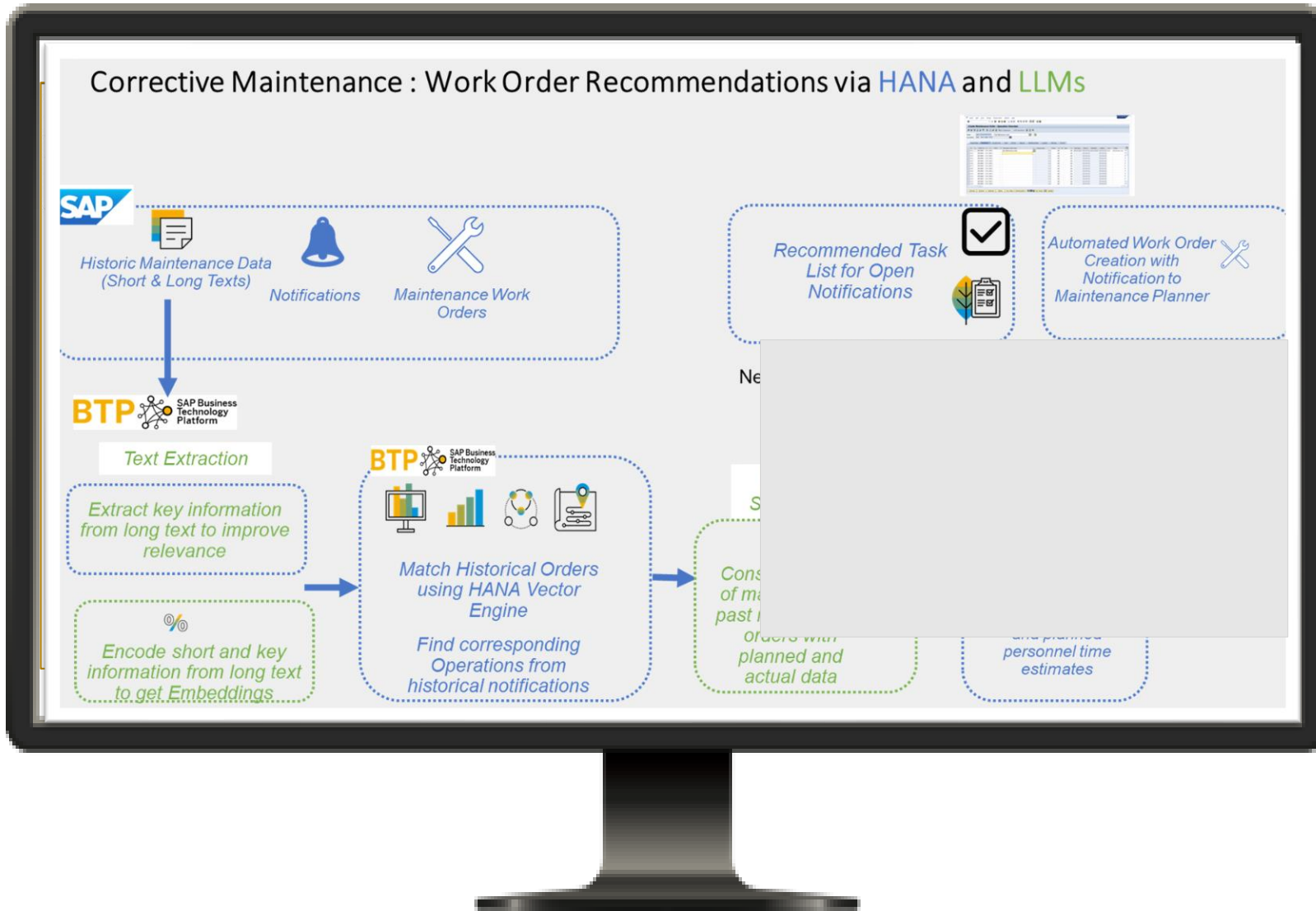# SAP Business Technology Platform – Use Cases

Pinaki Ray, Sr. Director Business Technology Platform
08.05.2024

AI Assisted Corrective Maintenance from Notification to WO Creation

Corrective Maintenance : Work Order Recommendations via HANA and LLMs

SAP

Historic Maintenance Data (Short & Long Texts)

Notifications

Maintenance Work Orders

Recommended Task List for Open Notifications

Automated Work Order Creation with Notification to Maintenance Planner

BTP SAP Business Technology Platform

Text Extraction

Extract key information from long text to improve relevance

BTP SAP Business Technology Platform

Match Historical Orders using HANA Vector Engine

Find corresponding Operations from historical notifications

Encode short and key information from long text to get Embeddings

Cons... of ma... past ... orders with planned and actual data

and planned personnel time estimates

Business Challenge

Maintenance Planners frequently need to create consistent Work Orders in response to Notifications. To streamline the process the planners need assistance from a template structures which best fits the current open notification

Solution

SAP Generative AI Hub LLM Services for similarity matching for long text and documents

SAP HANA Vector DB for scoring text embeddings

In-app extensions for Work Order selection with recommended templates based on historic planned and actual data

SAP Build Process Automation for orchestrating work order creation and notification to users

SAP Signavio for monitoring and triggering execution flows

Benefits and Value

Improved Process Efficiency for automatable Work Orders

Consistent Notification Handling between Planners for Time and Material Estimates

Reduced Manual Effort and Errors

SAP Business Technology Platform

Change PM Notification: Corrective Maint.

