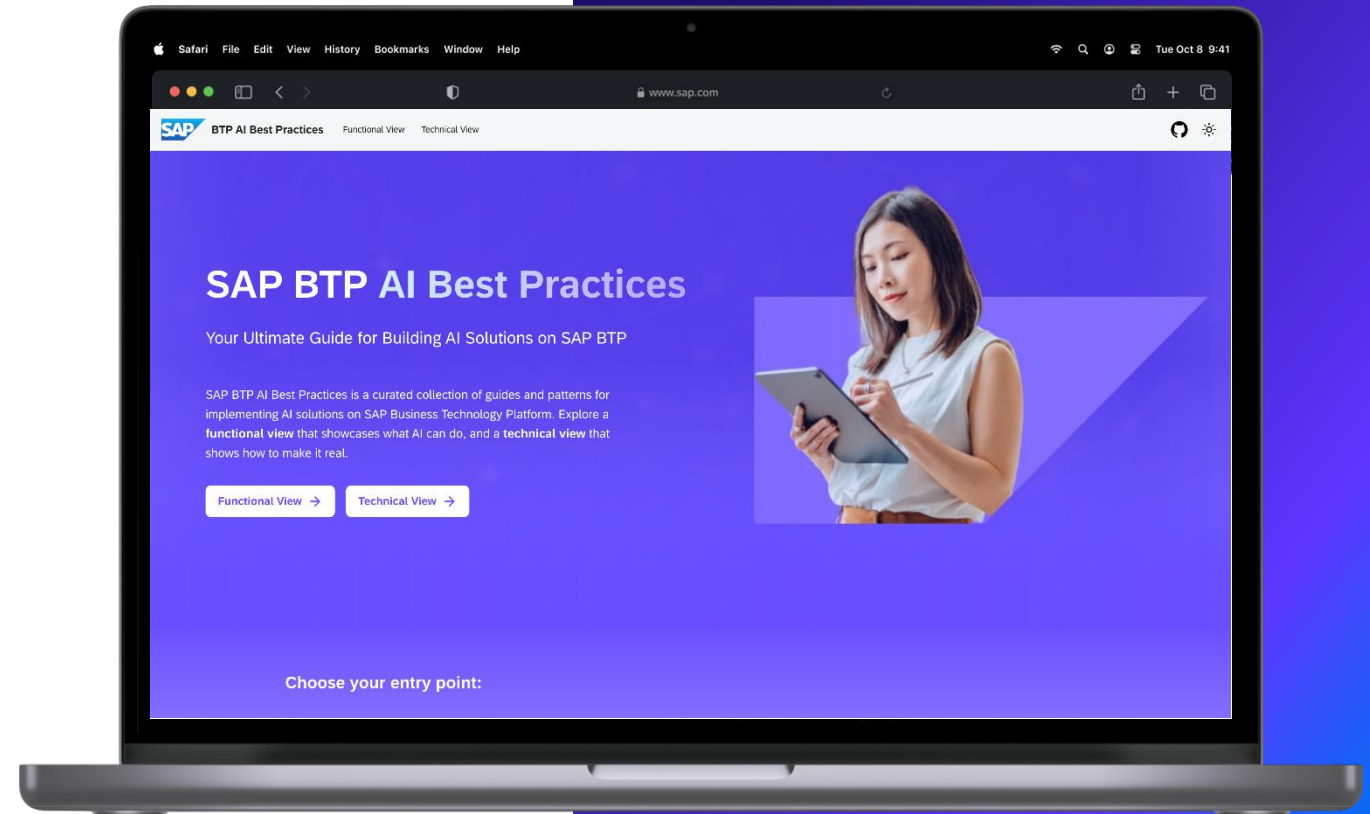


# SAP BTP AI Best Practices

## SAP Translation Hub

Simplifying Multilingual Enablement with AI



**BTP AI Services Center of Excellence**

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# Steps

- 1 Overview**
- 2 Pre-requisites**
- 3 Key Choices and Guidelines**
- 4 Implementation**

# SAP Translation Hub

SAP Translation Hub is an AI-driven translation service that simplifies multilingual content creation for applications, documents, and user interfaces. It blends Machine Translation and LLM capabilities with your enterprise terminology to ensure fast, consistent, and high-quality translations. Easily accessible via web UI or APIs, it helps deliver localized experiences at scale.

SAP Translation Hub includes the service for software translation as well as the document translation service in one offering.

## Document Translation:

- Translate documents with AI using **machine translation engines** or **large language models**.
- Automatically detect the source language from the input.

## Software Translation:

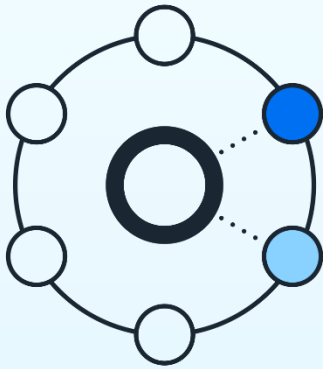
- Translate software and user interface texts using multiple sources.
- Faster localization with consistent enterprise terminology across languages

## Expected Outcome

Help in translate software and business documents at scale

# Key Benefits

Why leverage SAP Translation Hub.



