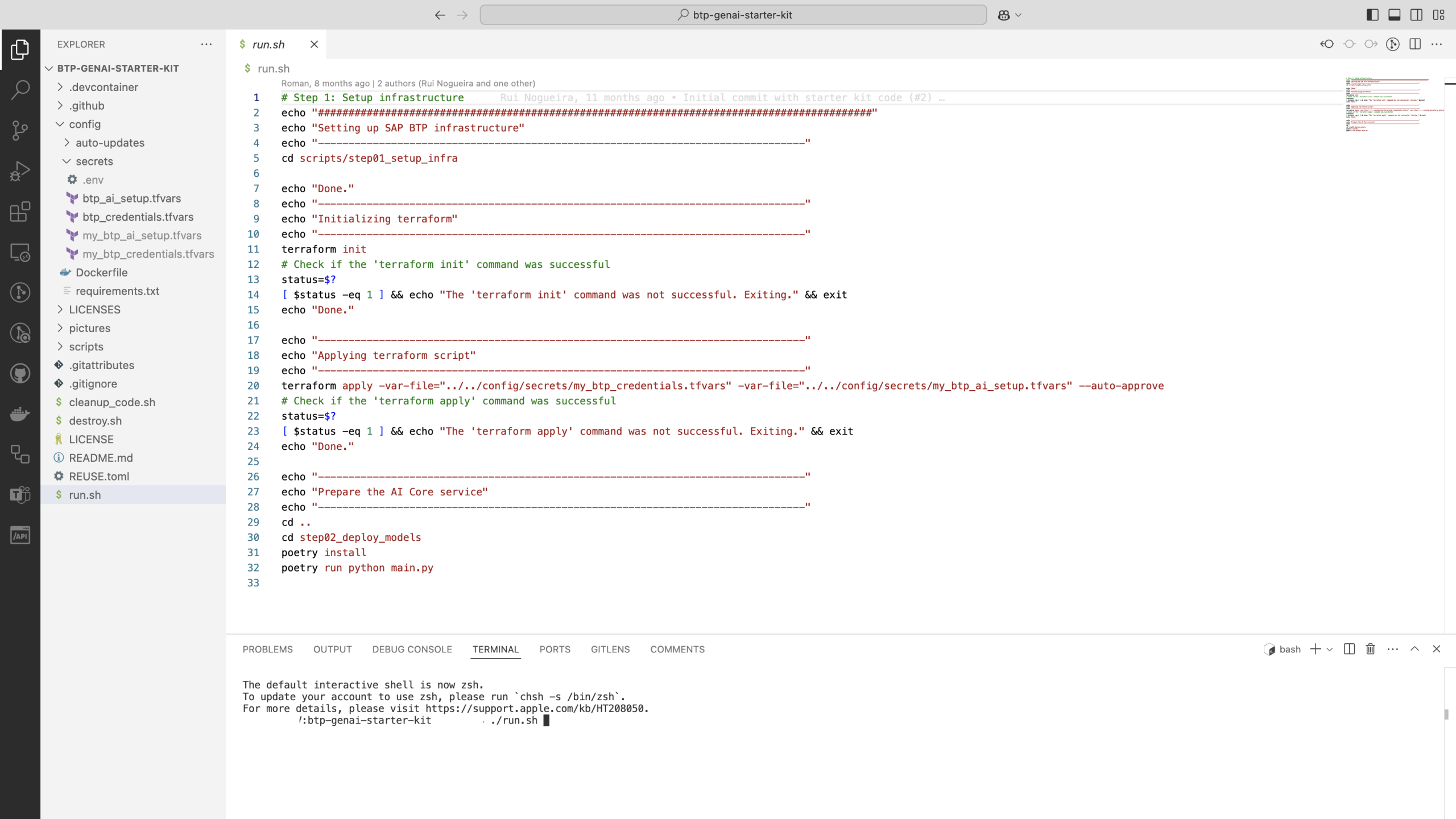


How it works

GenAI Starter Kit







EXPLORER

BTP-GENAI-STARTER-KIT

.devcontainer

.github

config

auto-updates

secrets

.env

btp_ai_setup.tfvars

btp_credentials.tfvars

my_btp_ai_setup.tfvars

my_btp_credentials.tfvars

Dockerfile

requirements.txt

LICENSES

pictures

scripts

step01_setup_infra

step02_deploy_models

step03_explore_examples

01_naive_rag

gen

library

main.py

poetry.lock

pyproject.toml

README.md

02_advanced_rag

03_vision_model

04_rag_on_mixed_data

05_multi_modal_rag

06_rag_benchmarking

utils

README.md

.gitattributes

.gitignore

cleanup_code.sh

destroy.sh

LICENSE

README.md

REUSE.toml

run.sh

scripts > step03_explore_examples > 01_naive_rag > README.md > # Example: Naive RAG on SAP BTP

You, 9 months ago | 2 authors (You and one other)

1

Example: Naive RAG on SAP BTP

You, 9 months ago • feat: add additional examples including refacto...

2

This example shows how to create a simple RAG application that uses provisioned SAP BTP services.

3

4

Installation

5

6

1. Create virtual environment

7

8

Poetry automatically creates and manages virtual environments. To create one for your project, run:

9

10

```sh

11

poetry install

12

```

13

14

This command creates a virtual environment and installs any dependencies specified in your pyproject.toml file.

15

16

17

2. Run the script

18

19

```sh

20

poetry run python main.py

21

```

22

23

And select one of the available options

24

0. Cleanup HANA DB

25

1. Run Data Ingestion

26

2. Run Retrieval Augmented Generation

27

28

1. Run Data Ingestion

29

We begin with data ingestion. This example uses LangChain to load sample documents that will be used for grounding the LLM responses. Document chunks and embedding vectors are then stored in SAP HANA Cloud Vector Engine using the Langchain Vector store adapter.

30

31

- We load the `.md` files from the [GitHub repo of the Terraform Provider for SAP BTP](https://github.com/SAP/terraform-provider-btp).