Notification	10000863 M1	Lub oil dirty
Notific. Status	NOPR	YTT
Order		

Notification | Reference object | Malfunction, breakdown | Location data | Scheduling overview

Reference Object

Functional loc.	1010-CWS-WCS-CWCP1	Cooling Water Circulation Pump#01
Equipment	210100091	Cooling Water Circulation Pump
Assembly		

Subject

Coding	1QMSTP LBR	Problem notification
Description	Lub oil dirty	

Subject Long Text

06.10.2023 11:54:17 UTC (BPINST)

chenge lube oil and rectify overspeed trip.

As found condition: Lube oil dirty
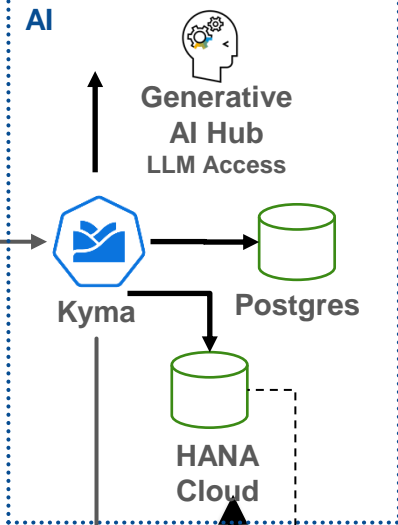
Actions taken during RM: adv traoubleshooting

Responsibilities

Planner Group	920 / 1010	PM-Planner Mech.
Main WorkCtr	RES-0100 / 1010	Mechanics

AI

Generative AI Hub
LLM Access

Kyma → Postgres

HANA Cloud

GenAI Score >= 95%

GenAI Score < 95%

Notify Planner

User Feedback

Data Replication

SAP ERP

Create new work order with user selected list recommended by AI

ZTX AIWO Report

1 New notification
New notification created and released in ERP

2 Event trigger
New workflow starts when notification was released in the ERP system

3 AI
Use GenAI to find orders for similar past notifications and summarize a list of operations to use in a new order

4 Selection form
List of operations and components sent to planner to select the relevant ones for this order. Collect user feedback for AI results
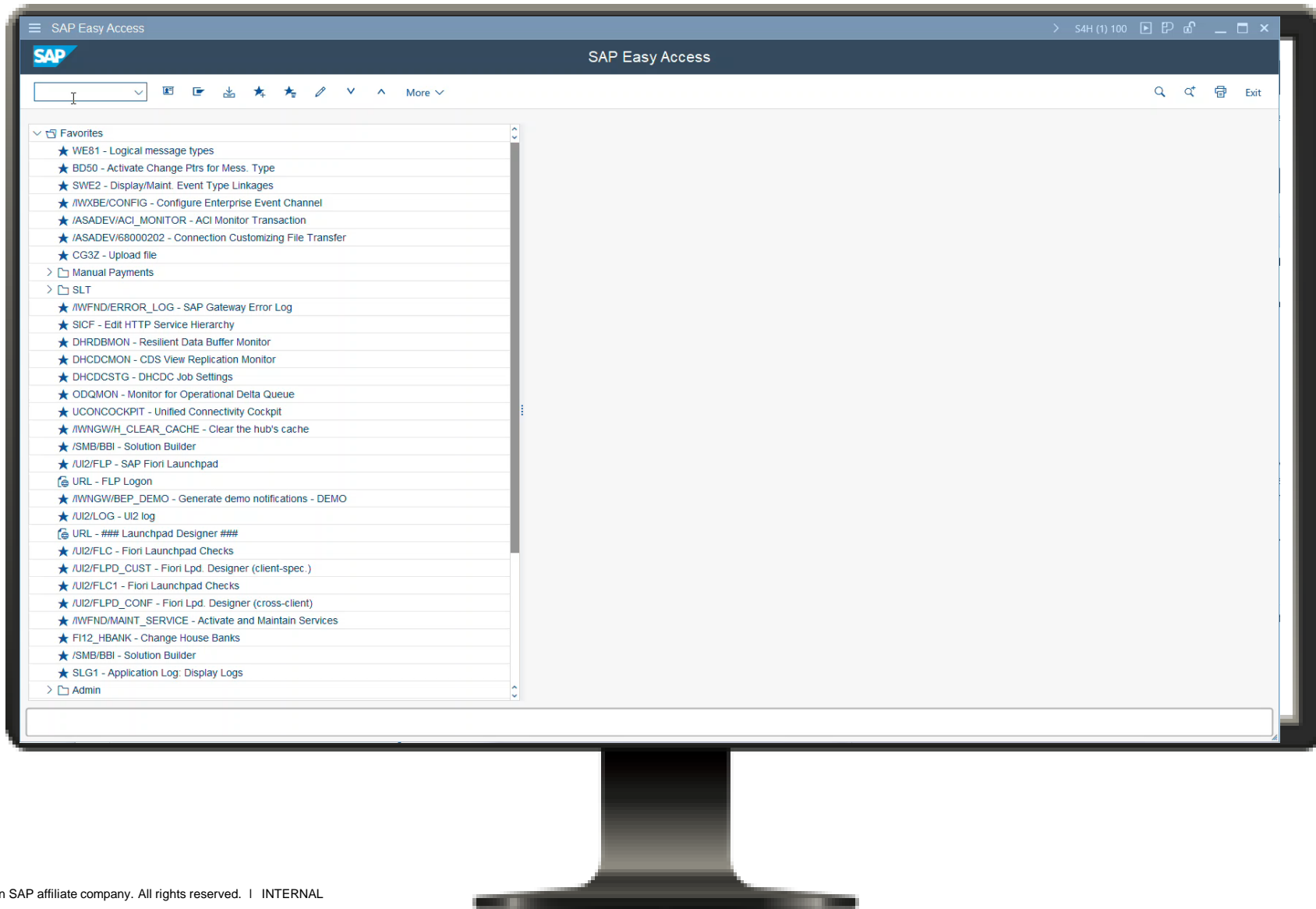
5 SAP ERP automation
Work order automatically created in the ERP system

