



INNOVATE TODAY
TO LEAD TOMORROW

Retrieval Augmented Generation (RAG) in SAP BTP



Global System Integrator Trusted by Fortune 500 Companies

800+
clients

1,600+
employees

950+
successful
projects

20
years of close
collaboration with SAP

 **9**
countries

 **14**
offices

 **15**
time zones
UTC-8 to UTC+6



LeverX is an international company with vast expertise serving companies all over the world. We power companies' digital transformation and provide our partners and customers with a full range of high-quality services, from consulting and implementation to support.



Operates as a part of LeverX and provides full software development services for startups and established companies in both consumer and enterprise areas.



BTP Enterprise Evolution Center

200+

BTP projects

>85%

BTP services coverage

Engagement into all SAP BTP pillars

120+ PROJECTS IN
APP DEVELOPMENT AND
AUTOMATION

40+ PROJECTS IN
INTEGRATION

65+ PROJECTS IN
DATA AND ANALYTICS

25 PROJECTS IN
ARTIFICIAL INTELLIGENCE



Learn more about our competencies and specializations at [SAP Partner Finder](#)

SAP BUSINESS TECHNOLOGY PLATFORM COMPETENCY

Expert

- Analytics and Planning
- Application Development and Integration
- Database and Data Management

LeverX Contribution to SAP Technology

Cloud Landscapes Assessments and Solutions Modernization

- NEO Sunset Program
- S/4HANA Customer Advocacy Program
- Clean Core Advisory

Co-innovation with SAP

- S/4HANA Core Services
- SAP BTP Core Services
- SAP Product add-ons

BTP Packaged Service Offerings

- BTP Audit & Advisory
- Extensions development
- E2E SaaS implementation
- Migration and modernization
- Use cases explore & discovery

DATA LARK

A complete SAP data migration solution by LeverX

SAP® Certified
Partner Center of Expertise

member of the **SAP**
AppHaus Network

SAP Global Strategic Supplier

Background

*Today the typical office worker spends **10%** of their time on manual data entry into business applications, such as the ERP system, CRM or spreadsheets. In total, they spend over **50%** of work time creating or updating documents, eg. PDFs, spreadsheets or word documents.*

workfellow.ai

*Employees spend **1.8 hours** every day searching and gathering information.*

McKinsey & Company

Percent of hours worked today that can be automated by 2030

21.5%

Without generative AI

29.5%

With generative AI

McKinsey & Company, 2023

Motivation

6
workshops

As a part of annual LeverX Innovation Forum and Design Thinking customer workshops

70
participants

Our valued customers and partners from different industries and teams

LeverX
AppHaus

Proven SAP methodology

3

The most popular use cases connected with AI



Use Case #1. Customer Service

Due to poor customer support, 89% of online shoppers stopped buying things online (slideshare, 2023)



Business challenge

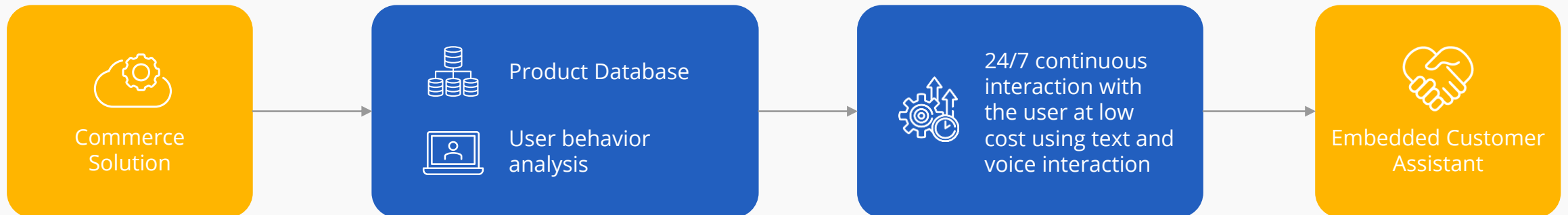
- The huge product knowledge base
- Structured and unstructured data
- Communication in many languages
- Necessity to cover 24/7 interval



Benefits

- Improving the quality of customer service
- Available 24/7
- Reduces the cost of customer service
- Collecting data required for marketing strategies

