



# GenAI with SAP

**Michael Lin**

Sr. Solutions Architect  
Amazon Web Services

# Agenda

- AWS generative AI overview and SAP partnership
- AWS generative AI for SAP use cases
  - New experiences
  - Productivity
  - Insights
  - Creativity
- Next steps

# AWS Generative AI Stack

## Applications to boost productivity



Amazon Q Business  
Insights and automation



Amazon Q Developer  
Software development lifecycle

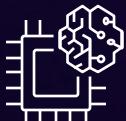
## Models and tools to build generative AI apps



Amazon Bedrock  
Amazon models | Partner models



Amazon SageMaker  
Managed infrastructure



AWS Trainium  
AWS Inferentia  
High performance compute



“

**Partnerships like this collaboration with AWS are critical as we embed generative AI solutions across our ERP applications so that customers can drive innovation at an accelerated pace.**

”

**Christian Klein**

CEO & Member of the Executive Board of SAP SE

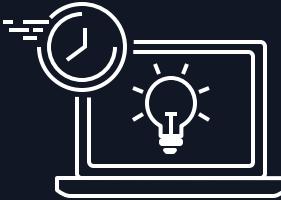


# Accelerate your transformation with AWS



## Harness the value of cloud infrastructure

- Improve Performance, Reliability & Agility
- Improve Security
- Reduce Cost



## Reimagine your business processes

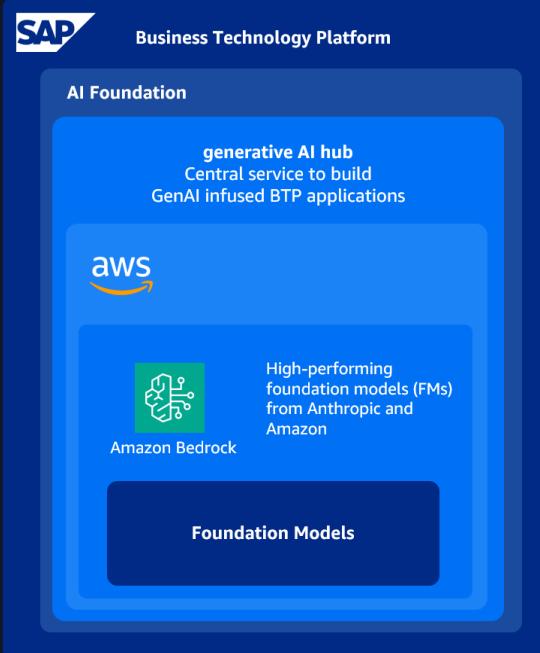
- Simplify Procurement and Supply Chain using Pan-Amazon capabilities (Amazon Business, Multi-Channel Fulfillment)
- Implement Connected Factory using AWS Industrial Services



## Unlock the power of data

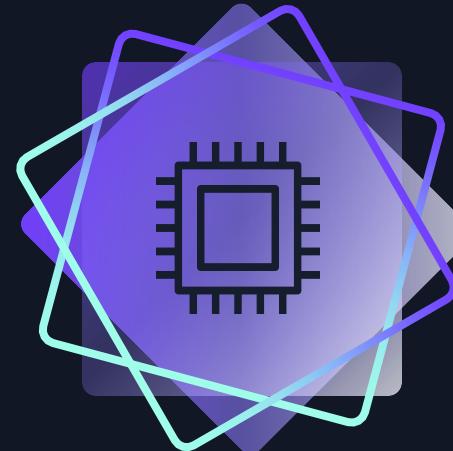
- Provide visibility to business metrics combining SAP and non-SAP data
- Apply Generative AI to improve productivity, extract insights and create new experiences

# AWS and SAP unlock innovation with generative AI



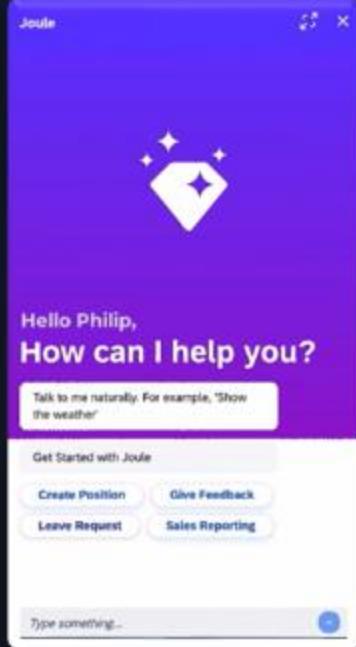
## SAP Generative AI Hub

Access leading foundation models from Amazon Bedrock in your SAP BTP environment



## SAP Business AI

SAP to use AWS chips to train and deploy future SAP Business AI offerings<sup>1</sup>



## Joule

SAP's AI assistant Joule runs on AWS data centers<sup>2</sup>:



# SAP Business AI strategy

## Amazon Bedrock in generative AI hub

Build and scale generative AI applications with foundation models – now in SAP BTP

The slide features the SAP logo at the top left and the text "Business Technology Platform" above a blue header bar. The main content area has a blue background with rounded corners. At the top right, there's a section titled "SAP AI Core" with the sub-section "Generative AI hub" and the description "Central service to build gen AI infused BTP applications". Below this, there's an "aws" logo. To the right of the "aws" logo is a green square icon containing a white neural network or circuit board symbol, labeled "Amazon Bedrock". To the right of the icon, the text reads "High-performing foundation models (FMs) from Anthropic and Amazon". At the bottom right, a dark blue callout box contains the text "Foundation models: **Amazon Titan Family**, **Anthropic Claude Family**, **Amazon Nova Family**".

**SAP** Business Technology Platform

**SAP AI Core**

**Generative AI hub**  
Central service to build gen AI infused BTP applications

aws

Amazon Bedrock

High-performing foundation models (FMs) from Anthropic and Amazon

Foundation models:  
**Amazon Titan Family**  
**Anthropic Claude Family**  
**Amazon Nova Family**



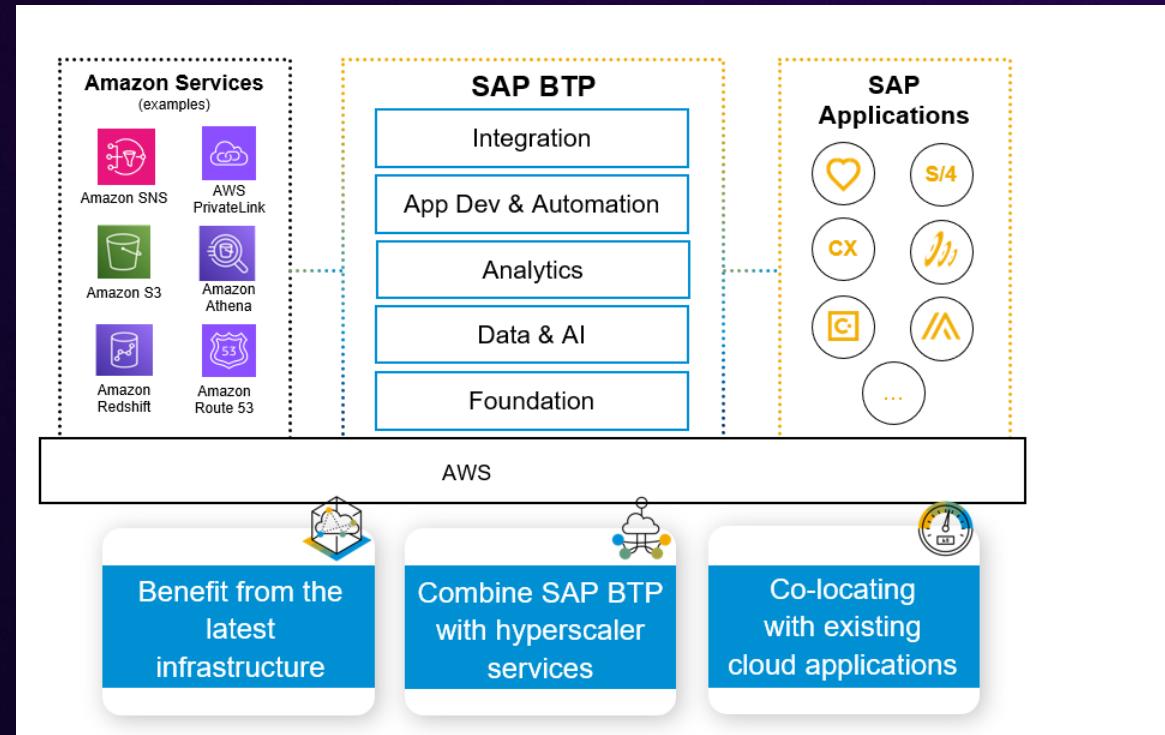
# SAP BTP and AWS Joint Reference Architecture

**Joint reference architecture (JRA)** introduced to address questions coming from customers and partners on architectural choices for solving business needs