6 Notification Email
Notify the planner that new work order was created or link to ERP Transaction for WO

AI Assisted Corrective Maintenance from Notification to WO Creation

Automated Accounting Advisor | Challenge

Accounting teams need to ensure accurate recording of business transactions while dealing with capacity limits, high time pressure and non-standard transactions

Software vendor X has charged us 100.000 EUR for a license package. Please post that in the ERP!

IFRS Accounting Manual

CHALLENGE

Accounting teams manage precise recording of company transactions.

Correct posting (e.g. account and document type) is crucial, but requires knowledge.

Month-end close deadlines impose additional stress which can lead to errors.

Automated Accounting Advisor | Solution – Functionality

The 'AutomatedAccounting Advisor' uses company-specific accounting guidelines and GenerativeAI to provide fast posting proposals to accountants, while keeping the "human in the loop"
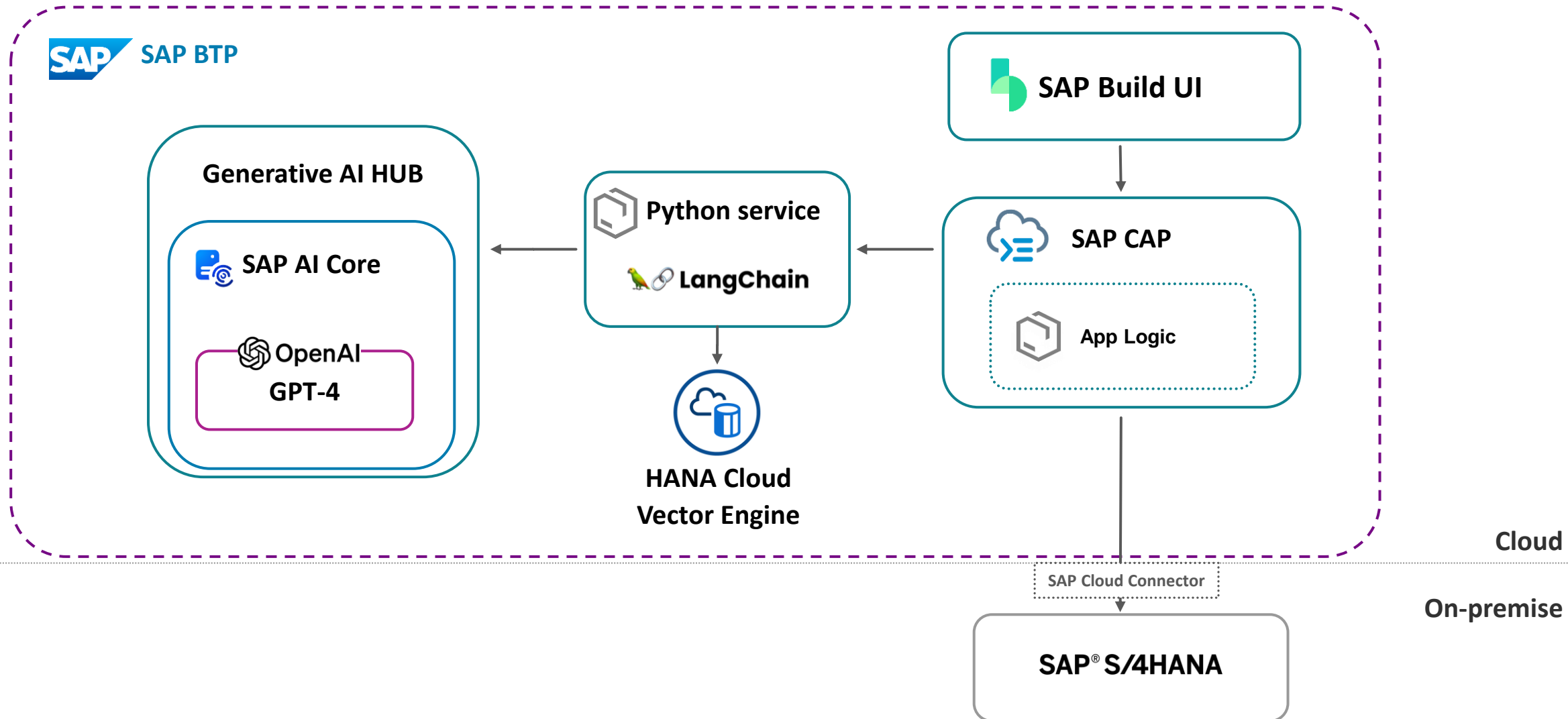

Software vendor X has charged us 100.000 EUR for a license package. How do I post that in the ERP?