Solution



Use Case #2. Sales Engine

According to the American Productivity & Quality Center, the average company spends \$24.21 to process a sales order

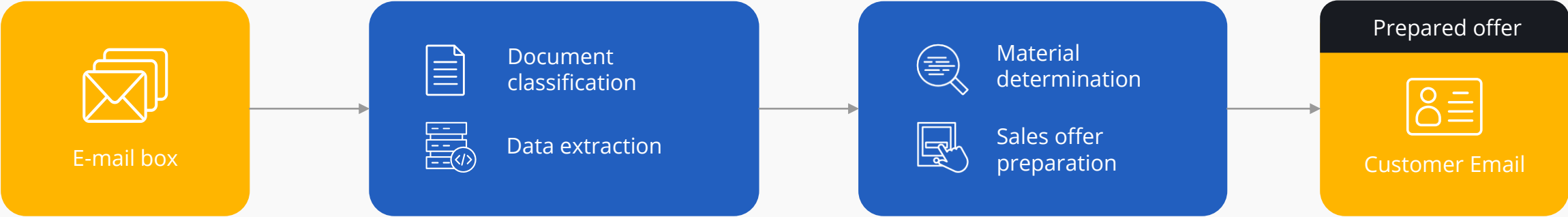
Business challenge

- Large amounts of customer inquiries
- Time-consuming task in the sales department
- Various formats of incoming requests

Benefits

- Reducing redundancy, time and manual work, increase efficiency
- Enable teams to Focus on strategic tasks and strategic customers