32

- We clean up any existing docs from the vector store.

33

- We embed the documents with the `text-embedding-ada-002` model and load them into a table within the SAP HANA Cloud database of your SAP HANA Cloud service instance.

34

35

This table will contain 3 columns:

36

- A column VEC_TEXT, which contains the text of the Document.

37

- A column VEC_META, which contains the metadata of the Document.

38

- A column VEC_VECTOR, which contains the embeddings-vector of the Document's text.

39

40

2. Run Retrieval Augmented Generation

41

Then we demonstrate *Retrieval Augmented Generation* with SAP HANA Cloud vector engine and SAP GenAI Hub.

42

We use LangChain `ConversationalRetrievalChain` to retrieve relevant documents and answer the question with the `gpt-35-turbo` model.

43

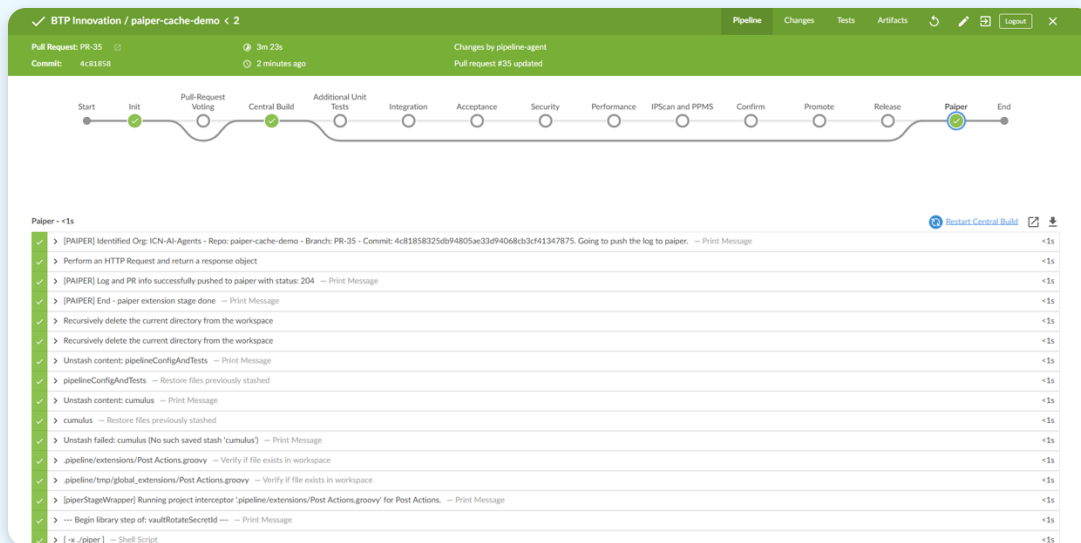
Pipeline Agent



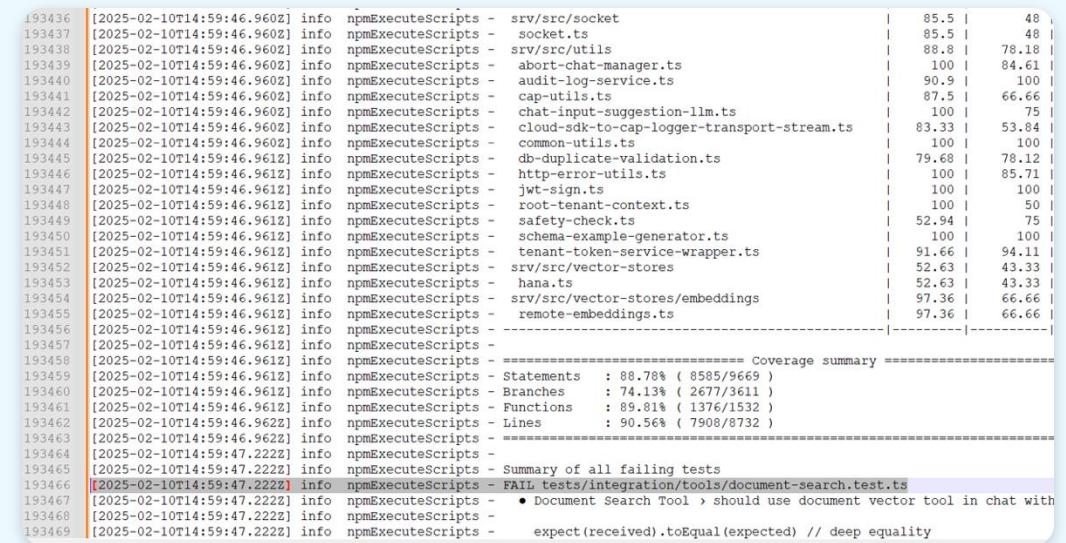
Pipeline Agent

Labs preview

When it works:



And when it doesn't:



Pipeline Agent

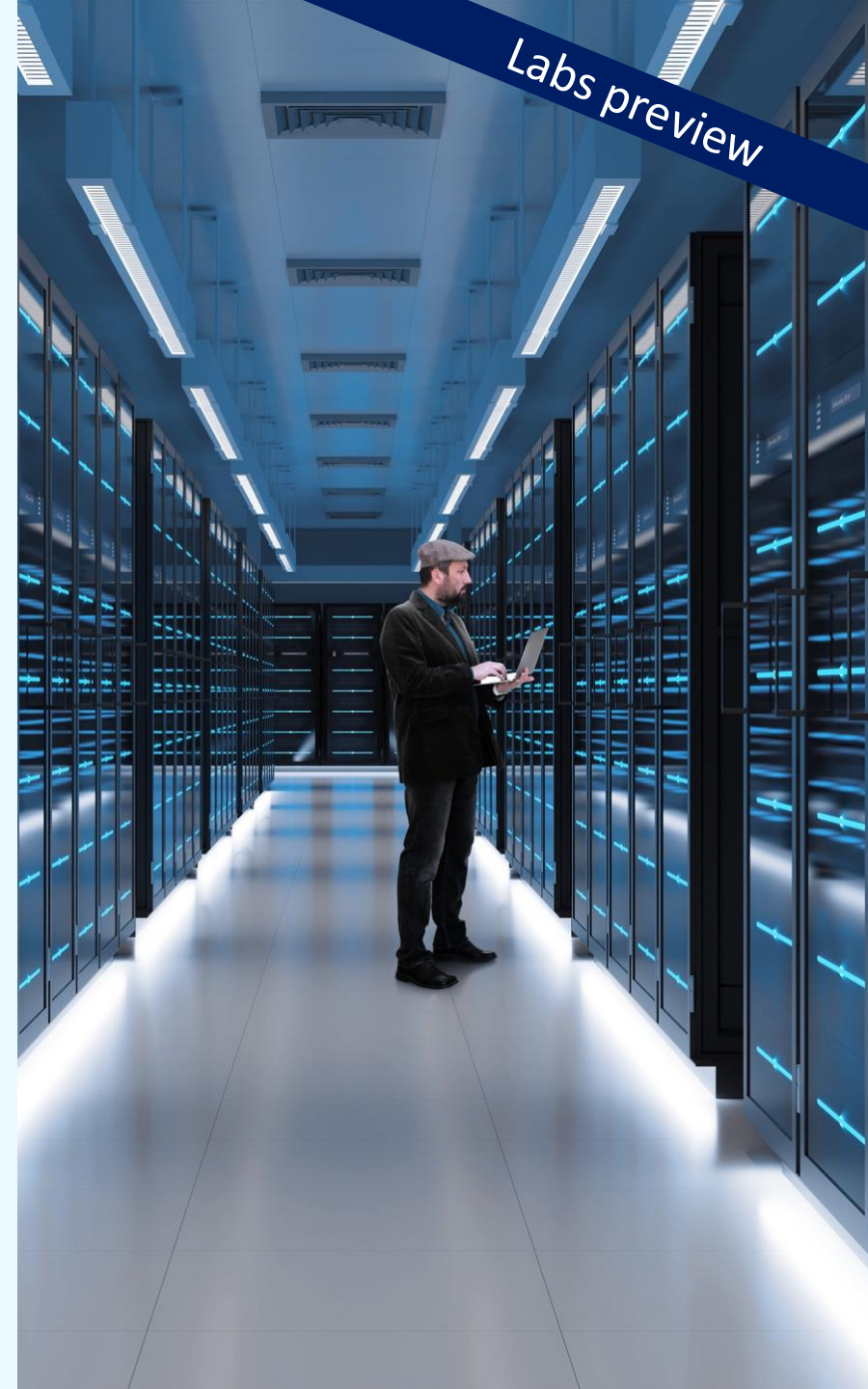
Project Agent Builder – AI Agents for DevOps is an example Multi-agent system that implements Investigation agent and Fixing agent to troubleshoot pipeline issues and propose automatic resolution for detected issues.

Vision

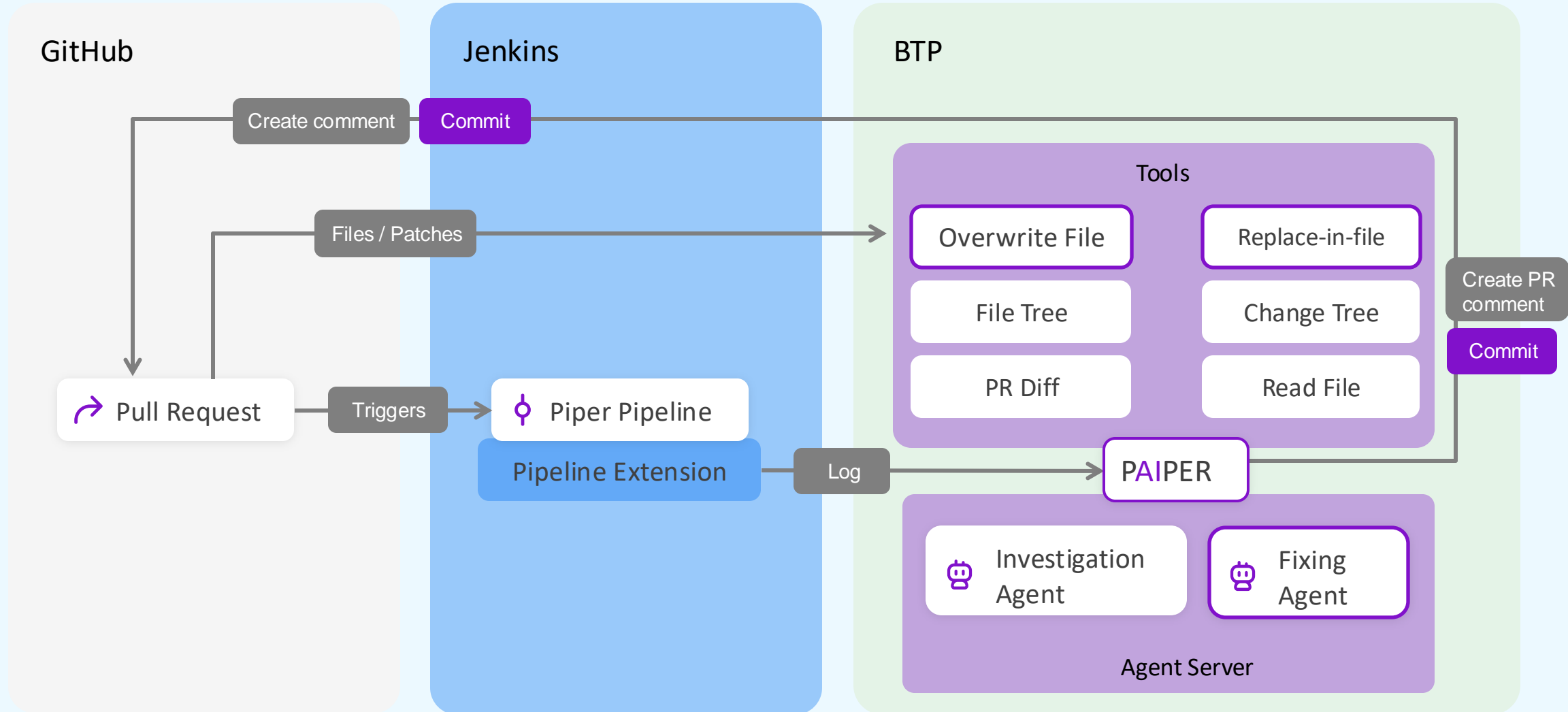
- Multiagent system as a DevOps expert
- Automated resolution of issues
- Applicable to SAP, Partners, Customers