I propose account 1234 "Licenses for purchased SW" based on section 4 of the Accounting Manual.

OK

100.000 EUR
ACC 1234

SAP S/4 HANA

IFRS Accounting Manual

Automated Accounting Advisor

SOLUTION

"Automated Accounting Advisor"

✓ provides user-friendly chat interface

✓ matches transaction description with organization's accounting manual

✓ offers curated proposal for posting parameters of the business transaction

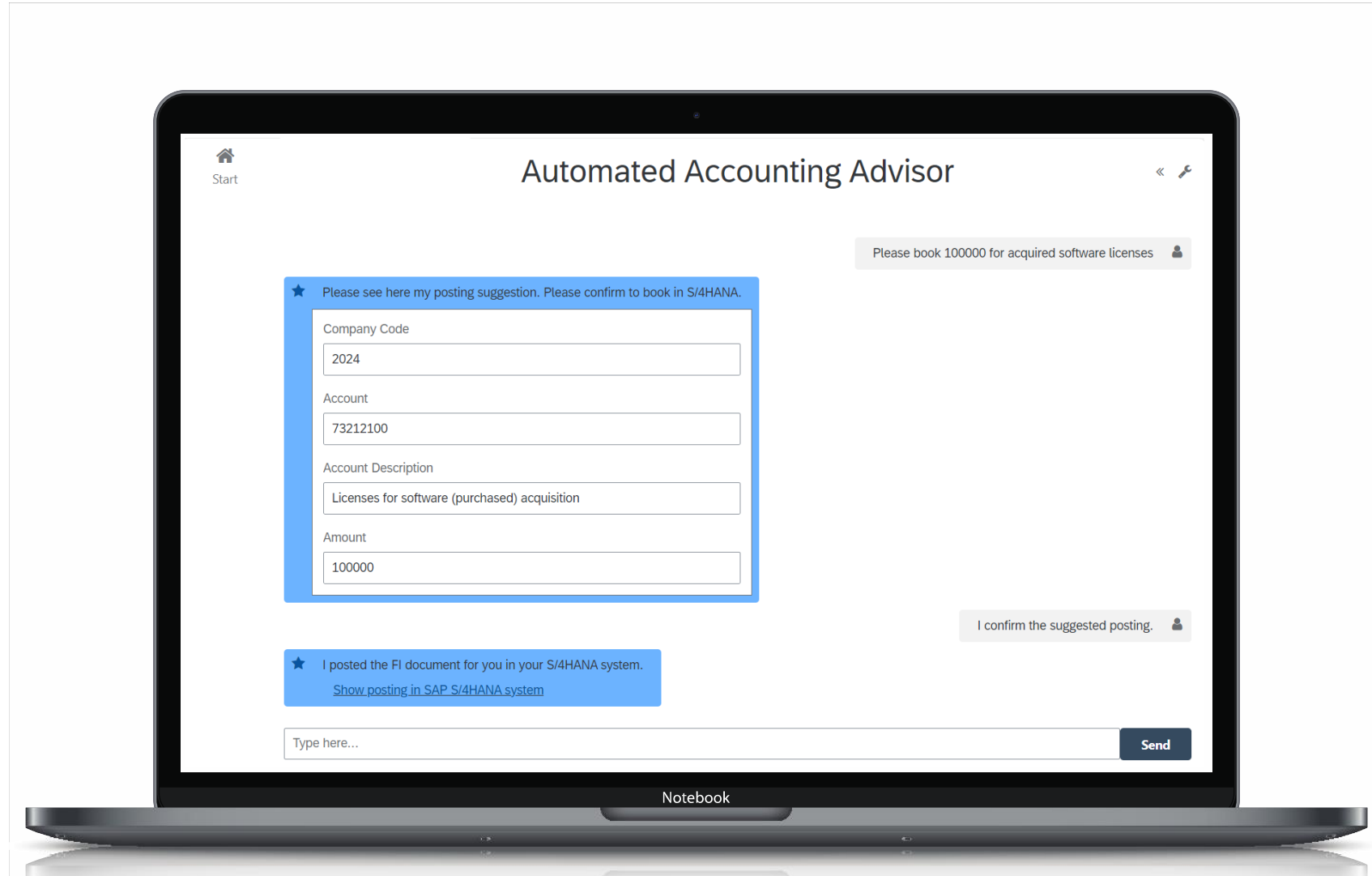✓ after final review, can update the ERP system automatically

Automated Accounting Advisor | Solution – Architecture

Our architecture combines the latest SAP stack to transform natural language dialog and company-specific sources into S/4-compatible posting proposals.