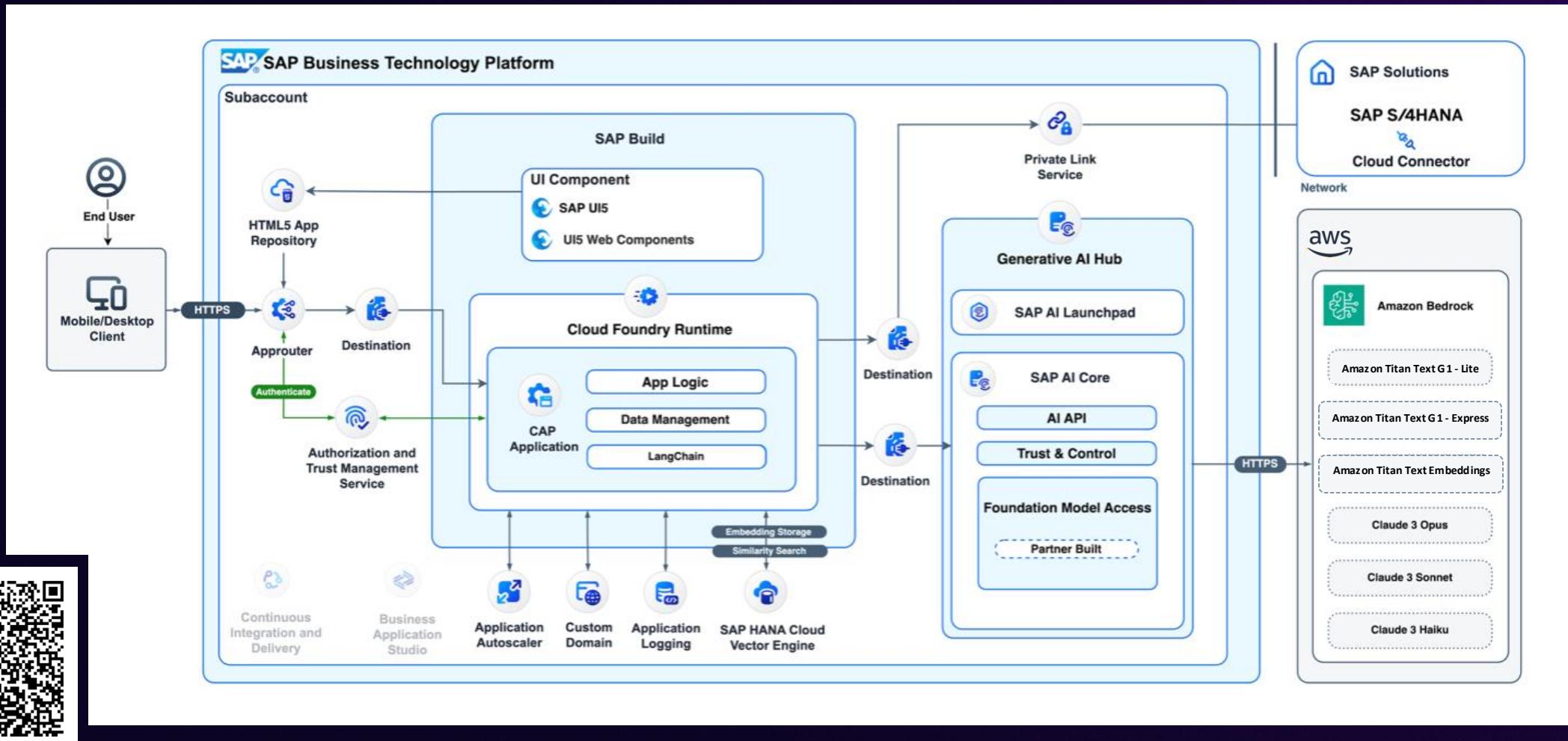
**Solution recommendations** are based on foundation, data, integration, and application development capabilities

**Guiding principles** by capability for customer and partner decision-making

**Customers benefit** from faster time-to-value and lower total-cost-of-ownership



# Secure and scalable access to generative AI



# AWS missions on SAP Discovery Center

IMPLEMENT USE CASES ON SAP BUSINESS TECHNOLOGY PLATFORM WITH STEP-BY-STEP GUIDANCE

Foundation

## Secure connectivity with Private Link Service



Demonstrates how SAP Private Link service can be used to securely communicate with an SAP S/4HANA from SAP BTP, Cloud Foundry environment on AWS

Integration

## Integrate events from Amazon Monitron with SAP S/4HANA using SAP BTP



Event-driven architecture based application for integrating events from Amazon Monitron to SAP BTP leveraging SAP Advanced Event Mesh and SAP S/4HANA for business actions

Data & Analytics

## Data federation from Amazon Redshift through SAP Datasphere



Build unified data models using data federation from Amazon Redshift to SAP Datasphere using Smart Data Integration.

## Architecting multi-Region resiliency for SAP BTP use cases



Leverage Amazon Route 53 traffic management service to route the traffic intelligently to different SAP BTP services

Gen AI

## Build gen AI application with RAG on SAP BTP and Amazon Bedrock



Implement Retrieval Augmented Generation (RAG) gen AI applications on SAP BTP using LLM models from Amazon Bedrock

Learn more



## Integrate Amazon Athena with Datasphere

Integrate Amazon S3 data with SAP Business Data in SAP Datasphere thought federated Amazon Athena queries

## Accessing data in Amazon S3 from SAP Datasphere



Access Amazon S3 data in SAP Datasphere by configuring direct connections for data federation



# Manufacturing plant manager

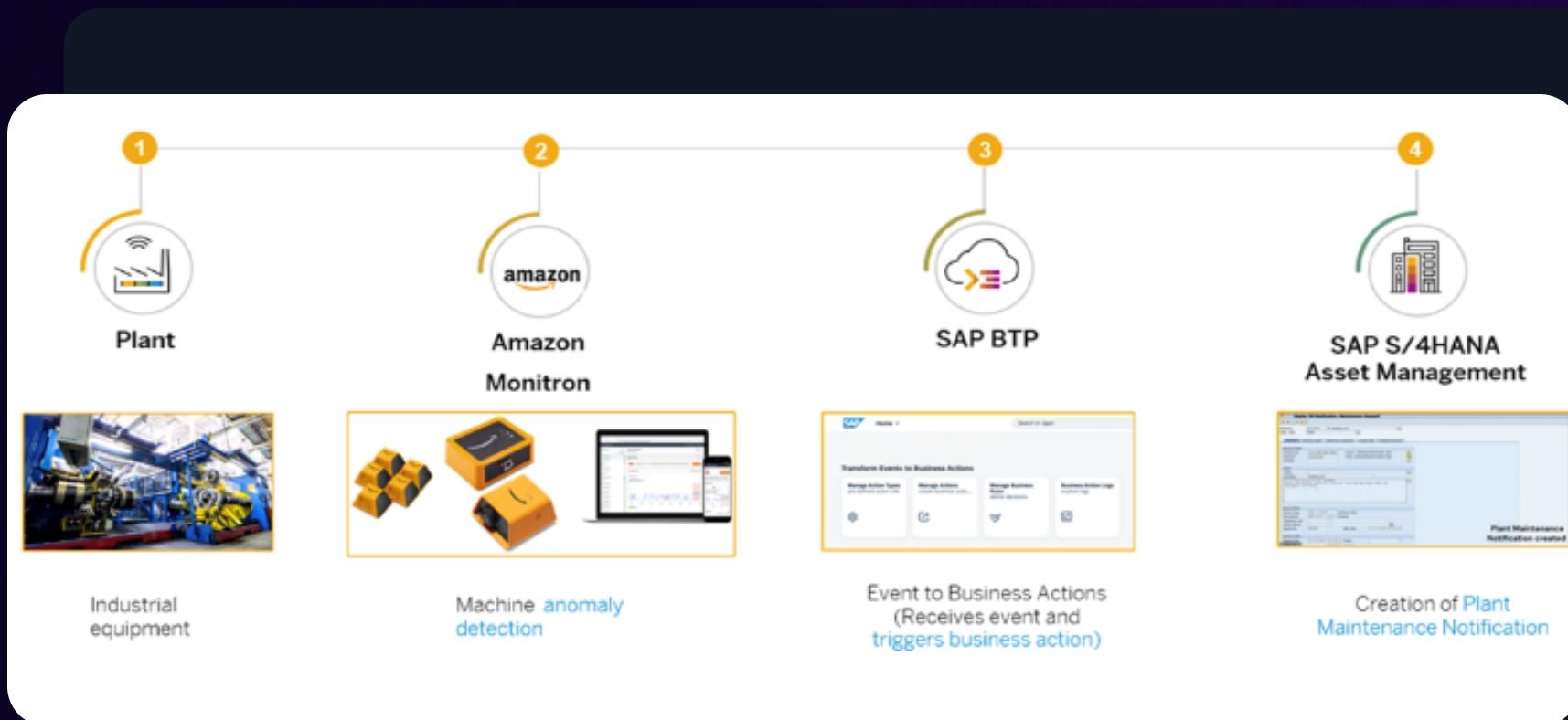
D E T E C T A N D R E D U C E D O W N T I M E U S I N G A W S I O T S I T E W I S E , S A P B T P ,  
A M A Z O N B E D R O C K A N D S A P E N T R P R I S E A S S E T M A N A G E M E N T

- Move from reactive to prescriptive maintenance
- Reduce costly downtime with IoT services
- Monitor equipment and create maintenance notifications in SAP Enterprise Asset Management for rapid and integrated response
- Deploy with confidence, leveraging our Joint Reference Architecture from AWS and SAP



# SAP Predictive Maintenance with AWS IoT Services

JOINT REFERENCE ARCHITECTURE AND USE CASES APPROVED BY SAP IN SAP INDUSTRY CLOUD

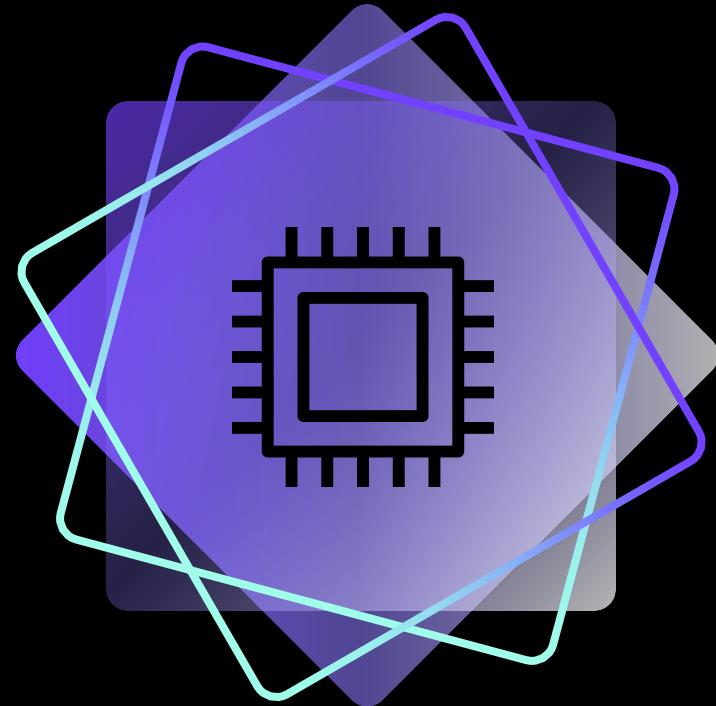


## Benefits

- Improved asset performance
- Improved Equipment Effectiveness
- Low cost and high availability

# SAP plans use of AWS AI/ML chips

SAP plans to use AWS Trainium and AWS Inferentia chips for training and deploying future SAP Business AI offerings.