Benefits

- Simplify DevOps
- Increase DORA metric
- Free up dev capacity



Pipeline Agent - PAIPER

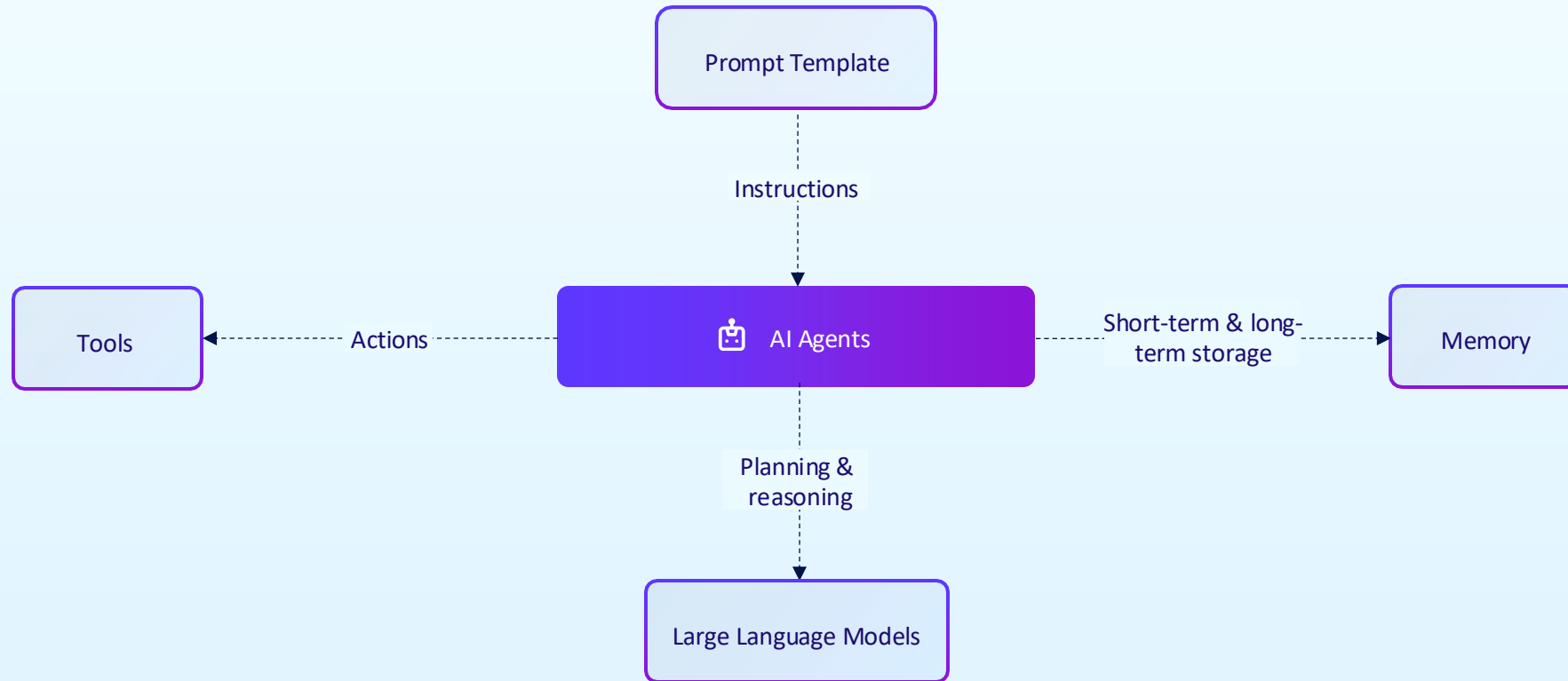


How AI Agents are revolutionizing Enterprise Automation



What makes up an AI Agent?

