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# Customization options in SAP S/4HANA migration:

Navigating  
traditional vs. modern  
approaches with  
Fujitsu's expertise



Migrating to SAP S/4HANA represents a significant step in modernizing your enterprise's ERP system, but it requires careful consideration of customization options. Customization is essential to ensure that your SAP environment aligns with your unique business processes and requirements. This guide covers the various customization options available during your SAP S/4HANA migration, exploring the details behind traditional and modern approaches, and highlighting their respective advantages and challenges.

Additionally, the guide outlines how Fujitsu's support and expertise can help you make informed decisions, ensuring a smooth and successful migration to SAP S/4HANA. Whether you're considering an **SAP on Azure** migration or committing to SAP's **RISE with SAP**, we will assist you in navigating your options. Our goal is to help you retain critical customizations or adopt new capabilities, ensuring your SAP environment meets your business needs effectively.



# Understanding customization in SAP S/4HANA migration

## Why is it critical?

Customization plays an important role in the successful migration to SAP S/4HANA. Each organization has unique business processes, regulatory requirements, and industry-specific needs that standard ERP systems may not fully address. Customization allows businesses to tailor their ERP environment to meet these specific demands, ensuring that the system supports and enhances their operational workflows rather than forcing a one-size-fits-all approach.

### Key reasons why customization is essential:

1

#### Alignment with business processes

Every organization operates differently, with unique processes that provide competitive advantages. Customization ensures that the ERP system can adapt to and support these processes rather than requiring the business to change its way of working to fit the software.

2

#### Regulatory compliance

Different industries have varying compliance requirements. Customizing SAP S/4HANA helps organizations adhere to industry-specific regulations and standards, thereby avoiding legal complications and ensuring smooth operations.

3

#### Enhanced efficiency and productivity

Customization allows for the automation of specific tasks and processes that are unique to an organization, leading to increased efficiency and productivity. Tailored workflows and functionalities can significantly reduce manual efforts and errors.

4

#### Competitive advantage

By customizing their ERP systems, companies can implement unique features that differentiate them from their competitors. This can lead to improved customer service, faster response times, and more innovative business practices.

5

#### Future-proofing

Customization provides the flexibility to adapt the ERP system to future requirements without significant overhauls. While maintaining a clean core and adhering to standard functionalities, businesses can strategically implement customizations outside the core.

## What is involved?

Customization in SAP ERP systems involves modifying the software to meet the specific needs and requirements of an organization. This can range from simple configurations to more complex developments. Here are the main aspects of customization in the context of SAP ERP systems:





## Configuration

This involves adjusting the settings and parameters within SAP to tailor it to the specific requirements of the business. Configuration is often the first step in customization and includes defining organizational structures, setting up business processes, and customizing the user interface.

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## Custom development

For more complex requirements that cannot be met through configuration or enhancements, custom development may be necessary. This involves writing new code or modifying existing code using SAP's development tools, such as ABAP (Advanced Business Application Programming). Custom development can include creating new modules, reports, interfaces, and other functionalities specific to the business.

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## Extensions

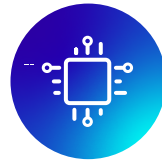
Utilizing the SAP BTP, businesses can build extensions that run on the cloud without altering the core ERP system. This approach helps in maintaining a clean core while still providing the necessary custom functionalities.



## Enhancement

Enhancements involve adding new functionalities or modifying existing ones to better align with business needs. This can be done through user exits, business add-ins (BADIs), or enhancement points within the SAP system. Enhancements allow for more detailed customization without modifying the core code.

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## Integration

Customization often involves integrating SAP with other systems within the organization, such as third-party applications, legacy systems, or other SAP modules. This ensures seamless data flow and process synchronization across different platforms.

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## User interface customization

Tailoring the user interface to enhance user experience and improve efficiency. This can involve creating custom screens, dashboards, and reports that provide relevant information and streamline workflows.

**Customization in SAP S/4HANA migration is therefore critical for aligning the ERP system with the unique needs of the business through a combination of features that drive efficiency, compliance, and competitive advantage.**

# Traditional customization approaches

Traditional customization methods in SAP ERP systems have long been used to tailor the software to meet specific business needs. These methods typically involve extensive code modifications and integrating with legacy systems to ensure continuity and functionality. The goal of traditional customization is to mold the ERP system to fit the exact processes, workflows, and requirements of an organization.

> There are two primary types of traditional customization methods: **code modifications** and **legacy system integrations**.

**Code modification** involves altering the core code of the SAP system to create custom functionalities that meet specific business requirements. It allows for deep customization but can increase complexity and maintenance effort.

**Legacy system integration** focuses on integrating the SAP system with existing legacy systems to ensure that all critical business functions are maintained. It helps in leveraging existing investments but may complicate future upgrades and updates.



# Code modifications

Traditional customization often involves modifying the core code of the SAP system. This can include:

- **User exits and BADIs:**  
Enhancements through predefined points in the SAP software where custom code can be inserted without affecting the main codebase.
- **Custom ABAP programs:**  
Writing new programs or modifying existing ones using SAP's proprietary programming language, ABAP, to add functionalities that are not available in the standard system.
- **Custom tables and fields:**  
Creating custom database tables and fields to store additional data required by the organization.