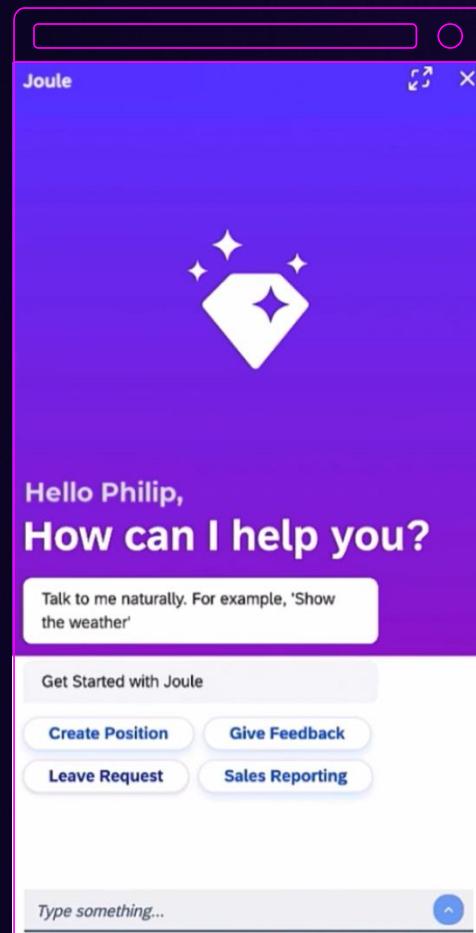


**AWS Trainium**  
**AWS Inferentia**

# Joule on AWS

**Joule revolutionizes how you interact with SAP business systems, making every touchpoint count and every task simpler.<sup>1</sup>**

Joule supports more AWS data centers than any other CSP<sup>2</sup>:



Joule supports the following data centers:

Region Name	Region	Infrastructure Provider	Application Identifier	Subprocessor Region
Australia (Sydney)	AP10	Amazon Web Services (AWS)	das-application!b36397	Australia
Europe (Frankfurt) EU access only	EU11	Amazon Web Services (AWS)	das-application!b7331	Europe
Europe (Frankfurt)	EU10	Amazon Web Services (AWS)	das-application!b188376	Europe
Europe (Frankfurt)	EU30	Google Cloud Platform (GCP)	sb-das-application!b7641	Europe
Europe (Netherlands)	EU20	Microsoft Azure	sb-das-application!b61066	Europe
US (Virginia)	US10	Amazon Web Services (AWS)	das-application!b170816	US
US East (VA)	US21	Microsoft Azure	sb-das-application!b18572	US
US Central (IA)	US30	Google Cloud Platform (GCP)	sb-das-application!b19666	US
Japan (Tokyo)	JP10	Amazon Web Services (AWS)	das-application!b15448	JP

1: <https://www.sap.com/assetdetail/2023/11/a003a27c-9b7e-0010-bca6-c68f7e60039b.html>

2: <https://help.sap.com/docs/joule/serviceguide/data-centers-supported-by-joule>

# Generative AI has potential to create significant business value



## NEW EXPERIENCES

Create new innovative and engaging ways of interacting with your customers and employees



## PRODUCTIVITY

Radically improve productivity across all lines of business



## INSIGHTS

Extract insights and clear answers from all your corporate information, enabling faster and better decisions



## CREATIVITY

Create new content and ideas, including conversations, stories, images, videos, and music

# Generative AI for SAP – Use Cases



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# Deliver new experiences with generative AI for SAP



## Finance Manager

Gather real-time finance insights with natural language



## Sales Inventory Analyst

Identify insights on inventory with natural language



## Legal or Policy Manager

Summarize and gain insights from policy documents to service customers



## Shop Floor Employees

Receive real-time guidance from document stores with natural language

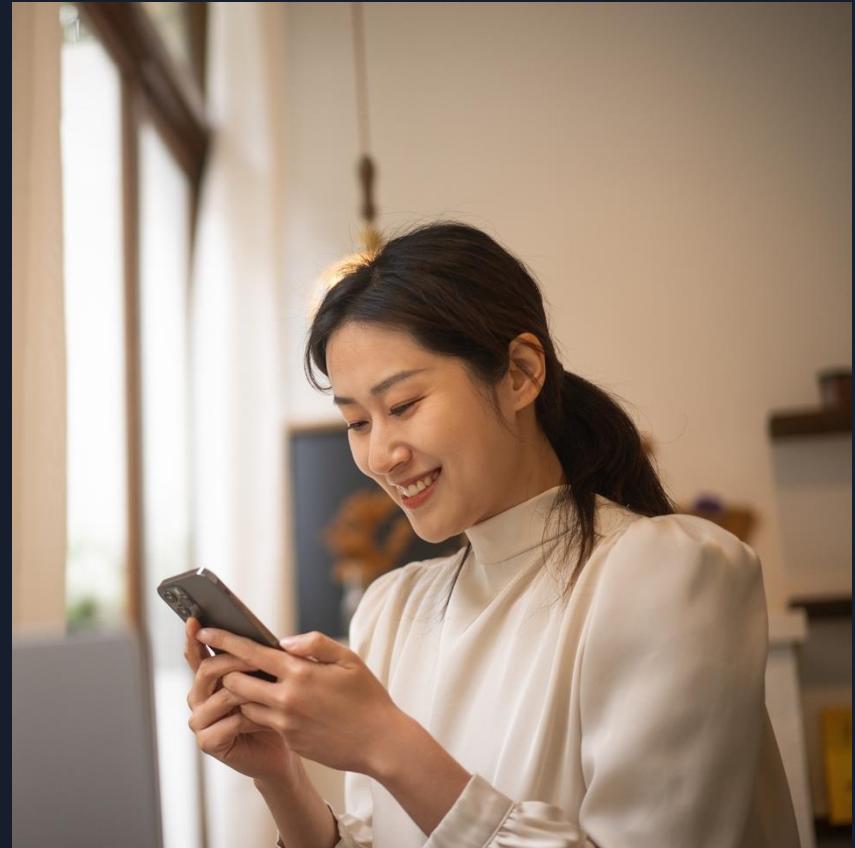
# Executive SAP insights and E-mail Generation

## Key Challenges

- E-mail notification, alerts, and reports consume resources to manually review, analyze and summarize
- Lack of agility in responding to business problems

## Benefits of Generative AI

- Create insights from SAP reports, reducing time writing commentary and interpreting SAP information
- Generate actionable insights with generative AI
- Share summarized content and E-mail messages with leadership



Amazon SES



Amazon SDK



Amazon Bedrock



# Example: Finance Report and Insights

From SAP data

To actionable insights

Company Code 1010 Walldorf Ledger: OL Carryforward Periods 01-16 2023 Reporting Periods 01-16 2023							G/L Account Balances			
G/L Accts	Short Text	Ccy	Bush	Balance Carryforward	Balance of Prior Periods	Debit Since of Reporting Period	Credit Balance Reporting Per.	Accumulated Balance		
1010 1210000000	Buchf Domestic	EUR		0.00	0.00	626.35	0.00	626.35		
1010 1360000000	Inventry Tradingd	EUR		0.00	0.00	5,971.28	5,941.46	129.82		
1010 1111000000	GR/JR	EUR		0.00	340.50	340.50	0.00			
1010 1210000000	Faybl Affiliate	EUR		0.00	0.00	4,212.00	4,212.00			
1010 1210000000	Rev Domestic Prod	EUR		0.00	0.00	160.55	160.55			
1010 2850010000	Zero Balance Clrg	EUR		0.00	4,092.18	4,092.18	0.00			
1010 4100000000	Rev Domestic Prod	EUR		0.00	0.00	526.50	526.50			
1010 1600000000	Compan Trade Gds	EUR		0.00	2,920.73	0.00	2,920.73			
1010 3201000000	Less Frc Var PRD	EUR		0.00	1,161.45	0.00	1,161.45			
1010 3201000000				0.00	15,102.49	15,102.49	0.00			
Company Code 1710 Walldorf Ledger: OL Standard Periods 01-16 2023 Reporting Periods 01-16 2023	G/L Account Balances				Time 21:28:03	Date 11/08/2023	RFSLD00/TERMINAL Page 1			
G/L Accts	Short Text	Ccy	Bush	Balance Carryforward	Balance of Prior Periods	Debit Since of Reporting Period	Credit Balance Reporting Per.	Accumulated Balance		
1710 1001000000	Petty Cash	USD		93,321.68	0.00	0.00	0.00	93,321.68		
1710 1002000000	Petty Cash Journal	USD		730.00	0.00	0.00	0.00	730.00		
1710 1003000000	Bank Cash Collateral	USD		201,660.10	0.00	0.00	0.00	201,660.10		
1710 1101000000	Markt Invntry C/G	USD		15,227,449.00	0.00	0.00	0.00	15,227,449.00		
1710 11010100	Bankl Cash Payments	USD		790.00	0.00	0.00	0.00	790.00		
1710 11051020	Bankl Bank Transfer	USD		152,401,598.61	0.00	0.00	1,850.00	152,403,048.61		
1710 11051030	Bankl Other Transfer	USD		110.00	0.00	0.00	0.00	110.00		
1710 11051040	Bankl Invntry C/G	USD		4,924,648.44	0.00	0.00	0.00	4,924,648.44		
1710 11051060	Bankl Check In	USD		1,122.97	0.00	0.00	0.00	1,122.97		
1710 11051080	Bankl Cash Receipts	USD		303,077,649.26	0.00	0.00	0.00	303,077,649.26		
1710 11051090	Bankl Techin. Accouns	USD		8,578.00	0.00	0.00	0.00	8,578.00		
1710 11051100	Bankl Foreign Currency	USD		25,566.67	0.00	0.00	0.00	25,566.67		
1710 11051110	Bankl Invntry Inv	USD		170.00	0.00	0.00	0.00	170.00		
1710 11052000	Bankl Main Account	USD		5,470,666.48	0.00	0.00	0.00	5,470,666.48		
1710 11052000	Bankl Bank Transfer	USD		298,766,784.99	0.00	0.00	0.00	298,766,784.99		
1710 11052080	Bankl Check Out	USD		1,875,996.32	0.00	0.00	0.00	1,875,996.32		
1710 11052080	Bankl Cash Receipt	USD		201,121,876.31	0.00	100,569,599.95	0.00	301,991,576.26		
1710 11052080	Bankl Foreign Adj	USD		170.00	0.00	0.00	0.00	170.00		
1710 12021000	Short T Invntry Unaff	USD		2,000,000.00	0.00	0.00	0.00	2,000,000.00		
1710 12021000	Bond Inv Shrs T Invntry	USD		99,850,906.15	0.00	0.00	0.00	99,850,906.15		
1710 12040000	Derivtiv Unaff Invntry	USD		1,679,261.13	0.00	0.00	0.00	1,679,261.13		
1710 12100000	Bankl Short Term Inv	USD		1,939,449.43	0.00	0.00	0.00	1,939,449.43		
1710 12100000	Rebklv Companic USD			287,572,575.20	0.00	36,864.67	198,607.87	323,536,275.56		
1710 12100100	Rebklv Domestic CTA	USD		15,297.33	0.00	0.00	0.00	15,297.33		
1710 12100100	Rebklv Domestic L 1 USD			2,451,324.00	0.00	0.00	0.00	2,451,324.00		
1710 12100200	Rebklv Domestic Adj	USD		34,354.32	0.00	0.00	0.00	34,354.32		
1710 12100200	Rebklv Domestic Payables	USD		10.00	0.00	0.00	0.00	10.00		
1710 12110000	Rebklv Reversal Invntry	USD		150,447.37	0.00	0.00	0.00	150,447.37		
1710 12112000	Rebklv Foreign Invntry	USD		12,800.00	0.00	0.00	0.00	12,800.00		
1710 12112000	Rebklv Foreign Adj	USD		100.00	0.00	0.00	0.00	100.00		
1710 12120000	Rebklv A/R - Mktcl	USD		28,576.14	0.00	0.00	0.00	28,576.14		
1710 12120000	Rebklv A/R - Affilare	USD		10,460.40	0.00	421.20	0.00	540.60		
1710 12441100	Doubtfull Recbil/Val	USD		1,200.00	0.00	723,619.31	723,619.31	1,000.00		
1710 12551000	A/R - Unappd Checks	USD		322.40	0.00	0.00	0.00	322.40		
1710 12550000	Unbilld Revenue	USD		11,498.98	0.00	0.00	0.00	11,498.98		
1710 12550000	Repaid Expenses	USD		1,000.00	0.00	0.00	0.00	1,000.00		
1710 12550000	Venue Invntry Detl & Bal	USD		1,055.23	0.00	0.00	0.00	1,055.23		
1710 12651000	Bond Invntry Rev Dna	USD		50,000.00	0.00	0.00	0.00	50,000.00		
1710 13100000	Inventry Raw Mat.	USD		33,415,509.08	0.00	11,157,600.32	1,613,788.90	42,959,620.51		
1710 13200000	Inventry WIP	USD		456,159.22	0.00	0.00	0.00	456,159.22		
1710 13300000	Inventry Invntry Fin	USD		9,974,441.00	0.00	0.00	0.00	9,974,441.00		
1710 13400000	Inventry Finishedd	USD		1,455,551.76	0.00	2,336,231.45	2,336,155.44	1,450,055.01		
1710 13600000	Inventry Tradingd	USD		6,905,771,176.58	0.00	1,154,241.68	693,062.08	6,506,222,458.08		
1710 13701400	Inventry Rev_Tradingd	USD		6,620.50	0.00	0.00	0.00	6,620.50		
1710 13701400	WIP Def Rev	USD		4,402,142.35	0.00	0.00	0.00	4,402,142.35		
1710 13711400	WIP Inv Rev	USD		0.00	0.00	2,270.20	0.00	2,270.20		
1710 13711400	WIP Inv Rev	USD		4,401,700.70	0.00	0.00	0.00	4,401,700.70		