SAP BTP

Generative AI HUB

SAP AI Core

OpenAI
GPT-4

Python service

LangChain

HANA Cloud Vector Engine

SAP Build UI

SAP CAP

App Logic

Cloud

SAP Cloud Connector

On-premise

SAP® S/4HANA

Automated Accounting Advisor | Prototype demonstration

Now let's watch the 'Automated Accounting Advisor' in action!

News & To-Do

Wed, 03 Jun 2020

Miele-Museum in Gütersloh zählt zu beliebtesten Museen Deutschlands - Neue Westfälische

Miele-Museum in Gütersloh zählt zu beliebtesten Museen Deutschlands Neue Westfälische

"Miele" - Google News

Tickets Assigned To Me
2

My High Priority Tickets
0

Tickets Escalated To...
0

Unassigned Tickets
1

My Tasks

You're Up-to-Date. No overdue tasks today.

All Tickets

My Queue
2

My Team Queue
4

Get Appointments
Service Agent requests free Slots from FSM

Miele

🔍 📞 🕐 ❓ 🔔

ℹ 1 | Your entries have been saved.

10050 - Washing machine requires fix...
Christian Günther ⭐ 🚩 📶 | 💬 ☁ +

Subject Washing machine requires fixing	**Type** Service Request
Contract -	**Work Progress** Open

Priority
Normal

Overview · Interactions · Solution Finder · Surveys · Activities · **Items** · Related Items · Document Flow · Skills · Attachments · Changes · Timeline · GENIUS SEARCH

🔲 Items (1)   ↑↓ 📄 Add   Appointment   More

☑	Line	▲	Product	Description	Work Progress	Planned Quantity	Actual Quantity	Actual Start	Actual End	Action
☑	10		REPAIR	Repair	Open	2 Hour(s)				🗑

☑ 1 Selected   ⏮ ◀ 1 /1 ▶ ⏭

General Data · Notes · Skill

Processing Billing Request	**Product Category** Wages and salaries
Requested Start 20.06.2020 02:00	**Requested End** 20.06.2020 04:00
Actual Start -	**Actual End** -
Coverage -	**Invoicing Method** Time and Material
Service Technician -	**Contract** -
Contract Restriction -	**Contract Item** -

Status
Open

Appointment Search

Start Date 20.06.2020 02:00 CET	
End Date 20.06.2020 04:00 CET	
Duration 2 Hour(s)	

[Get Appointments]

Available Slots (5)

Noa Weisenfeld
Start Date Time:
20.06.2020 01:00 CET
End Date Time:
20.06.2020 03:00 CET
Driving Minutes (From):
1 Minute(s)
Driving Minutes (To):
1 Minute(s)
Pick SLOT:
[✓]

Ressource:
Noa Weisenfeld
Start Date Time:
20.06.2020 02:00 CET
End Date Time:
20.06.2020 04:00 CET
Driving Minutes (From):
1 Minute(s)
Driving Minutes (To):
1 Minute(s)
Pick SLOT:
[✓]

Action ⌄

Escalate

Add Note

Set as Irrelevant

Assign to Me

Finish Work

Capture Signature

Generate Summary

Copy

Release For Scheduling

Get Next Ticket

Release To FSM

Check Consistency

ℹ 1   Your entries have been saved.   ⌄ ✕

📇 10050 - Washing machine requires fix...   Christian Günther ★ ⚑ 🔊 | 💬 💭 +   ➕ ✏ ↻   **Action** ⌄

Subject	Type	Priority	Status
Washing machine requires fixing	Service Request	**Normal**	**Open**
Contract	Work Progress		
-	Open		

Overview   Interactions   Solution Finder   Surveys   Activities   **Items**   Related Items   Document Flow   Skills   Attachments   Changes   Timeline   GENIUS SEARCH

Action menu:
- Escalate
- Add Note
- Set as Irrelevant
- Assign to Me
- Finish Work
- Capture Signature
- Generate Summary
- Copy
- Release For Scheduling
- Get Next Ticket
- Release To FSM
- Check Consistency

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☑ 1 Selected |< < 1 /1 > >|

General Data   Notes   Skill

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20.06.2020 02:00	20.06.2020 04:00
Actual Start	Actual End
-	-
Coverage	Invoicing Method
-	Time and Material
Service Technician	Contract
-	-
Contract Restriction	Contract Item
-	-

Appointment Search

Start Date
20.06.2020 02:00 CET

End Date
20.06.2020 04:00 CET

Duration
2 Hour(s)

Get Appointments

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Driving Minutes (From):
1 Minute(s)
Driving Minutes (To):
1 Minute(s)
Pick SLOT:
✓