Conceptual building blocks and how they fit together



AI Agents The Self-Driving Vehicle of Business Automation



Key Capabilities



Planning



Reflection



Tool usage



Collaboration
and multiagent

Business Value



Automate
business tasks

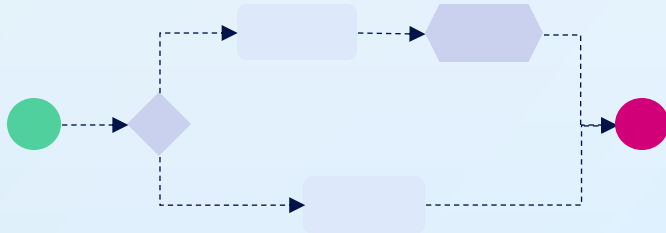


Augment business
decision-making

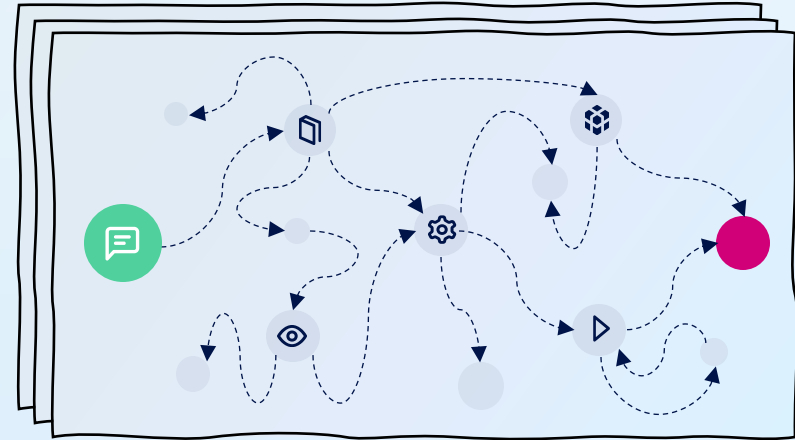
AI Agents for Business

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

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

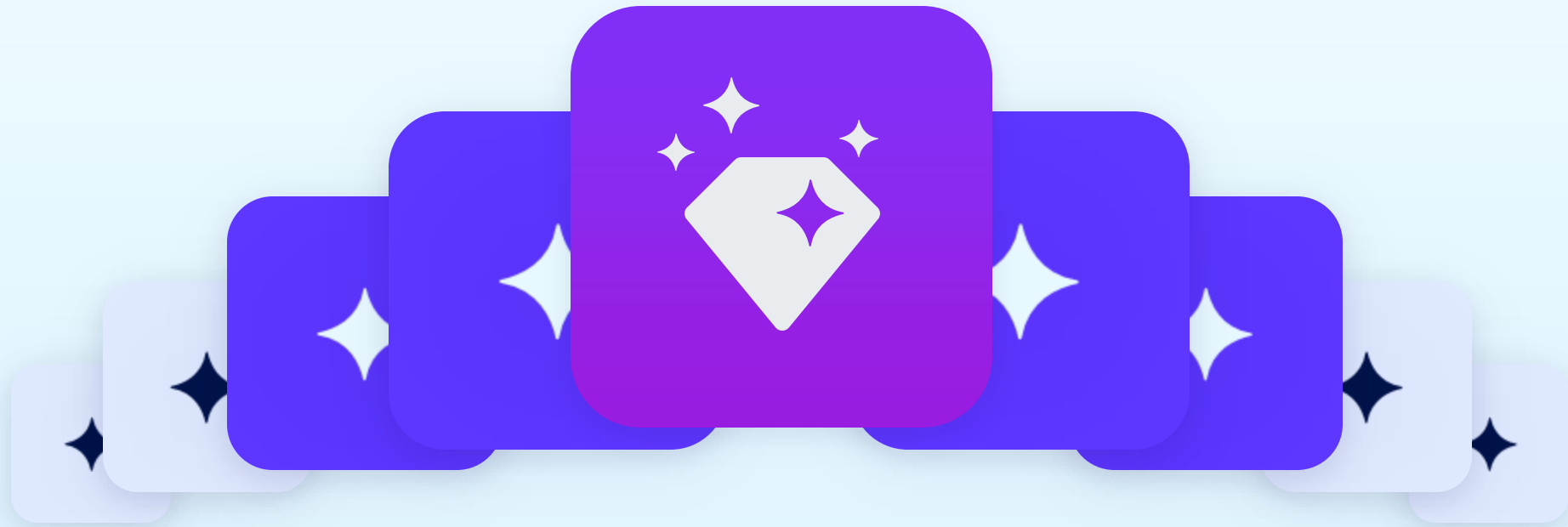


...to providing **tools and a mission** prompt for **dynamic problem solving**



The 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.