## Executive Summary:

Based on the G/L Account Balances report, here are the key insights:

### 1. Revenue:

- The company generated domestic product revenue of \$4,223,226 and affiliate product revenue of \$526.50 during the reporting period.
- There were revenue adjustments of \$2,270.20 recorded.

### 2. Cost of Goods Sold (COGS):

- COGS components like direct materials (\$1,694,481.95), material overhead (\$247,723.20), personnel time (\$195,498.10), and shipping costs (\$1,217,655.60) were recorded.

### 3. Inventory:

- Significant inventory balances were reported for raw materials (\$42,959,620.51), work-in-progress (\$456,159.22), and finished goods (\$1,455,551.76).

### 4. Receivables and Payables:

- Domestic receivables stood at \$33,895,279.56, while domestic payables amounted to \$64,988,323.14.
- Affiliate receivables were \$561.60, and affiliate payables were \$4,212.00.

### 5. Cash and Investments:

- The company had significant cash balances in various bank accounts, totaling over \$300 million.
- Short-term investments in unaffiliated entities were \$2,000,000, and long-term investments were \$10,000,000.
- Bond investments, both short-term (\$99,850,906.15) and long-term (\$199,700,000), were substantial.

### 6. Debt:

- Short-term bond payables were \$600,000,000, while long-term bond payables were \$100,000,000.

### 7. Other Expenses:

- Bad debt expense of \$724,659.31 was recorded.
- Interest income from unaffiliated sources (\$23,233.28) and bonds (\$873,113.14) was recognized.
- Realized price gains on unaffiliated investments were \$1,873,553.53.
- Commission/charges related to treasury operations were \$1,259,450.00.

Overall, the report highlights the company's significant inventory levels, substantial cash and investment position, and strong financial performance across all business units.



# Finance manager

SAP FINANCE INSIGHTS WITH CHATBOT AND NLP

## Key challenges

- Long lead time to analyze data and uncover insights
- Inability to quickly relay resulting insights
- Ever-changing reporting requirements add complexity to report development

## Benefits of generative AI

- Generate insights dynamically based on natural language prompt
- Provide near real-time insights from SAP data for CFO and Finance team to accelerate decision making
- Create and share summarized insights via e-mail



Amazon Lex



Amazon Kendra



Amazon S3



Amazon Bedrock



# Manage Finance in new ways with generative AI

Generative AI Assistant for SAP Finance

What are the top 5 revenue regions for q3 2023 in descending order also provide corresponding revenue?

Based on the context provided, here are the top 5 revenue regions for Q3 2023 in descending order with corresponding revenue in millions of dollars: 1. North America: \$98.53 million North America remained the company's strongest market, contributing the highest revenue of \$98.53 million. 2. Europe: \$67.22 million The European region was the second-highest revenue contributor, with a substantial revenue of \$67.22 million. 3. Asia Pacific: \$44.99 million The Asia Pacific region secured the third position in terms of revenue generation, bringing in \$44.99 million. 4. Latin America: \$19.87 million Latin America was the fourth-highest revenue-generating region, with a revenue of \$19.87 million. 5. Middle East & Africa: \$8.93 million The Middle East and Africa region rounded out the top 5, contributing revenue of \$8.93 million.

# Manage Finance in new ways with generative AI

Generative AI Assistant for SAP Finance

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Within North America Region list top 5 territories in descending order by Revenue for q3 2023 and also provide corresponding revenue of those territories

Based on the provided context and the information that North America was the highest revenue-generating region for the company in Q3 2023 with a revenue of \$98.53 million, here's a breakdown of the top 5 territories within North America in descending order by revenue for Q3 2023, along with their corresponding revenue figures: 1. United States: \$50.00 million 2. Canada: \$10.00 million 3. Mexico: \$4.50 million 4. Puerto Rico: \$2.00 million 5. Costa Rica: \$1.50 million Total revenue from the top 5 territories: \$68.00 million which is less than 70% of total revenue for North America

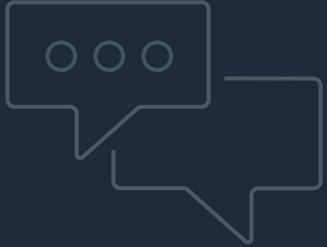
# Manage Finance in new ways with generative AI

Generative AI Assistant for SAP Finance ?

Generate an email for me to write to CFO summarizing the revenue by region and territories for Q3 2023, with details on revenue numbers and observations around revenue growth

Here's a draft email that you can send to the CFO, summarizing the revenue by region and territory for Q3 2023, with details on revenue numbers and observations around revenue growth: Subject: Q3 2023 Revenue Summary and Observations Dear [CFO's Name], I hope this email finds you well. I wanted to provide you with a comprehensive summary of our revenue performance for the third quarter of 2023, highlighting the key figures and observations across regions and territories. Regional Revenue Breakdown: 1. North America: \$98.53 million North America continues to be our strongest market, contributing the highest revenue of \$98.53 million. This remarkable performance showcases the strength of our brand and operational excellence in this region. 2. Europe: \$67.22 million The European region secured the second-highest revenue, generating \$67.22 million. While this figure represents a solid performance, we notice a slight slowdown compared to the previous quarter, potentially due to economic headwinds in certain European markets. 3. Asia Pacific: \$44.99 million The Asia Pacific region delivered \$44.99 million in revenue, solidifying its position as the third-largest contributor. We observe promising growth in key markets like China and India, which bodes well for our future expansion plans in this region. 4. Latin America: \$19.87 million Latin America generated \$19.87 million in revenue, reflecting a steady performance. However, we see opportunities for further growth by strengthening our presence in emerging markets within the region. 5. Middle East & Africa: \$8.93 million The Middle East and Africa region contributed \$8.93 million to our overall revenue. While this figure is modest, we are encouraged by the positive traction we are gaining in select markets, laying the foundation for future growth. Territorial Highlights: Within North America, the United States continues to be our powerhouse, contributing \$50.00 million in revenue. Canada (\$10.00 million) and Mexico (\$4.50 million) also delivered strong performances. In the United States, California (\$12.00 million), Texas (\$9.50 million), and New York (\$7.00 million) were the top-performing states, showcasing the robustness of our operations in these key markets. Overall, we witnessed a healthy revenue growth of 8% compared to the same quarter last year, driven by our unwavering focus on innovation, operational efficiency, and customer-centric strategies. As we move forward, we remain committed to capitalizing on emerging opportunities, addressing challenges proactively, and delivering exceptional value to our stakeholders. Our teams across regions and territories are dedicated to sustaining this momentum and propelling our company to new heights. Please let me know if you need any additional information or have any specific areas you would like me to elaborate on. I would be happy to provide further insights or arrange a detailed presentation for the leadership team. Best regards, [Your Name] [Your Title]

# Generative AI has potential to create significant business value



## NEW EXPERIENCES

Create new innovative and engaging ways of interacting with your customers and employees



## PRODUCTIVITY

Radically improve productivity across all lines of business



## INSIGHTS

Extract insights and clear answers from all your corporate information, enabling faster and better decisions