## Enhanced Translation Quality

Best quality for SAP-related content and increased consistency



## Faster time to market

- Faster translation and increased efficiency when you need to expand globally.
- Customers report up to 90% reduction in time to translate due to integration and automation.



## Cost Savings

- Cost-savings through AI-enabled pre-translation and intelligent data reuse.
- Customers report between 25% and 85% reduction in costs, depending on process chosen.

# Pre-requisites

## Business

- SAP Business Technology Platform subaccount
- Subscription to SAP Translation Hub ([Pricing Information](#))

## Technical

- SAP Business Technology Platform subaccount ([Setup Guide](#))
- Translation Hub Service ([Setup Guide](#))

## SAP Business Technology Platform (SAP BTP)

- SAP Business Technology Platform (BTP) is an integrated suite of cloud services, databases, AI, and development tools that enable businesses to build, extend, and integrate SAP and non-SAP applications efficiently.

## SAP Translation Hub

- SAP Translation Hub is the central SAP Business Technology Platform (SAP BTP) AI service for high-quality, easy-to-integrate translation of custom applications and content for customers, partners, and SAP teams.

# SAP Translation Hub Offering overview

## Software Translation Workflow & Editor

Automate translation of custom Fiori apps (CAP, UI5), ABAP extensions and more.

## Document Translation UI

Get texts and documents translated automatically via our intuitive user interface

APIs (translate/project)

APIs (sync/async)

## Conversion Service

(ABAP, .properties, .json, iOS, Android, XLIFF)

## Conversion Service

(HTML, .DOCX, .XSLX, PPTX, PDF, XLIFF, txt)

Company MLTR

SAP MLTR

Language Identification

Markup handling

## AI-Enabled Translation Providers

### SAP's machine translation

- 40 target languages
- Transformer architecture
- Trained on SAP language data
- SAP-owned & trained according to security standards

NEW

### LLM-based translation

- 50+ target languages
- 2000+ language combinations
- Use of LLM via SAP Generative AI Hub
- Optimized prompting

# Key Choices and Guidelines

Decisions that impact the performance and utility of the application

## SAP MT vs LLM-based translation: When to use what

### SAP's neural machine translation

**Speaks SAP fluently** Offers the best quality for SAP-related content

**High performance**  
Fast real-time translation, even for large volumes (Sync API, up to 16.600 requests per min, 12K words/min)

### LLM-based translation

Offers **additional languages and language combinations** not supported by machine translation

Performs well on **non-SAP content**, generic content, 'noisy' content (such as input with errors/mixed language source)

# Key Choices and Guidelines

Decisions that impact the performance and utility of the application

## Document Translation

### Path Selection - Sync vs Async

- **Synchronous API:** Best for short docs and interactive UX, up to 100 MB or up to 40,000 characters (depending on the source language for example Japanese language limit is 13500 characters).
- **Asynchronous API:** Best for large files/batch it translates documents of up to 100MB in size or up to 2,500,000 characters. You can poll status and can retrieve the translation at any time within three days after the translation was completed

### Language Detection

- It is recommended that if you know the source language then always set it. Use language identification only when the source is unknown, please note that detection is single language and less accurate on very short/noisy texts.
- It is not recommend using the feature for source texts that only contain, for example, numbers, URL, email addresses, spaces, special characters.



# Key Choices and Guidelines

Decisions that impact the performance and utility of the application

## Software Translation

### Right Operating mode and scheduling

- Pick the right translation approach and organize your jobs for efficiency.
  - For small, ad-hoc software-translation projects, use the Translation Hub UI .
  - For medium to large workloads, run the ABAP report RS\_LXE\_MLTR\_GET\_TEXTS\_FOR\_OL as a background job , because it fetches proposals directly from the hub and scales better.
- Use API's to automate software-translation in files and CI/CD pipelines.

### Review & Post-Edit Workflow

- Use the quality index to decide when to accept machine-translation proposals (on a 0-100 scale).

### Performance & Scale

- In case you are running long-running translation projects ,break large translation workloads into chunks of roughly a thousand objects. This reduces the risk of time-outs and makes it easier to track progress.

# Implementation

Programming Model reference in order to use Translation Hub

## Python Examples

- **Reference Code**
- [Synchronous Document Translation through MT](#)
- [Asynchronous Document Translation through MT](#)
- [Translation using LLM](#)

## API References

### API

- [SAP API Hub – Document Translation](#)
- [SAP API Hub – Software Translation](#)
- [API Reference – Software Translation](#)
- [API Reference – Document Translation](#)

## Learning Journeys

### Learning Journeys

- [Enable Users in Multilingual Business with SAP Translation Hub](#)

# Code Sample

JavaScript/TypeScript

```
headers = {  
  "Authorization": f"Bearer {access_token}",  
  "Content-Type": "application/json"  
}  
  
body = {  
  "sourceLanguage": "de-DE",  
  "targetLanguage": "en-US",  
  "encoding": "plain",  
  "model": "llm",  
  "data": "Dieser Satz soll übersetzt werden"  
}  
  
r = requests.post(f"{translation_base_url}/api/v1/translation", headers=headers, json=body, timeout=60)  
r.raise_for_status()  
print(r.json())
```

# Contributors



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**Thank you**