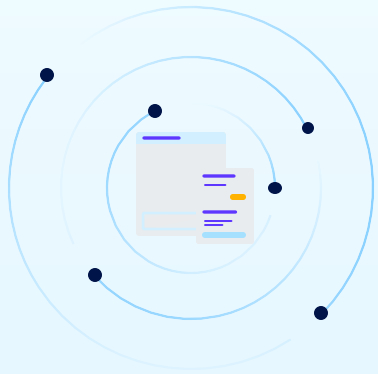
Joule Agents



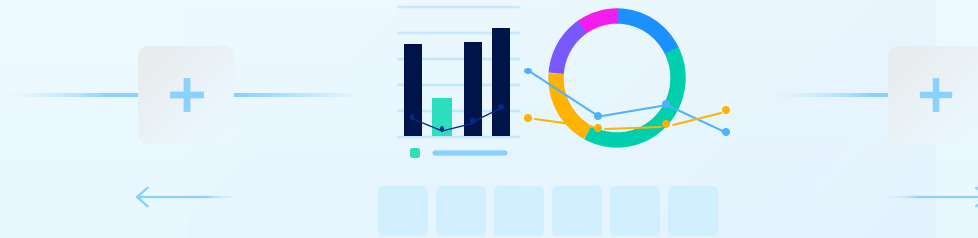


getting work done **from start to finish**

The most capable AI agents for your business



Business process grounding



All the right data



Power to act end-to-end

Joule agents are uniquely equipped
to solve bigger cross-functionally

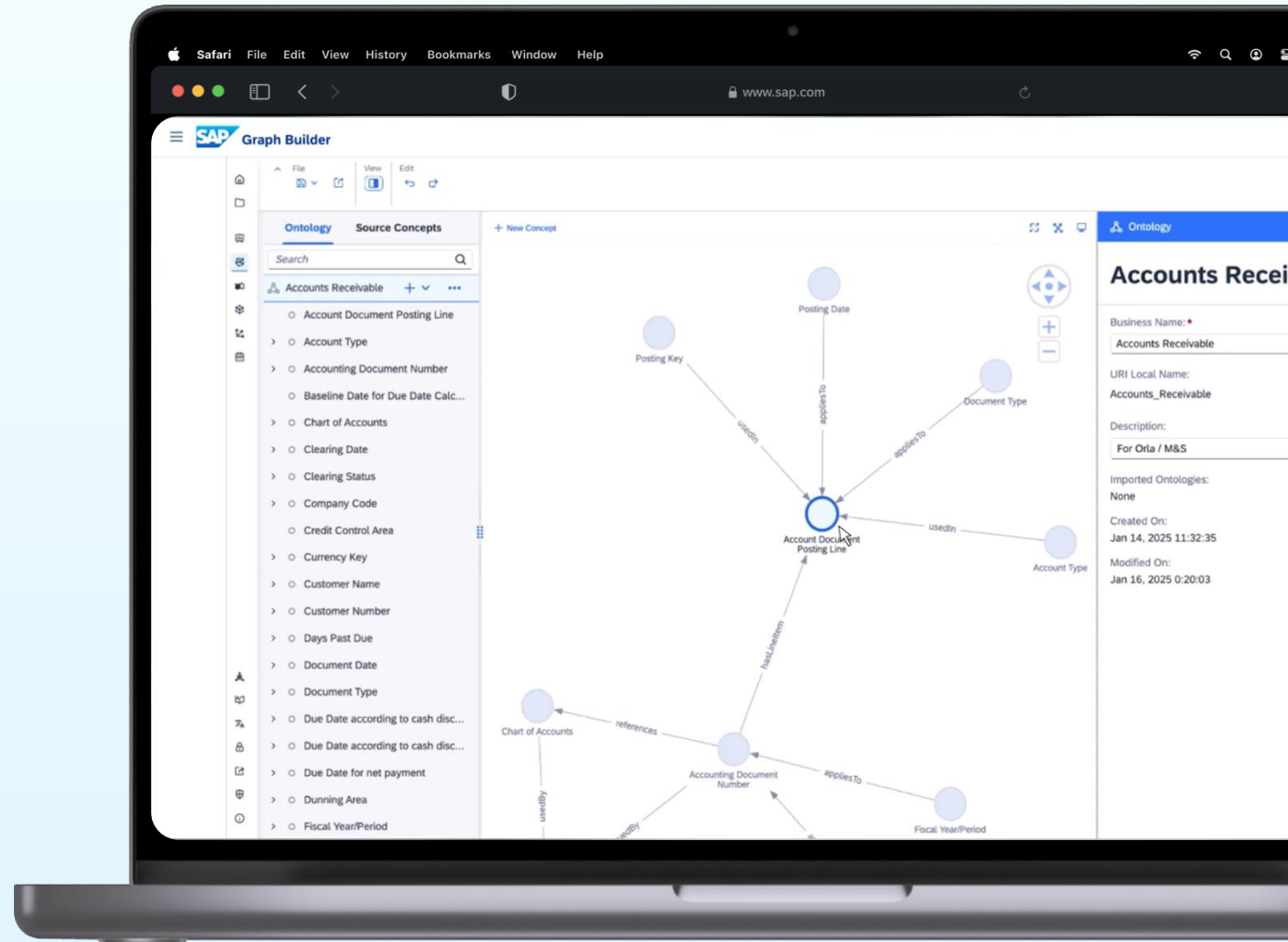
Uniquely equipped to solve bigger problems

Joule agents understand your end-to-end processes, allowing them to act with breadth across your business

SAP Knowledge Graph
encodes SAP's 50+ years of processes expertise.

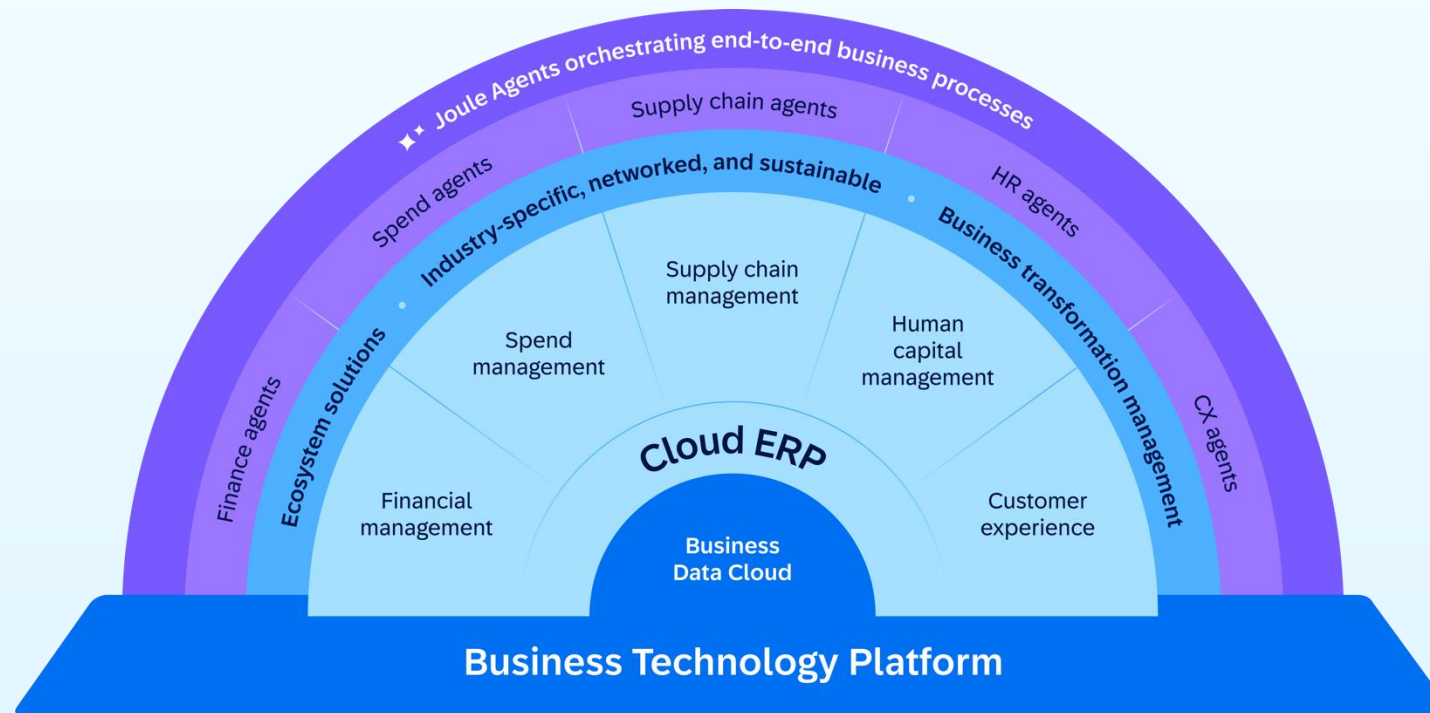
Provides deep business context
to identify the relevant processes and data.