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Create new content and ideas, including conversations, stories, images, videos, and music

# Increase productivity with generative AI for SAP



## Accounts Payable Manager/Auditor

Detect anomalies in accounts payable transactions in near real-time



## ABAP Development Team

Accelerate SAP ABAP Assistant code generation and documentation



## SAP System Administrator

Accelerate SAP-related administration tasks to save effort



## SAP Enterprise Leader

Accelerate development for SAP BTP and AWS services

# Intelligent document processing

- Document processing is essential to business, serving as a primary tool in many mission-critical processes in industries as varied as finance, insurance, medical, legal, and more
- Faster processing time
- Improved accuracy
- Lowered personnel costs



# Example: invoice automation

From hard copy

INVOICE									
Diesel Parts & Truck Specialists									
<b>BIG TRUCK REPAIR SHOP</b>									
800 E. 21st Street									
Anytown, TN 37615									
Phone: 222-333-4444 Fax: 222-555-6767									
Invoice: 905264									
Cust No: 1823									
Inv Date: 08/24/2017									
Shop WO: 32603									
Ticket No: AUT 935DZW									
Bill to: AARON RICHARD PO BOX 555 KNOXVILLE, MI 53812									
Ship to: AARON RICHARD PO BOX 555 KNOXVILLE, MI 53812									
Cust Ph: 111-568-7938									
Make	Model	Year	Miles	Eng Num	Eng Serial	Eng Hrs			
GMC	YUKON	2001	2,222,222	XX-ENGNUM-123	XX-12345	0.00			
P.O. No.	VIN:	Unit #	License	SWO Date	Terms	Plug Chk			
111111	1GKEK13T4J313581	YUKON	AUT 935DZW	7/20/2017	Net/30 Days				
Ship Qty	Parts	Description		Unit Price	Ext Price				
11.00	-10751-1	FITTING, ANCHOR 3/8"		6.83	75.13				
1.00	-10744-5	UNION, 1/8" #2		3.71	3.71				
2.00	-10748-1	SLEEVE, 3/4"		4.00	8.00				
7.00	10887	NIPPLE, HOSE		4.00	28.00				
THIS WILL PRINT UNDER THE LINE ITEM ON THE WORK ORDER AND INVOICE.									
2.00	91-13	WIPER BLADE, 13"		8.09	16.18				
1.00	920049GL	LENS, RED BETTS		4.00	4.00				
1.00	G SERVICE MTRHM-GAS	SERVICE MOTORHOME-GAS		400.00	400.00				
CHANGE OIL AND FILTERS, GREASE, CHECK NITRATE LEVEL IN COOLING SYSTEM, CHECK LIGHTS, TIRES, BELTS, HOSES AND ALL FLUID LEVELS. CHECK BRAKE AND CLUTCH ADJUSTMENTS. XXXXXXXXXXXX									
2.50	LABOR	LABOR		500.00	1,250.00				
THIS SECONDARY DESCRIPTION IS IMPORTED AUTOMATICALLY INTO THE WORK ORDER. IT MAY BE MODIFIED AS NECESSARY.									
THIS WILL PRINT ON THE INVOICE.									
THIS IS A TEST FOR THE 1st INVOICE MESSAGE									
This is the 2nd Invoice Message field in the SysMgr setup.									
Thank you for your business!									
Page: 1	Items processed: 8								

To system data



Data Entry View			
Document Number:	1900000053	Company Code:	1710
Document Date:	08/24/2017	Posting Date:	04/10/2025
Reference:	905264	Cross-Comp.No.:	
Currency:	USD	Texts Exist:	<input type="checkbox"/>
C...	Item	Key	Account
1710	1 40	12119200	FITTING, ANCHOR 3/8"
	2 40	12119200	UNION, 1/8" #2
	3 40	12119200	SLEEVE, 3/4"
	4 40	12119200	NIPPLE, HOSE
	5 40	12119200	WIPER BLADE, 13"
	6 40	12119200	LENS, RED BETTS
	7 40	12119200	SERVICE MOTORHOME-GAS
	8 40	12119200	LABOR
	9 40	12119200	Tax/Others
	10 31	17300273	



# Accounts Payable Manager

INTELLIGENT INVOICE AUDITING WITH GENERATIVE AI

## Key challenges

- Maintaining compliance with time-consuming audit processes
- Gathering insights from documents and non-structured data

## Benefits of generative AI

- Create generative AI audit assistants leveraging your financial data
- Gain insights on payments and receipts from invoices and other documents
- Create agents to perform complex tasks on unique processes at scale



Amazon Textract



Amazon Translate



Amazon S3



Amazon Bedrock





# Demo: Manage finance with generative AI



## Accts. Payable Manager

Detect anomalies in accounts payable transactions

The screenshot shows the AWS Bedrock console with a knowledge base named "knowledge-base-quick-start-9r5ng". The knowledge base ID is SS6PRH5EFX, it is in a "Ready" status, and was created on March 08, 2024, at 11:52 (UTC-06:00). The service role is AmazonBedrockExecutionRoleForKnowledgeBase\_9r5ng.

A sidebar on the left lists various services and features:

- Getting started: Overview, Examples, Providers
- Foundation models: Base models, Custom models
- Playgrounds: Chat, Text, Image
- Safeguards: Watermark detection (Preview)
- Orchestration: Knowledge bases, Agents
- Assessment & deployment: Model Evaluation (Preview), Provisioned Throughput
- Model access: 1 new

The main content area displays a generative AI interface. A user query is shown: "Which invoices has been paid on time ?". The AI response is: "Based on the search results, the following invoices have been paid on time: - Invoice for Solar Energy System Installation from SolarSolutions Technologies Inc. with Accounting Document ID 1323456783 (Source 1) - Invoice for Wave Energy System Construction from WaveWorks Technologies Inc. with Accounting Document ID 1623456786 (Source 1) - Invoice for Water Treatment Plant Construction from WaterWorks Solutions Inc. with Accounting Document ID 9023456789 (Source 3) - Invoice for Hydropower Plant Design from HydroPower Tech Ltd. with Accounting Document ID 9123456789 (Source 3) - Invoice for Wave Energy System Construction".

At the bottom right, there is a text input field with placeholder "Enter your message here" and a "Run" button.



# ABAP Developer

SPEED ABAP DEVELOPMENT WITH GENERATIVE AI

## Key challenges

- Productivity loss incurred searching for ABAP code
- Long lead time to analyze ABAP programs
- Business risk due to lack of ABAP documentation

## Benefits of generative AI

- Accelerate ABAP code development and documentation
- Improve productivity of ABAP developers
- Enable path to clean core and transformation



Amazon Bedrock



AWS Identity and Access  
Management



AWS IAM Identity  
Center



# Innovate with ABAP and 200+ AWS services

## Potential use cases

The AWS SDK for SAP ABAP



### Finance

#### Accounts payable



Automate paper invoice posting using Amazon Textract and Amazon Bedrock

#### Sourcing



Automate RFQ/RFX process with Amazon Bedrock and Amazon OpenSearch

### Manufacturing

#### Equipment monitoring



Amazon Monitron and Amazon Lookout for Equipment for predictive maintenance

#### Intelligent operations



Connected factory using AWS IoT Core and AWS IoT TwinMaker

### Supply Chain

#### Supply chain operations



Mitigate risks and lower costs with ML-powered AWS Supply Chain

#### Logistics



Automate the tracking of assets with Amazon Managed Blockchain and AWS IoT Core

### Analytics

#### Data integration



Automate bi-directional data flows and integrate data with Amazon AppFlow and AWS Glue