# Legacy system integrations

Integrating SAP with legacy systems ensures that data flows seamlessly between the new SAP system and older systems that the organization continues to use. Methods include:

- **Data mapping and transformation:**  
Converting data from legacy formats to formats compatible with SAP.
- **Middleware solutions:**  
Using middleware to facilitate communication between SAP and other systems.
- **Custom interfaces:**  
Developing interfaces to enable the exchange of data between SAP and legacy systems.



# Advantages

- **Maintains pre-existing customizations and configurations**  
Traditional customization allows businesses to carry over their existing customizations and configurations to the new SAP system. This continuity ensures that the specific needs and preferences of the organization are preserved.
- **Allows for deeper customization to meet unique business needs**  
By modifying the core code and developing custom programs, organizations can achieve a level of customization that precisely fits their unique business processes and requirements. This deep customization can provide significant competitive advantages.
- **Utilizes existing IT/SAP skill sets**  
Organizations that have invested in developing in-house SAP expertise can leverage their existing skill sets. This utilization can reduce the learning curve and enable a more seamless transition to the new system.

# Disadvantages

- **Increases implementation complexity**  
Extensive code modifications and custom integrations can significantly increase the complexity of the SAP implementation. This complexity can lead to longer project timelines and higher risks of errors or issues during the migration process.
- **Can complicate future updates and upgrades**  
Custom code and modifications can create challenges when it comes to updating or upgrading the SAP system. Standard updates from SAP may not be compatible with the customizations, requiring additional testing and adjustments to ensure compatibility.
- **May result in higher long-term maintenance costs**  
Maintaining custom code and integrations can be costly over the long term. As business processes change or new requirements emerge, the customizations may need to be modified or extended, adding to maintenance expenses.
- **Skills shortage may inhibit an organization's ability to manage the customization process**  
The availability of skilled SAP professionals who can manage and maintain traditional customizations may be limited. This skills shortage can pose a significant challenge for organizations, particularly as they seek to adapt and evolve their ERP systems over time.



# Modern approaches

Modern customization approaches in SAP S/4HANA migration leverage advanced technologies and methodologies to enhance the flexibility, scalability, and maintenance of ERP systems. These approaches prioritize maintaining a clean core while allowing for extensive customizations through APIs, cloud extensions, and the SAP BTP. This enables organizations to customize their ERP systems without compromising the integrity of the core software.

## Cloud extensions

Cloud extensions use cloud-based platforms to add functionalities and features to the core SAP system. By leveraging cloud services, organizations can develop and deploy custom applications and extensions that run independently of the core ERP, thereby preserving the clean core. These extensions can be easily scaled and updated as needed, providing a high degree of flexibility.

## APIs (Application Programming Interfaces)

APIs enable seamless integration between SAP S/4HANA and other systems, whether they are SAP or non-SAP. APIs allow different software applications to communicate with each other, exchange data, and invoke functionalities. This modular approach facilitates the creation of custom applications that can extend the functionality of the core ERP system without altering its code.

## SAP BTP tools

SAP BTP is a comprehensive suite of tools and services designed to support the development, integration, and extension of SAP applications. BTP includes:

- **SAP Extension Suite:** Allows for the creation of application extensions that enhance SAP S/4HANA functionalities without modifying the core.
- **SAP Integration Suite:** Provides tools for integrating SAP and third-party applications, ensuring seamless data flow and process integration.
- **Analytics and AI services:** Offers advanced analytics and AI capabilities to derive insights from data and enhance decision-making processes.

## Advantages

- **Simplifies maintenance with customizations that do not affect the core ERP**  
Modern approaches ensure that customizations are decoupled from the core ERP system. This simplifies maintenance as updates and upgrades to the core system can be applied without affecting the customizations.
- **Improves reliability and integration with other SAP and non-SAP solutions**  
APIs and integration tools enhance the reliability of the system by ensuring seamless communication between SAP and other applications. This integration capability supports comprehensive business processes that span multiple systems.
- **Reduces implementation workload and facilitates easier updates**  
By using cloud extensions and BTP tools, organizations can reduce the workload associated with custom development. These tools provide pre-built functionalities and services that can be easily integrated, making updates and enhancements more straightforward.
- **Boosts operational agility and flexibility**  
Modern customization approaches allow organizations to quickly adapt to changing business needs. Cloud-based extensions and APIs enable rapid deployment of new features and functionalities, enhancing the agility and responsiveness of the ERP system.
- **Provides access to capabilities including new applications, AI solutions, [Green Ledger](#), and data analytics**  
The SAP BTP offers access to a wide range of advanced applications and services, including AI-driven solutions, sustainability tools like the Green Ledger, and powerful data analytics, embedded within RISE with SAP. These capabilities support innovative business practices and informed decision-making.
- **Accommodates organizational growth (flexibility to change)**  
The modular nature of modern customization approaches allows organizations to scale their systems as they grow. New functionalities can be added incrementally, and existing ones can be modified or retired as needed, ensuring the ERP system evolves with the business.