To solve bigger problems
that span business functions.



Power to act across every corner of your business

Joule provides one seamless AI integration layer across SAP and third-party applications

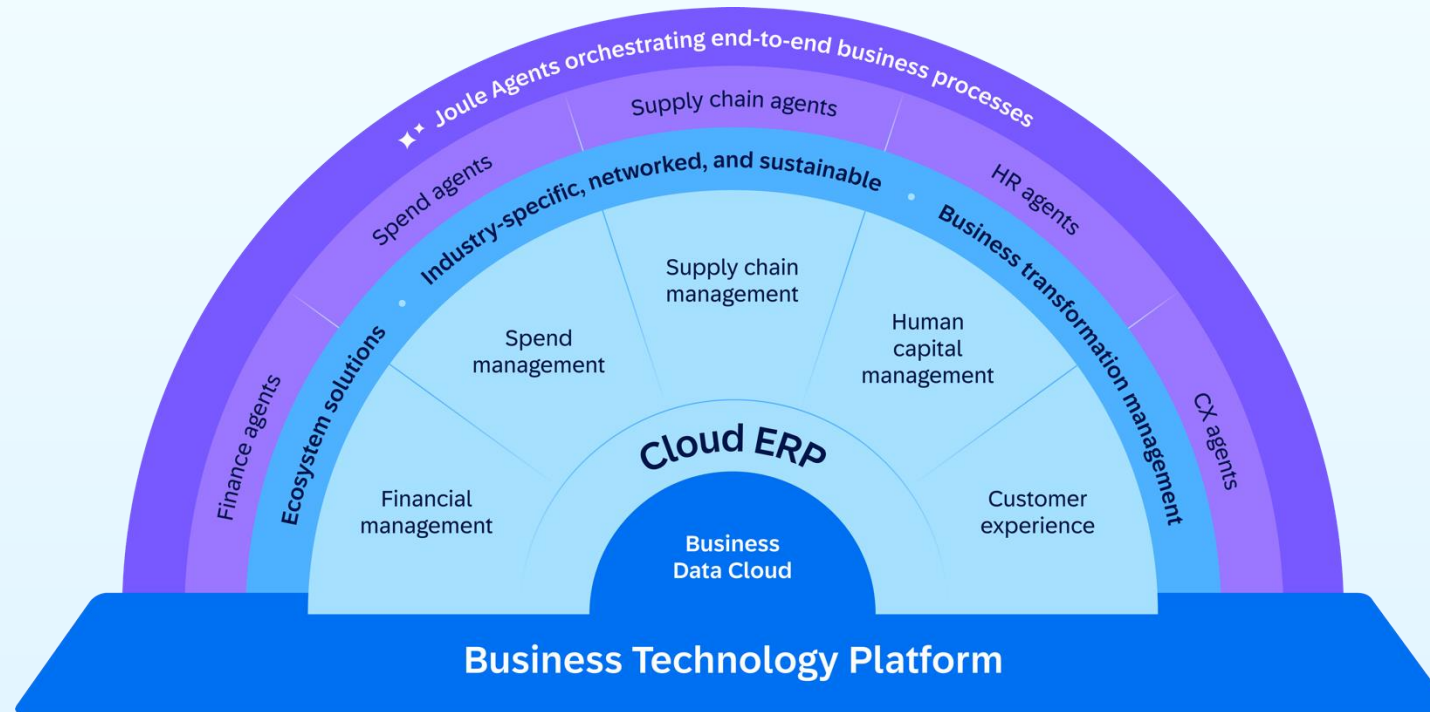


SAP Business Suite
powers mission-critical
end-to-end processes.

+1,300 prebuilt Joule skills
to perform tasks in every core
business application.

To complete high-impact work
involving multi-step cross-functional
workflows.