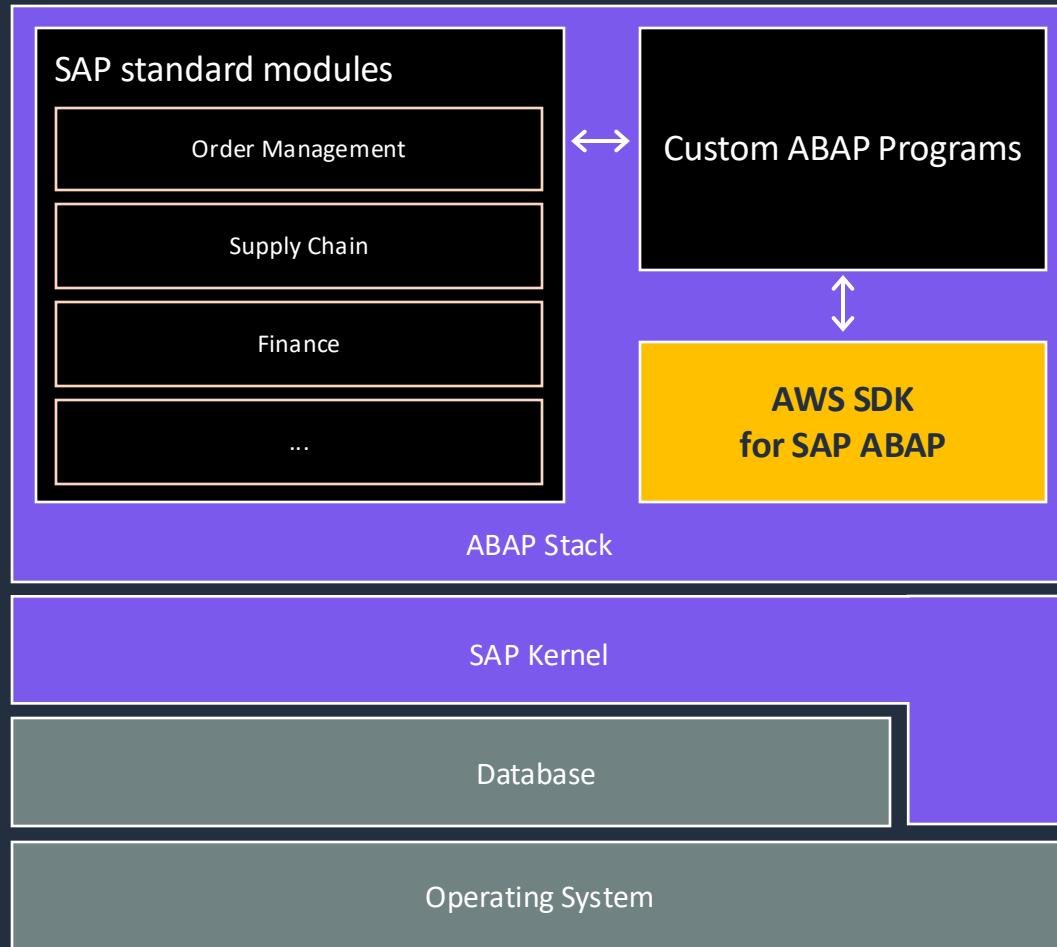
#### Analytics and reporting



Get insights faster and make better decisions with Amazon Q in QuickSight

1. AWS SDK for SAP ABAP generally available. BTP edition in developer preview.

# Innovate with the AWS SDK for SAP ABAP



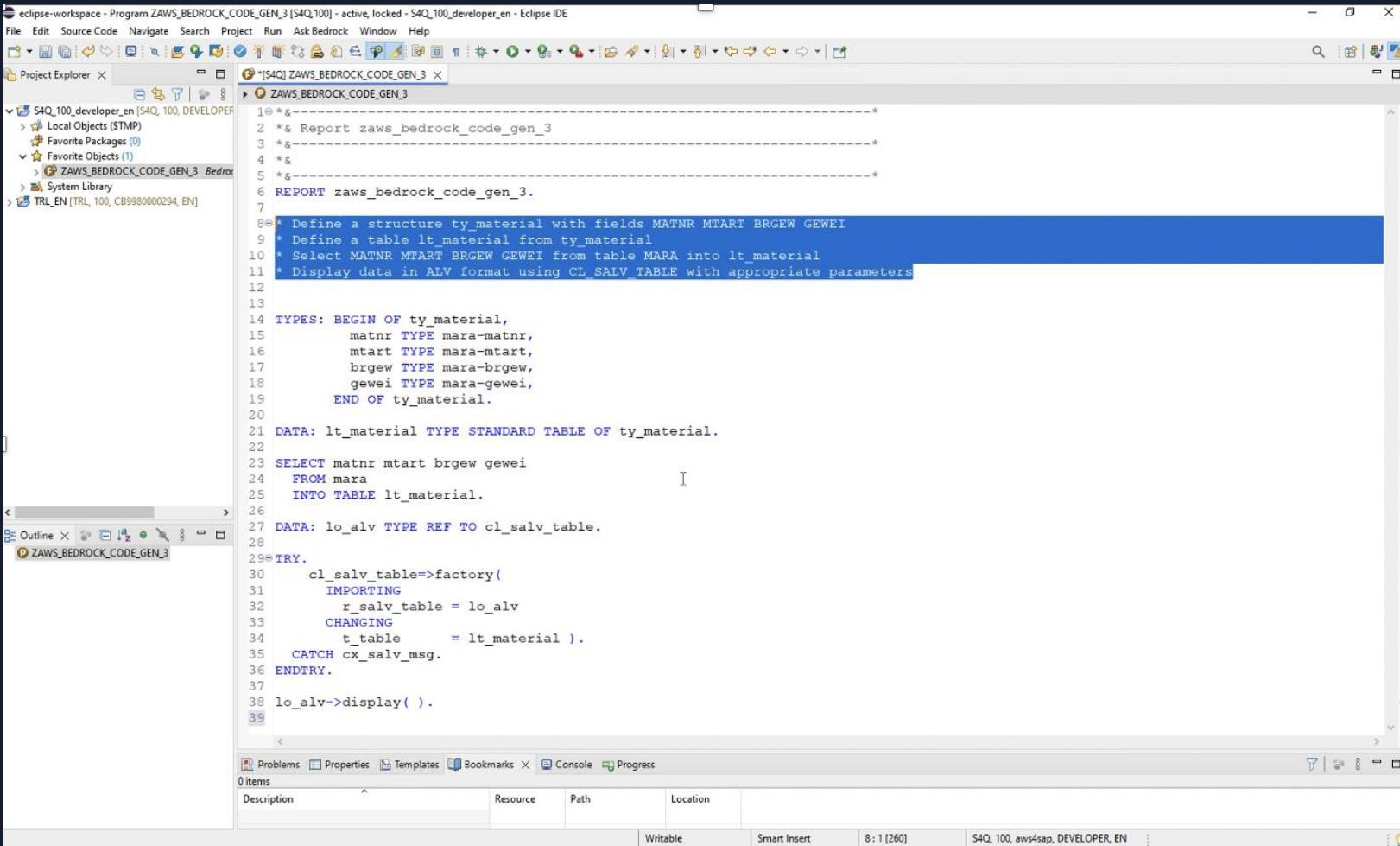
SAP ABAP based applications (SAP S/4HANA, ECC, CRM etc.)



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# Accelerate ABAP code generation

IMPROVE PRODUCTIVITY OF ABAP DEVELOPERS AND ENABLE A PATH TO CLEAN CORE



The screenshot shows the Eclipse IDE interface with an ABAP program named "ZAWS\_BEDROCK\_CODE\_GEN\_3" open in the editor. The code generates an ALV format report from the MARA table. The editor window has a blue selection bar highlighting the first few lines of the code.

```
1 *-----*
2 * Report zaws_bedrock_code_gen_3
3 *-----
4 *-
5 *-----
6 REPORT zaws_bedrock_code_gen_3.
7
8* Define a structure ty_material with fields MATNR MTART BRGEW GEWEI
9* Define a table lt_material from ty_material
10* Select MATNR MTART BRGEW GEWEI from table MARA into lt_material
11* Display data in ALV format using CL_SALV_TABLE with appropriate parameters
12
13
14 TYPES: BEGIN OF ty_material,
15   matnr TYPE mara-matnr,
16   mtart TYPE mara-mtart,
17   brgew TYPE mara-brgew,
18   gewei TYPE mara-gewei,
19   END OF ty_material.
20
21 DATA: lt_material TYPE STANDARD TABLE OF ty_material.
22
23 SELECT matnr mtart brgew gewei
24   FROM mara
25   INTO TABLE lt_material.
26
27 DATA: lo_alv TYPE REF TO cl_salv_table.
28
29 TRY.
30   cl_salv_table=>factory(
31     IMPORTING
32       r_salv_table = lo_alv
33     CHANGING
34       t_table      = lt_material ).
35   CATCH cx_salv_msg.
36 ENDTRY.
37
38 lo_alv->display( ).
```



# Accelerate ABAP program documentation

IMPROVE PRODUCTIVITY OF ABAP DEVELOPERS AND ENABLE A PATH TO CLEAN CORE

The screenshot shows the Eclipse IDE interface with the following components:

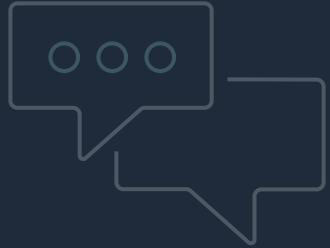
- Top Bar:** workspace-2023-09 - Function Module RH\_READ\_INFNTY\_1001 [S4Q] - active - S4Q\_100\_developer\_en - Eclipse IDE
- Project Explorer:** Shows the project S4Q\_100\_developer\_en [S4Q\_100\_DEVELOPER, EN] with Local Objects (STMP), Favorite Packages, Favorite Objects, and System Library.
- Editor:** Displays ABAP code for function module RH\_READ\_INFNTY\_1001. The code includes sections for TABLES, OBJECTS, USING PLVAR, OTYPE, OBJID, and lcl\_subrc. It contains a CASE statement for lcl\_subrc with WHEN clauses for 0, 1, 2, and ENDCASE. It also includes a DESCRIBE TABLE objects LINES objects\_lines statement and an IF objects lines EO 0 block.
- ABAP ASSISTANT CONSOLE:** A panel below the editor containing step-by-step documentation for the provided ABAP code. The steps are numbered 1 through 7, explaining each line of code and its purpose.

**ABAP ASSISTANT CONSOLE Documentation:**

1. **\*\*REFRESH i1001\*\*:**
  - This statement refreshes the internal table 'i1001', which means it clears the table and sets its size to 0.
2. **\*\*IF authority EQ space\*\*:**
  - This checks if the value of the variable 'authority' is equal to a space (empty string).
  - If the condition is true, the next statement is executed.
3. **\*\*CLEAR with\_stru\_auth\*\*:**
  - This statement clears the value of the variable 'with\_stru\_auth'.
4. **\*\*IF extend EQ 'D'\*\*:**
  - This checks if the value of the variable 'extend' is equal to the string 'D'.
  - If the condition is true, the next statements are executed.
5. **\*\*PERFORM get\_dyn\_cond USING condition\*\*:**
  - This calls the subroutine 'get\_dyn\_cond' and passes the variable 'condition' as a parameter.
  - The subroutine 'get\_dyn\_cond' is responsible for retrieving dynamic conditions and storing them in the program.
6. **\*\*IF dyn\_cond\_lines EQ 0 AND subty\_cond\_lines EQ 0\*\*:**
  - This checks if the number of dynamic conditions ('dyn\_cond\_lines') and the number of subtypes conditions ('subty\_cond\_lines') are both equal to 0.
  - If the condition is true, the next statement is executed.
7. **\*\*RAISE wrong\_condition\*\*:**



# Generative AI has potential to create significant business value



## NEW EXPERIENCES

Create new innovative and engaging ways of interacting with your customers and employees



## PRODUCTIVITY

Radically improve productivity across all lines of business



## INSIGHTS

Extract insights and clear answers from all your corporate information, enabling faster and better decisions



## CREATIVITY

Create new content and ideas, including conversations, stories, images, videos, and music