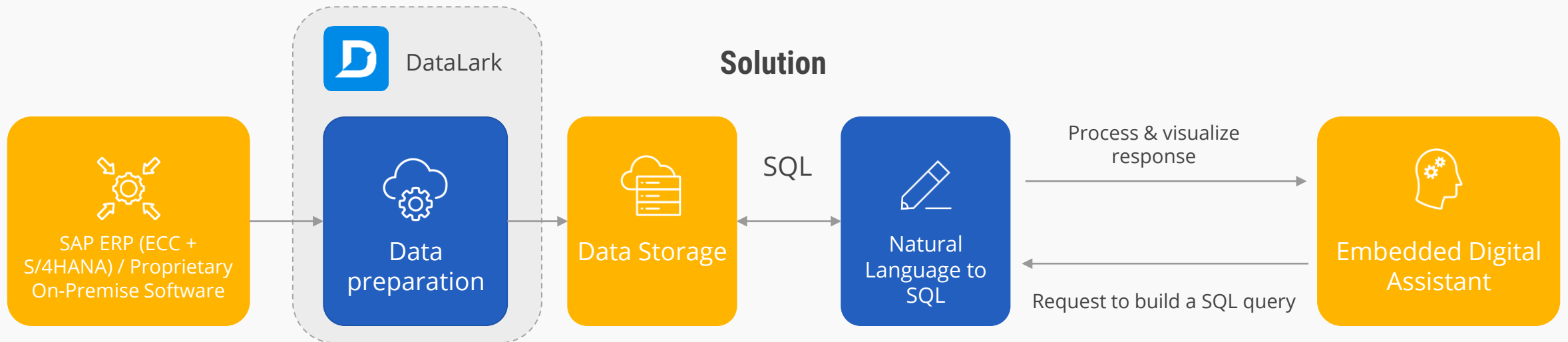
Solution



Use Case #3. Chatting with the data

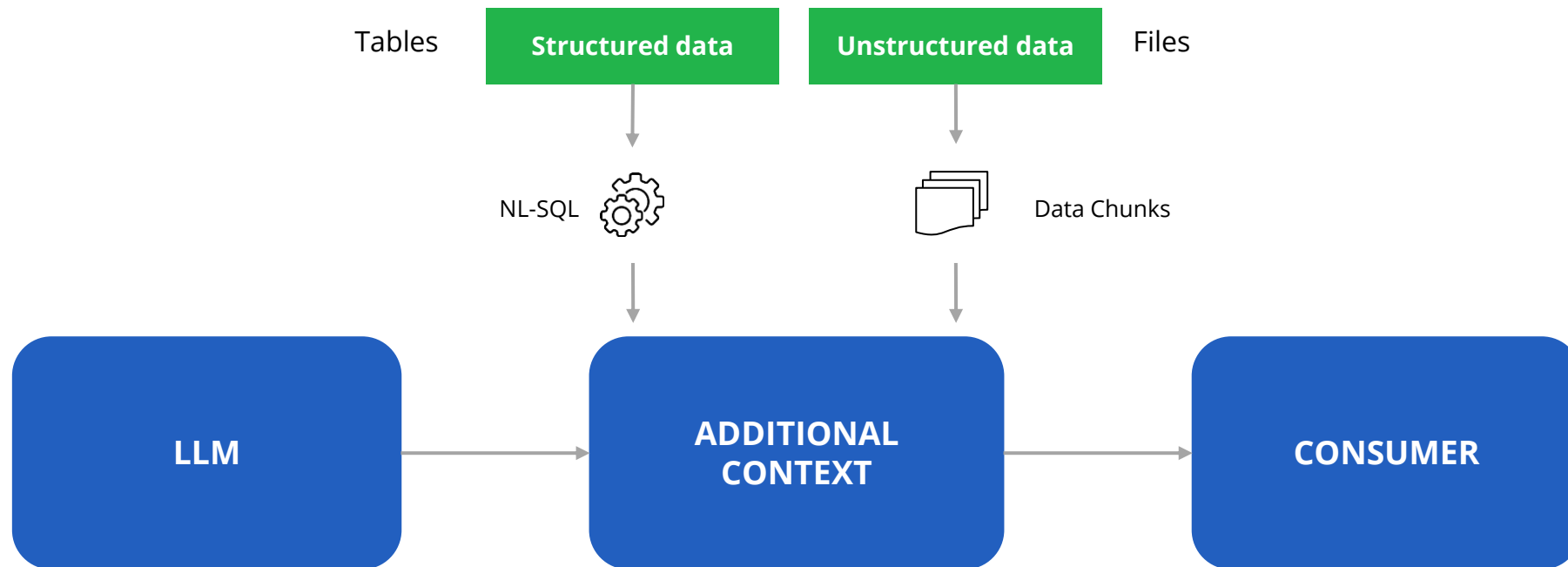
Around 4 hours of the work time per week can be saved for the CAD engineer with a embedded search mechanisms

Business challenge	Benefits
<ul style="list-style-type: none">• Inability to get insights on the required key metrics without technical and system knowledge• Unstructured data / Custom file format• On-Premise systems	<ul style="list-style-type: none">• Increase data access level within the company• Increase operations efficiency• Access proprietary information in one place



Why Retrieval Augmented Generation (RAG)?

RELEVANT & RELIABLE & PRIVATE information



Via external documents, embeddings, prompt engineering, data input conversion and a vector database

Unstructured data problem

Problem:



- Complexity in understanding data in various formats (CAD, PDX, etc.)
- Processing photos including handwritten text

Solution:

- 1** Extract data from various sources
- 2** Use OCR to process handwritten text
- 3** Data pre-processing
- 4** Chunk size & strategy optimization

Synonyms problem

Problem:

- Different ways to access the data by different people which need to be supported by Natural Language to SQL transformation
- Professional and unclear terminology

Solution:

- 1 Analyze queries and responses
- 2 Create possible synonyms base
- 3 LLM prompt engineering

Accuracy & Scale problem

Problem:

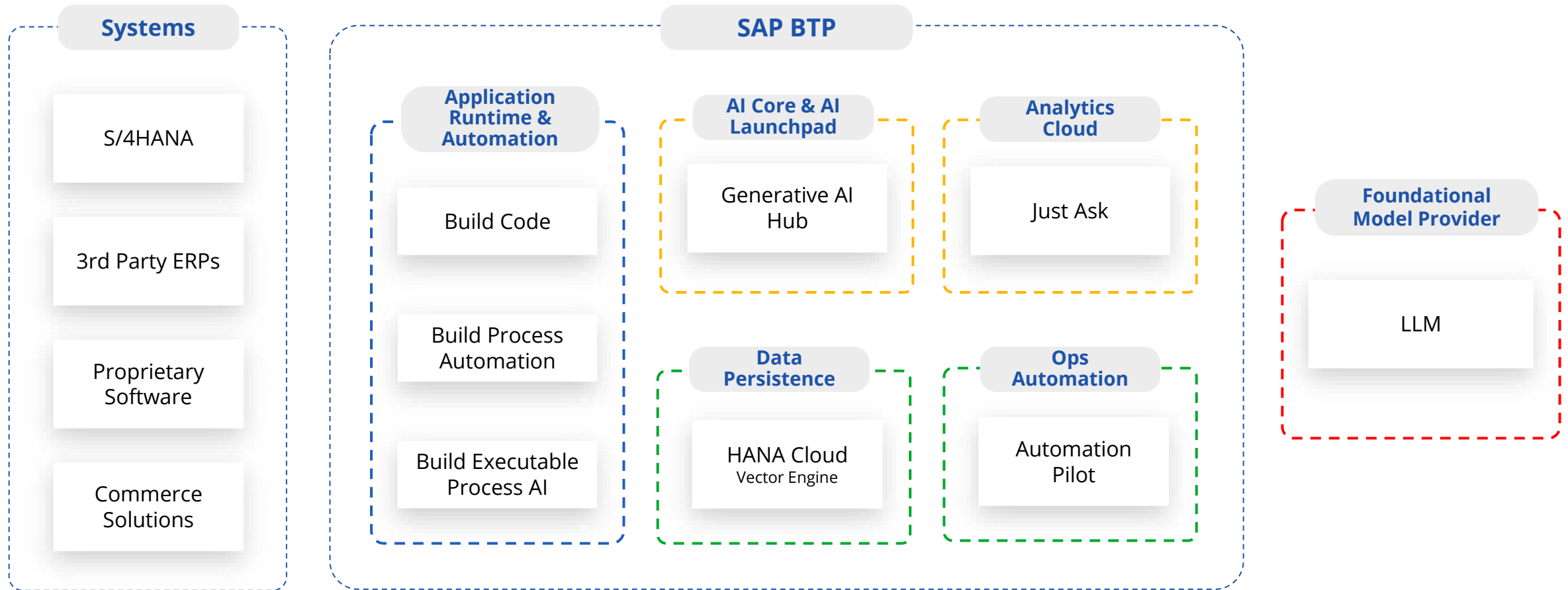


- Not concrete answers (for example when LLM can't decide)
- This correlates with data growth

Solution:

- 1 Data preparation & cleanup
- 2 LLM prompt engineering
- 3 Verification & adjustments

SAP BTP Services and Capabilities



Conclusions

SAP's GenAI Mail Insights

The scenario presents a comprehensive SaaS solution for enhancing customer support within a travel agency, utilizing advanced email insights and automation.

<https://github.com/SAP-samples/btp-cap-genai-rag>

The screenshot displays the SAP GenAI Mail Insights interface. On the left, there are filter settings for Request State (Unanswered checked), Request Type (Booking Assistance, Cancellation, Feedback, General Inquiry, Post-Trip Complaint, Problem During Travel, Special Requests, Unexpected Problem), Urgency (High checked), and Sentiment (Calm, Worried, Agitated). The main inbox shows two emails: one from Adelheid with a 'CANCELLATION OR CHANGE' subject and one from Cyrril with a 'Request for Booking Extension - Gr...' subject. The right panel provides a detailed view of the 'Cancellation Request' from Adelheid, including customer information (Adelheid, German, Indonesia), a summary of the message, and suggested actions like 'Flight Cancellation' and 'Hotel Cancellation'. A suggested response is also visible at the bottom.

FEBRUARY 8,
2024

Webinar #1

Use cases and best practices in SAP BTP integration

FEBRUARY 22,
2024

Webinar #2

Automating manual routine tasks using AI and SAP Build Process Automation

MARCH 7,
2024

Webinar #3

SAP BTP as a platform for SAP and non-SAP systems extensions development

MARCH 21,
2024

Webinar #4

Intelligent technologies: SAP BTP and its AI capabilities

APRIL 4,
2024

Webinar #5

SAP Datasphere & SAP Analytics Cloud: central enterprise data & analytics layer

APRIL 18,
2024

Webinar #6

SAP BTP landscape modernization best practices

Elevate Your Business with SAP Business Technology Platform



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by LeverX



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Thank you!

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