Unlock value for your Business Everywhere



with SAP Business AI



Dispute management
agent



Sourcing
agent



HR advisor &
self-service agent



CFO



CPO



CHRO



COO



CIO



CRO



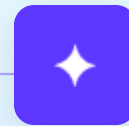
Accounts receivables
agent



Service rep
agent



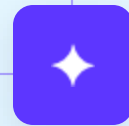
Spare parts
agent



Category manager
agent



Recruiting
agent



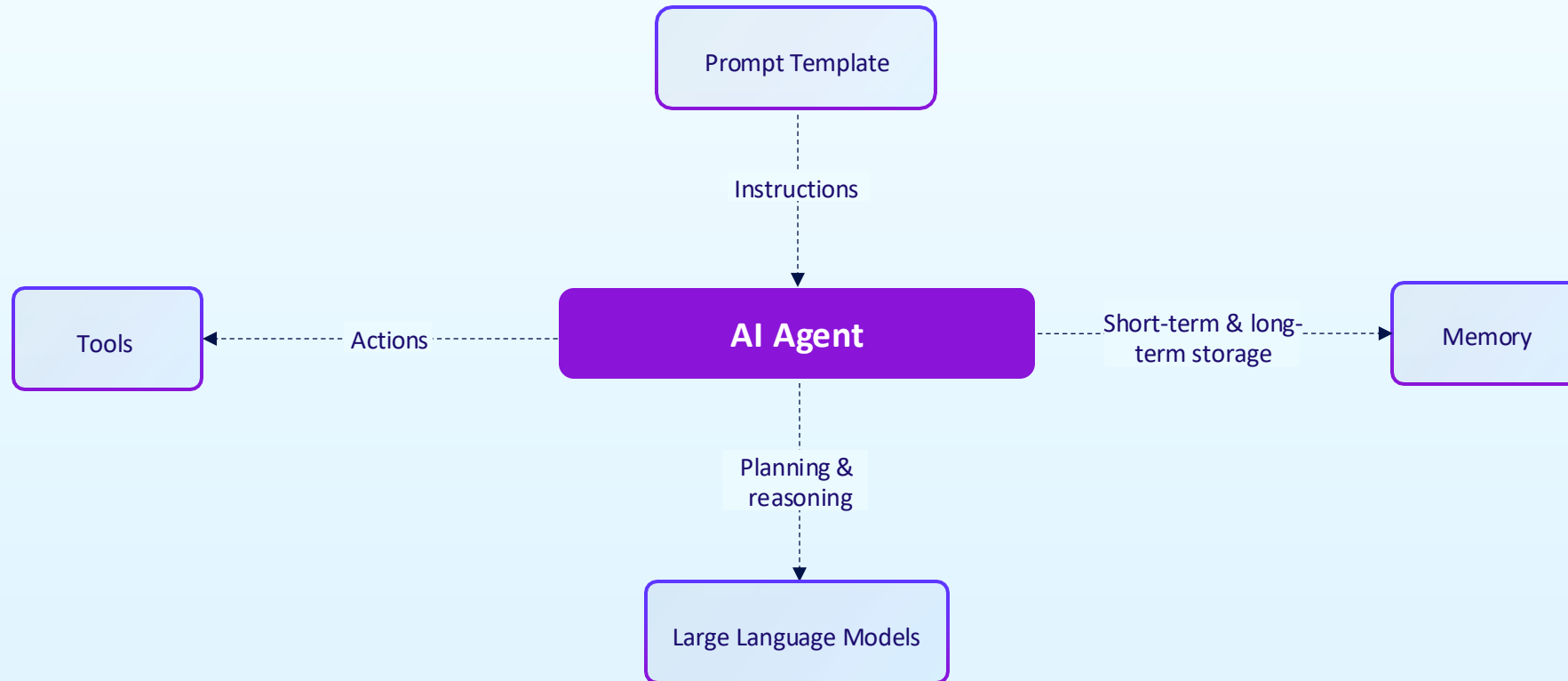
ABAP code
agent

Discover how AI agents can empower your business



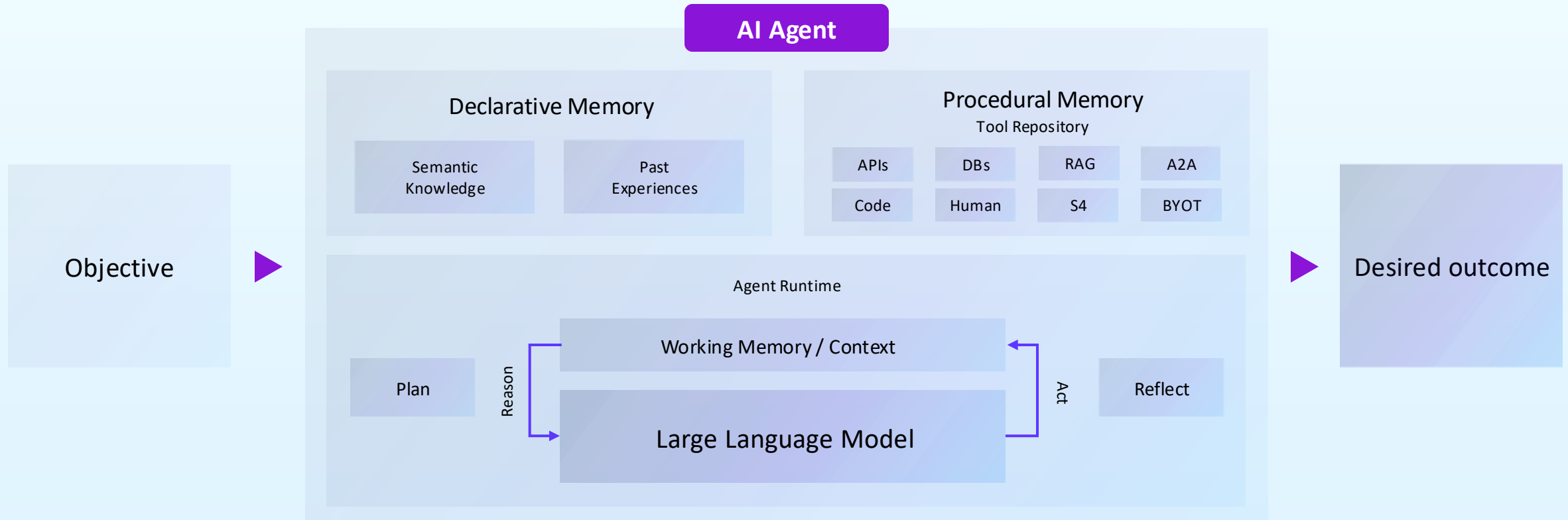
What makes up an AI Agent?

Conceptual building blocks and how they fit together



AI agents: From objective to desired outcome

More than just LLM-powered AI, agents can interact with the real world and autonomously create and adapt plans, make decisions, and execute actions aimed at achieving user-defined goals. Agentic AI design enables formerly impossible levels of task automation in unstructured, dynamic environments.



Is it an agentic use case?



I've got a great idea about how AI can make our daily work way more efficient. I'm not sure which approach would be the best fit for this, though. Maybe we could build an AI agent?

Our customer mentioned how tough and exhausting it is to generate product insights from their customer data. I think AI could help them understand their customers' behaviour better and faster.

Do you think using agentic AI would be the right way to improve the process and generate insights?



Is it an agentic use case?

Evaluate your use case with the questions below



Does your use case involve uncertain or dynamic situations?



Does the task require complex problem-solving skills?



Is there a need for natural language, software code understanding or processing?



Does the task or goal evolve over time in a given context, requiring adaptability?



Does the solution need to handle unexpected inputs or off-script scenarios?



Are there opportunities for automation to streamline repetitive operations?

The future of artificial intelligence is not about man versus machine, but rather man with machine.

Together, we can achieve unimaginable heights of innovation and progress.

Fei-Fei Li

Computer scientist and Co-director of the Stanford
Institute for Human-Centered AI