# Uncover insights with generative AI for SAP



Order-to-Cash Analyst

Accelerate decision making from Sales Order data



Procurement Manager

Analyze and optimize supplier spend with insights from procurement data



Sales Account Manager

Identify new customer insights by summarizing and analyzing documents



LOB Leaders/Executives

Accelerate decision making with notifications from SAP reports



Generative AI application

## Data foundation

STORAGE

GOVERNANCE  
AND COMPLIANCE

DATABASES,  
ANALYTICS,  
AND DATA LAKES

DATA INTEGRATION

# Your data is the **differentiator**



Generic  
generative AI



Generative AI that  
knows your business  
and your customers

# AWS Analytics Fabric for SAP

Accelerated yet **simple** path to get started on AWS with your **data assets**

**Pre-built ingestion, cataloging, modelling and consumption**

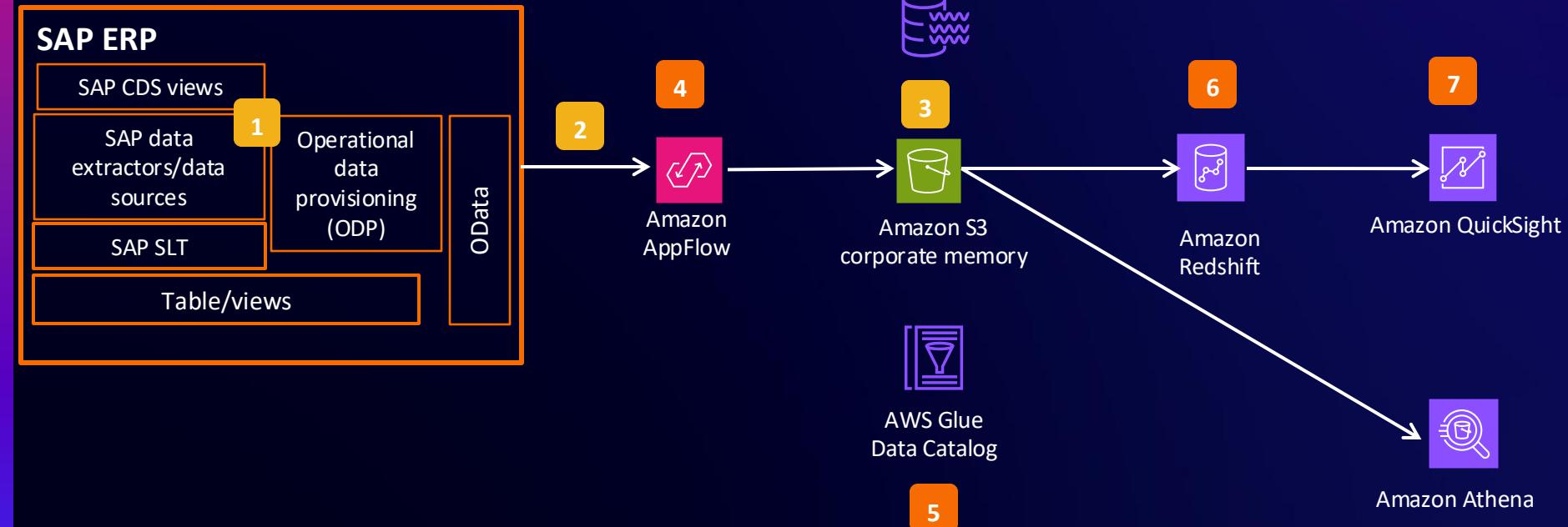
With just a few simple clicks, you will be able to **deploy pre-defined data pipelines** into your AWS account

**Fast access to AWS analytics, AI, and ML capabilities**

Get near-**real-time insights** within minutes from the data being updated

# Data LakeHouse on AWS with SAP

This architecture is showing how to build a cloud data warehouse using SAP data on AWS, by extracting data from SAP via OData protocol. The data warehouse can be used to model and combine your SAP data with that of other sources loaded into your data warehouse. Data can be consumed by other purpose-built services.



1 Pre-req. – Install and activate standard SAP Business Content Extractors. Configure ODP for extraction in the SAP gateway of your SAP system

2 Pre-req. – Create the OData system connection from Amazon AppFlow to your SAP source system. This can be over PrivateLink for SAP on AWS/connect with AWS via VPN/direct connect, or over the internet

3 Pre-req. – Create an S3 bucket to store data

4 In Amazon AppFlow, create the Flow using the SAP source created in step 3. Run the flow to extract data from SAP and save to an S3 bucket

5 Create a data catalog entry with metadata for the extracted SAP data in your S3 bucket

6 Load data into Amazon Redshift through “COPY” commands. Model the data appropriately, enable the capability for visibility on historical movement of data

7 Create the dataset in QuickSight with Amazon Redshift as your data source. Create a dashboard to visualize the business data as per requirements

8 Orchestrate end-to-end process

# O2C and P2P Insights

INSIGHTS ON-DEMAND WITH AMAZON Q IN QUICKSIGHT

## Key challenges

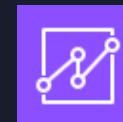
- Discrepancies in order fulfillment
- Unable to measure supplier spend and performance

## Benefits of generative AI

- Automatically generate insights from Order-to-Cash and Procure-to-Pay data
- Accelerate decision making to improve order fulfillment and on-time delivery rate
- Analyze and optimize supplier spend and performance



Amazon Bedrock



Amazon QuickSight



Amazon Q in  
QuickSight



# AI-powered dashboard authoring experience

A NEW DASHBOARD BUILDING EXPERIENCE POWERED BY GENERATIVE BI

## Build visuals

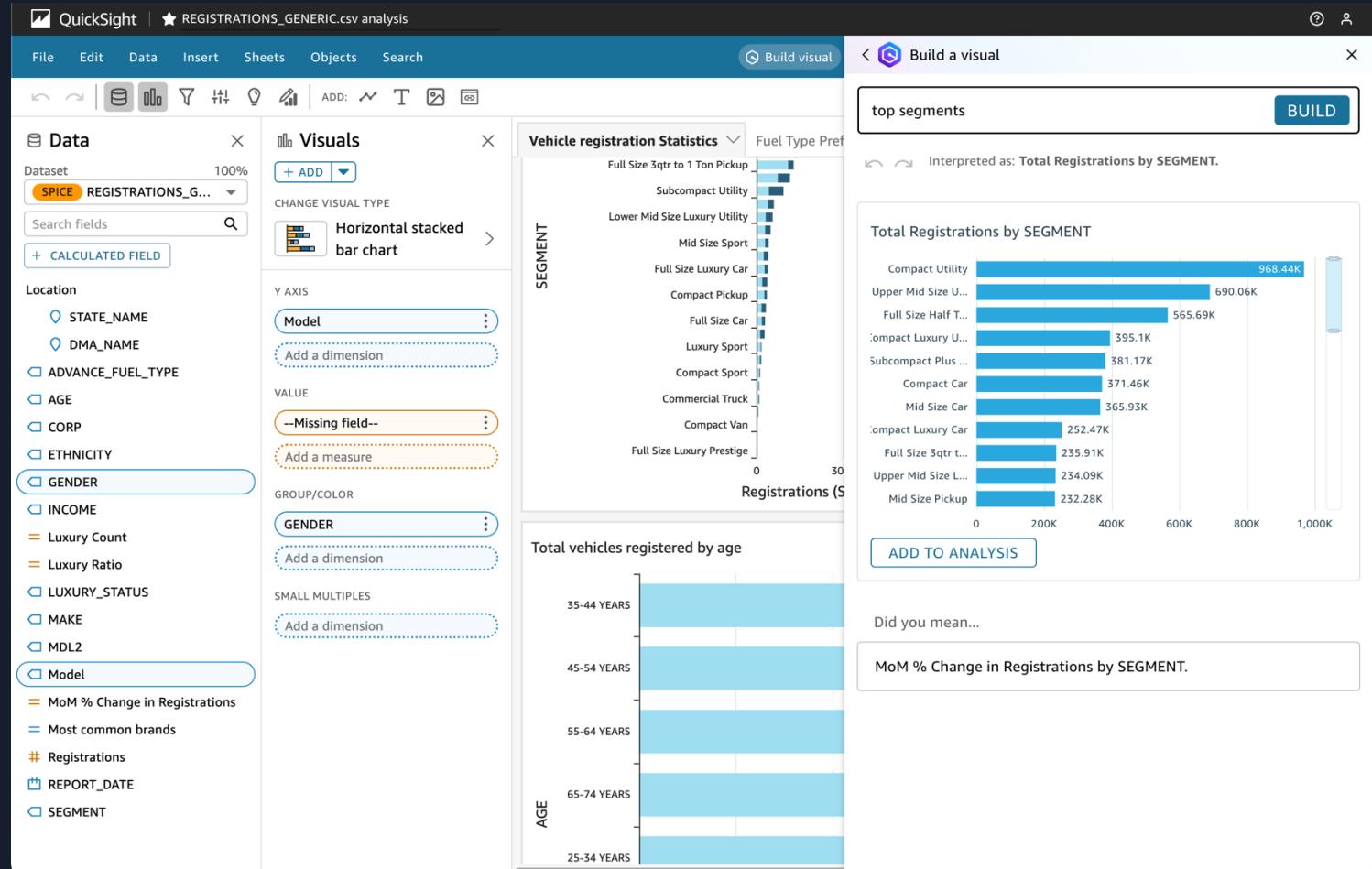
Use natural language to quickly build visuals for dashboards and reports