Ressource:
Noa Weisenfeld
Start Date Time:
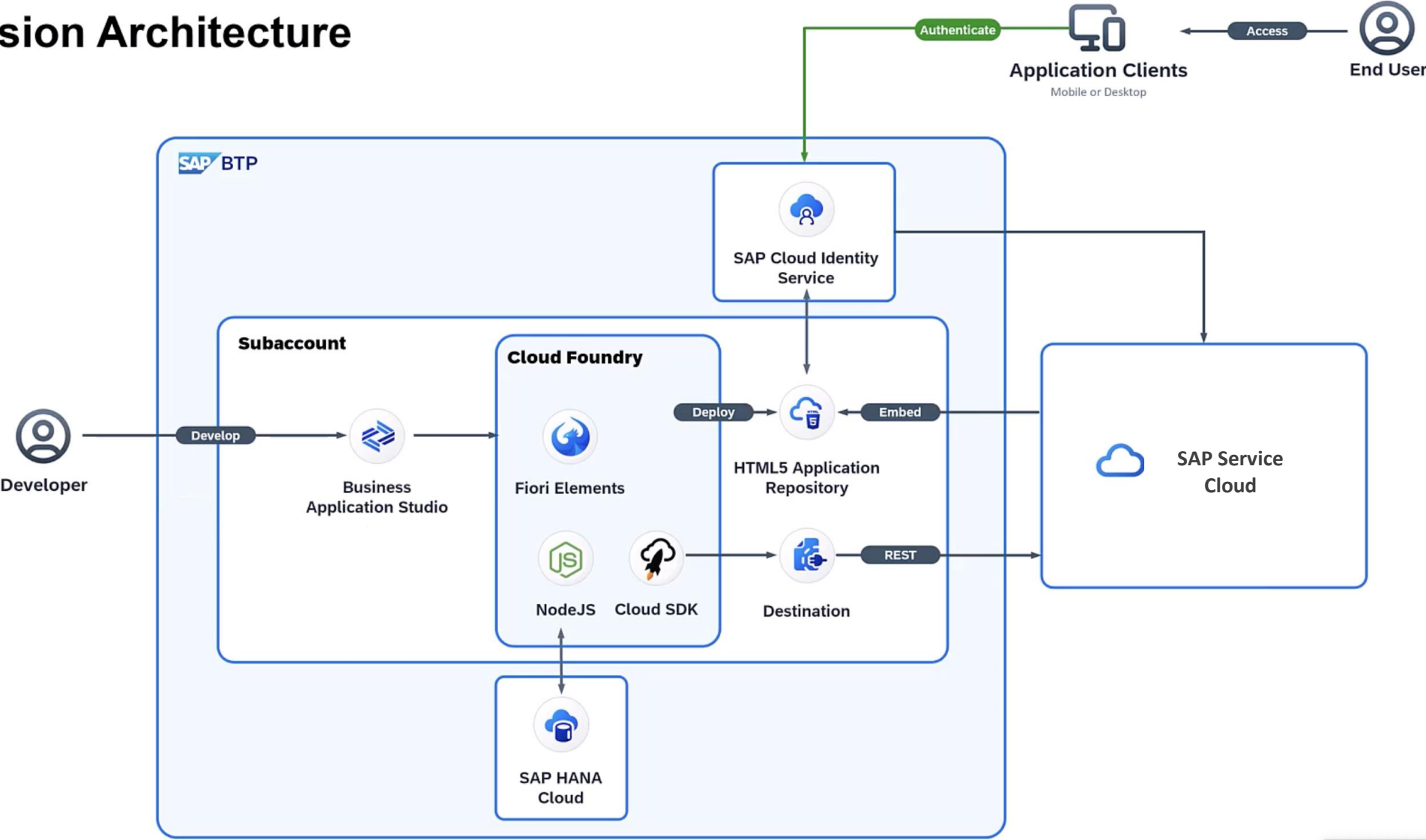20.06.2020 02:00 CET
End Date Time:
20.06.2020 04:00 CET
Driving Minutes (From):
1 Minute(s)
Driving Minutes (To):
1 Minute(s)
Pick SLOT:
✓

Extension Architecture

Adding Risk Details to Opportunity in Sales Cloud

SAP

Search

Change Project Main Layout End Session

Opportunity | 116
Selling Super Pump Eco 11i

89 days past close date

Identify Oppor... Qualify Opportunity

General Geo Location Changes S4 Order Project Risks

Here are a few things you could do to accelerate the deal

Edit Tabs

General
Geo Location
Changes
S4 Order
Project
Risks

Apply Cancel

You are ready to proceed.
Progress

Appointment on Init
Dec 9, 2023

Activities (0)

Show Completed (0)

There are no activities

Latest Note

SAP

Search

Home Guided Selling Opportunity | 116
Selling Super Pump Eco 11i

Opportunity Set Status

Selling Super Pump Eco 11i
116 · IN PROCESS
Arral Energy DE
Opportunity

0

Overview Timeline

€100,000   Adrian Chase
Expected Value   Owner

Pipeline   Nov 30, 2023
Forecast Category Close Date

90 days In Identify Opportunity Phase

Insights

No Results found

Days to Close   Expected Value Change
89 days ago   €100,000
Status Change   Times Closing Date Changed
0   2

Engagement

Opportunity | 116
Selling Super Pump Eco 11i

89 days past close d

Identify Oppor... Qualify Opportunity
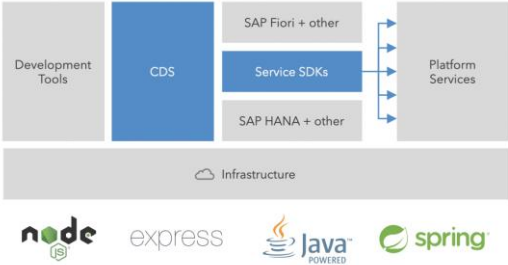
General Geo Location Changes S4 Order Project Risks