## Create calculations

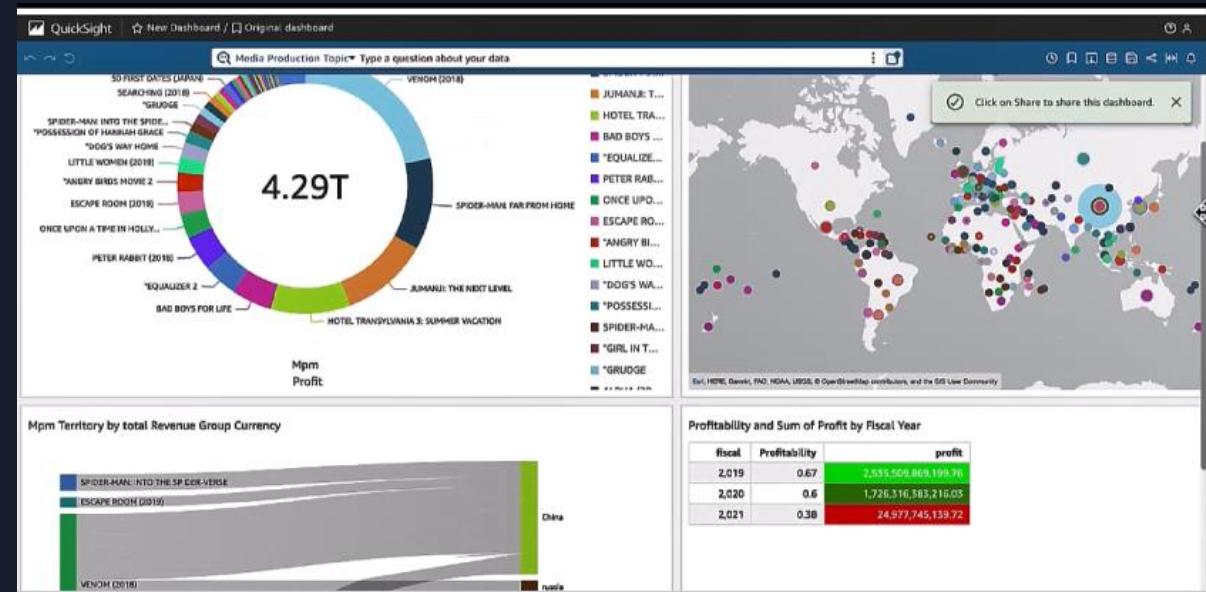
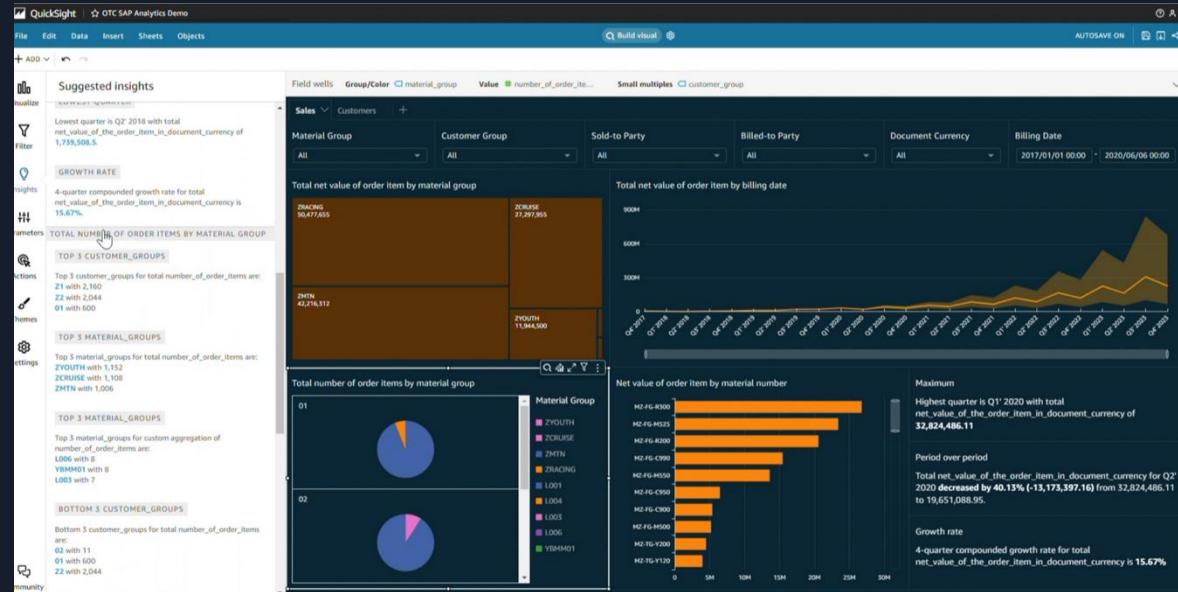
Build calculations using natural language without looking up or learning specific syntax

## Refine visuals

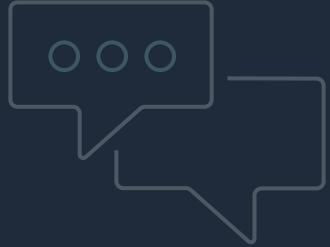
Quickly update visuals by describing desired formats using natural language



# Create and share insights with generative AI



# Generative AI has potential to create significant business value



## NEW EXPERIENCES

Create new innovative and engaging ways of interacting with your customers and employees



## PRODUCTIVITY

Radically improve productivity across all lines of business



## INSIGHTS

Extract insights and clear answers from all your corporate information, enabling faster and better decisions



## CREATIVITY

Create new content and ideas, including conversations, stories, images, videos, and music

# Unleash creativity with generative AI for SAP



## Master Data Manager

Generate product descriptions or images to augment master data records



## Marketing Manager

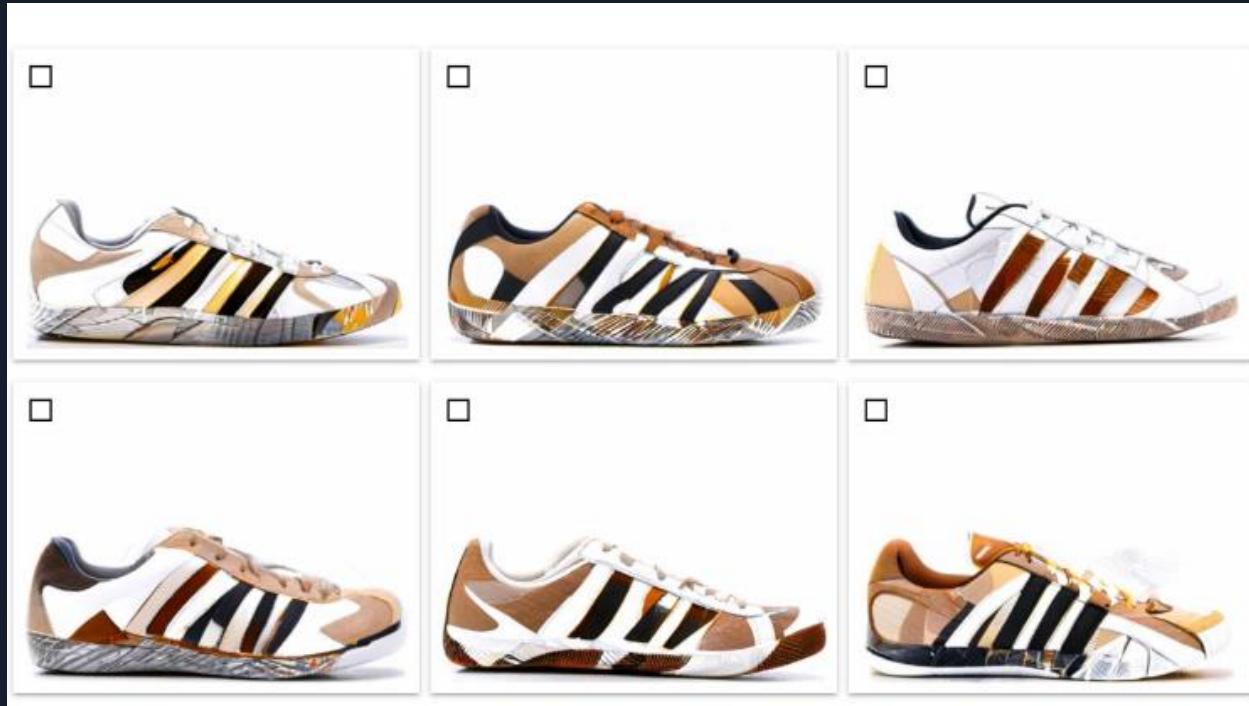
Generate images for sales and marketing materials



## Product Development Manager

Generate product alternatives for prototyping

# Explore more possibilities with generative AI



adidas

Adidas rapidly explores new design concepts with model trained on 150,000 unique shoe designs in their archive, while powering their enterprise with SAP S/4HANA on AWS.

# AWS generative AI capabilities



# Amazon Bedrock

The easiest way to build and scale generative AI applications with foundation models (FMs)

Choice of leading FMs through a single API

Model customization

Retrieval Augmented Generation (RAG)

Agents that execute multistep tasks

Security, privacy, and safety



# Rapidly and securely utilize Amazon Bedrock with the AWS SDK for SAP ABAP

## Accelerate business process innovation

Provide ABAP developers access to **200+ AWS services**—  
including **Amazon Bedrock**

## Reduce architectural complexity

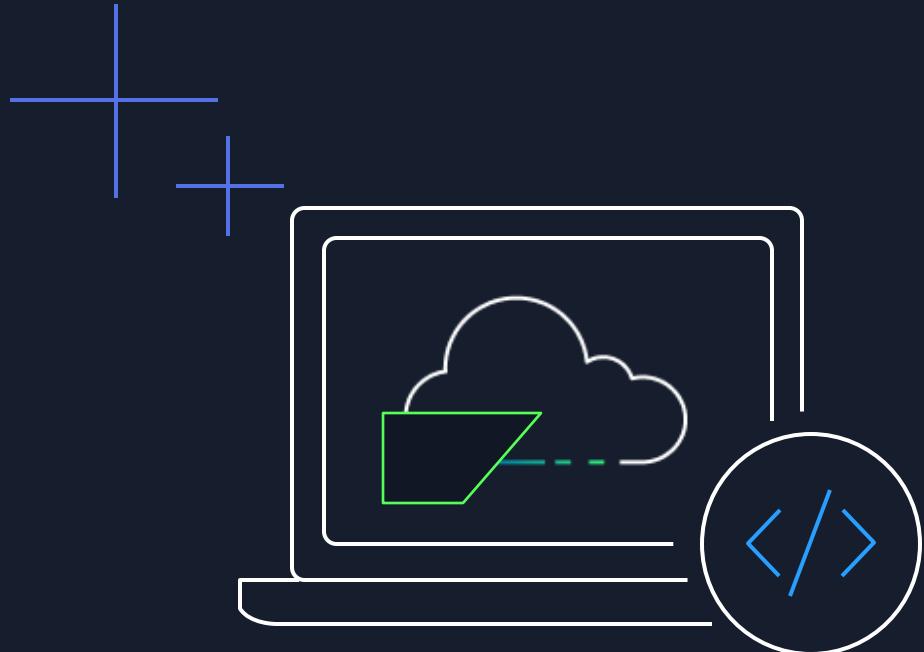
Eliminate complex manually integrations in both **self-managed** and **RISE with SAP** deployments

## Maintain a strong security posture

Encrypt payloads and **enforce SAP-level permissions**

## Upskill ABAP development teams

Develop cloud solutions with **familiar ABAP**



# Amazon Q in Amazon QuickSight

Generative dashboard authoring

Visually compelling data stories

Reimagined Q&A experience



# Next Steps



# Embark on generative AI journey



## Move quickly

- **Identify use cases** that are relevant, viable, and impactful
- **Leverage your data is the key** to maximizing the potential of generative AI
- Empower your entire workforce, **regardless of their AI expertise**



## Customize

- **Customize** to deliver differentiated experiences
- Ensure your data is **readily accessible** and **ready for AI**



## Scale

- Measure and track the **business value and ROI** as you scale
- Optimize for your **cost, latency, and accuracy** needs
- **Manage risk, maintain trust, and build responsibly** with strong compliance & governance

# Thank you!

**Michael Lin**

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