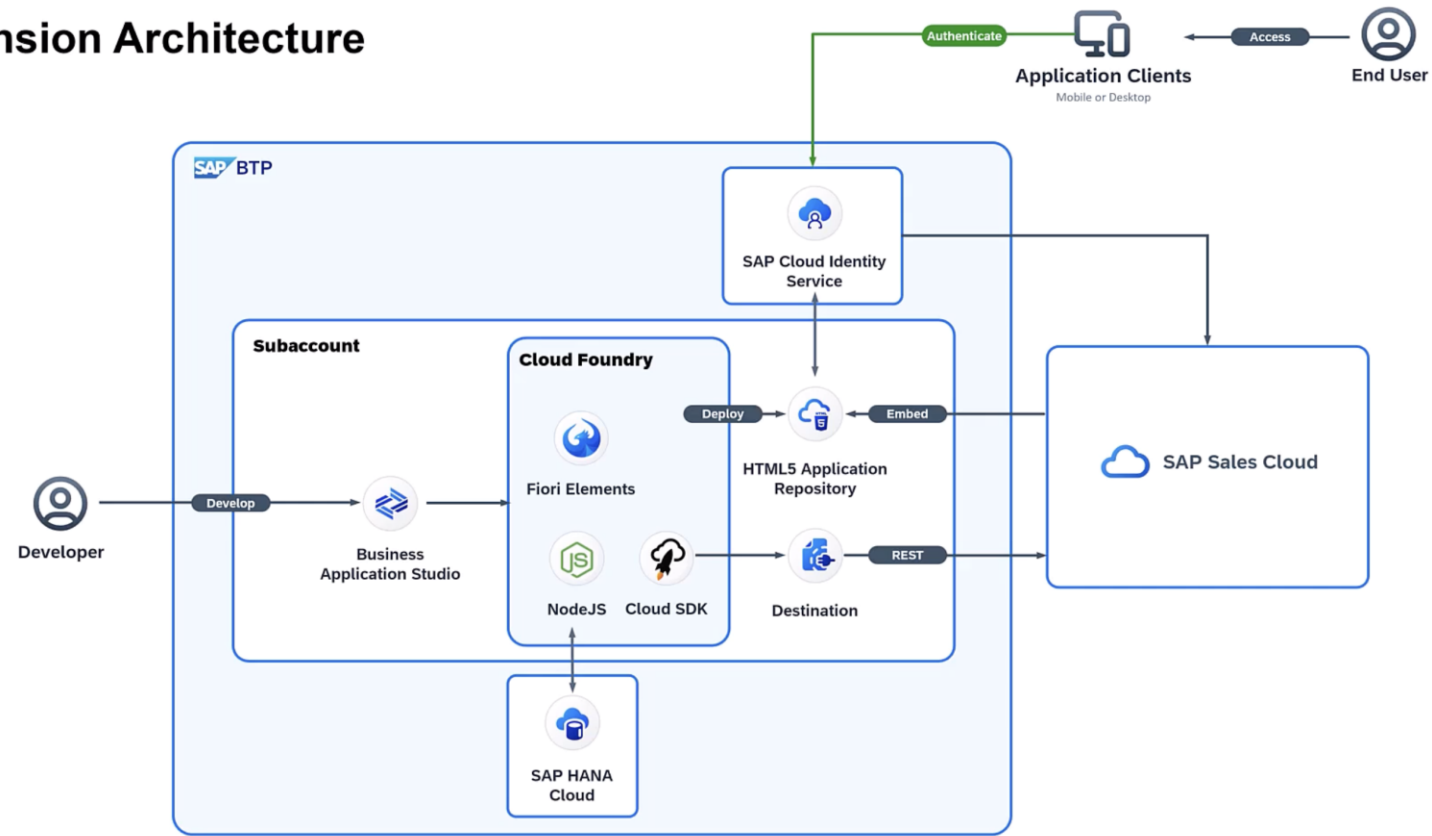**Price-Sensitive Opportunity** Draft

General Information Risks

Display ID: Status:
                              409   Open

Description: Employee:
Price-Sensitive Opportunity   Adrian Chase

Risks

Search Create

	Title	Mitigation	Priority*	Impact	
☐	Quality not adequate	review third party contractors to ease service...	High	20,000	
☐	Lower Consumption rate	investigate source of shipment request and r...	Me...	100,000	
☐	Product feature Faiure	review shipment proceedure and stop deliver...	Low	5,000	
☐	Strong competition	Find out their weakness	High	3,000	

Steven Gary
Barbara Elliston
Jenny Summers
Adrian Chase
Mohan Kumar
Boris Graph
Mary Fox
Sara Davis
Maxwell Jannet
Robyn Gray
Connie Whitley
Eddie Smoke
Sara Davis
Pedro Borras
Liza Franklin

SAP

Search

Home Guided Selling Opportunity | 116
Selling Super Pump Eco 11i

Opportunity Set Status

Selling Super Pump Eco 11i
116 · IN PROCESS
Arral Energy DE
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Days to Close   Expected Value Change
89 days ago   €100,000
Status Change   Times Closing Date Changed
0   2

General Geo Location Changes S4 Order Project Risks

Create

Price-Sensitive Opportunity

Edit Delete

General Information Risks

Risks

Search

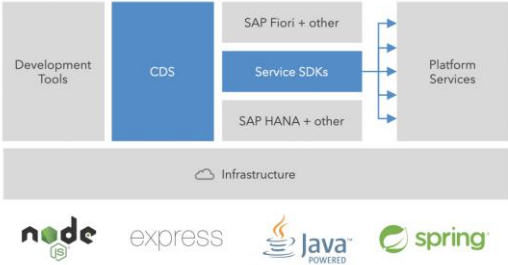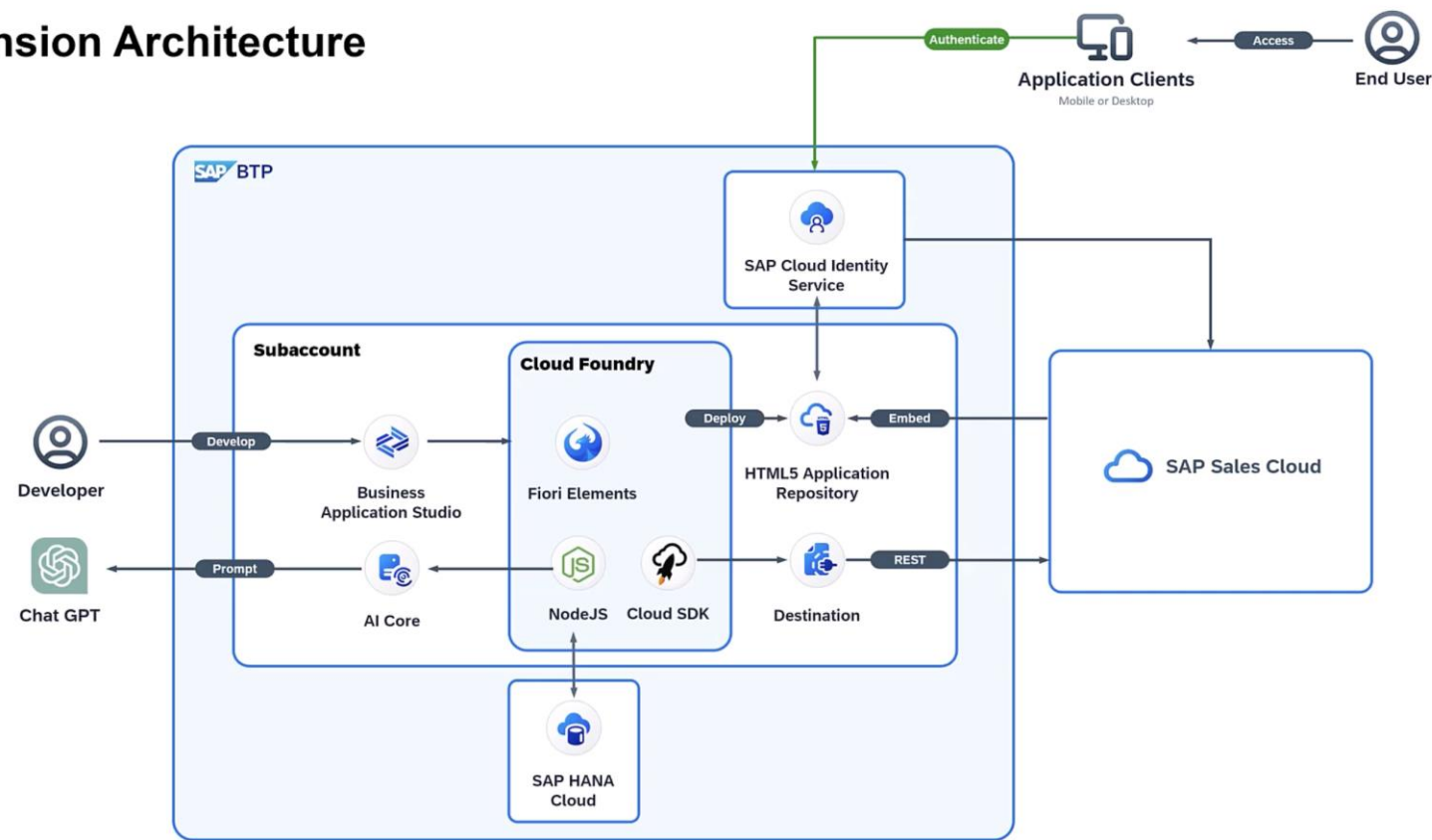| Title	Mitigation	Priority	Impact	Employee	
Quality not adequate	review third party contractors to ease service delivery challenges	High	20,000	Steven Gary	
Lower Consumption rate	investigate source of shipment request and revoke authorization	Medium	100,000	Steven Gary	
Product feature Faiure	review shipment proceedure and stop delivery until further notice	Low	5,000	Steven Gary	

Extension Architecture

Extension Architecture

Thank you.

Pinaki Ray

Sr. Director BTP, SAP
Pinaki.ray@sap.com