## Disadvantages

- **Requires investment in new skills and training**  
Adopting modern customization approaches necessitates new skills and expertise, particularly in cloud technologies, APIs, and SAP BTP. Organizations may need to invest in training and upskilling their IT teams to effectively leverage these tools.
- **Potentially higher initial costs compared to traditional methods**  
While modern approaches can reduce long-term maintenance costs, the initial investment in new technologies, training, and development can be higher than traditional methods. Organizations need to carefully evaluate the cost-benefit ratio to ensure a sound investment.

# Fujitsu's role in customization strategy

Fujitsu plays a crucial role in guiding our customers through the complexities of customizing and migrating to SAP S/4HANA. By offering a tailored migration framework, expert consultancy, and a comprehensive RISE with SAP transformation approach, Fujitsu ensures a smooth, efficient, and value-driven transformation. Our framework helps decide the extent of customization needed, balancing business requirements with maintaining a clean core to optimize long-term efficiency and upgradeability.



# 1. Tailored migration framework

## Discovery and assessment

Fujitsu begins each customization journey with a thorough discovery and assessment phase. This involves a detailed evaluation of the organization's IT landscape, business objectives, and migration readiness. By understanding the current environment and specific needs, Fujitsu can develop a customized migration plan that aligns perfectly with the organization's goals/

## Flexible migration options

Recognizing that each business has unique requirements, Fujitsu offers flexible migration options:



### Lift-and-shift (Brownfield)

Quickly move existing systems to S/4HANA without major changes, preserving current processes and customizations.



### Selective data transition (Bluefield)

Gradually transition to S/4HANA by selectively migrating data and processes, allowing for continuous operation and minimizing disruption. This hybrid approach balances short-term migration gains with long-term best practices.



### Complete re-implementation (Greenfield)

Rebuild the ERP system from the ground up, optimizing processes and eliminating inefficiencies.

## Agile methodologies

Fujitsu employs agile methodologies to provide flexibility and iterative development throughout the migration process. This approach allows for continuous feedback and adaptation, ensuring that the final solution meets evolving business needs.



# Fujitsu's approach to supporting your customization

Fujitsu leverages deep industry knowledge to tailor its migration framework to meet the specific requirements of various sectors, ensuring that the customization strategy aligns with your specific business needs. Our industry-specific solutions address the unique challenges faced by sectors such as manufacturing, retail, oil & gas, and utilities. By integrating industry best practices into the migration strategy, we enhance the relevance and effectiveness of the transformation.

## Manufacturing

Solutions that streamline production processes, enhance supply chain visibility, and improve operational efficiency.

## Retail

Customizations that support omnichannel operations, improve customer experience, and provide real-time sales analytics.

## Oil & gas

Tailored approaches to meet strict compliance requirements, integrate legacy systems, and ensure operational continuity.

## Oil & gas

Solutions that enhance maintenance strategies, improve reliability, and support large-scale asset management.



## 2. Uvance Wayfinders

### Strategic guidance

Fujitsu's [Wayfinders](#) consultants offer strategic guidance throughout your RISE with SAP journey. They help define business goals, develop roadmaps, and make informed decisions, ensuring alignment with long-term objectives.

### Technical expertise

With extensive technical knowledge, Wayfinders assist with architecture design, implementation, and optimization. Their expertise ensures that the customized solutions are robust, scalable, and efficient.

### Change management support

Change management is crucial for a successful migration. Wayfinders provide comprehensive support to help employees adapt to new environments, ensuring smooth transitions and minimizing resistance.

### Project management

Ensuring projects are delivered on time and within budget is a core strength of Fujitsu's Wayfinders. Their project management skills ensure that every aspect of your migration is meticulously planned and executed, reducing risks and ensuring quality outcomes.



# 3. Fujitsu's SAP and Cloud Expertise

## Modernizing SAP environments

Fujitsu leverages the latest SAP innovations and technologies to modernize SAP environments. This modernization enhances system capabilities, improves performance, and prepares businesses for future challenges.

## Moving to the cloud

Fujitsu helps organizations achieve scalability, flexibility, and cost savings by moving SAP systems to the cloud. This transition enables businesses to leverage cloud benefits such as on-demand resources, improved disaster recovery, and reduced infrastructure costs.

## Simplifying IT operations

Managing SAP systems and cloud infrastructure through a single platform simplifies IT operations. Fujitsu ensures that systems are integrated, streamlined, and easy to manage, reducing complexity and operational burdens.



# Transforming business

Fujitsu helps businesses leverage cloud and intelligent technologies to drive innovation and transformation. By integrating advanced analytics, AI, and other capabilities, Fujitsu enables organizations to unlock new business opportunities and achieve greater agility. Our capabilities include:

- **AI:**  
Utilizing artificial intelligence to automate processes, improve decision-making, and drive innovation.
- **SAP Signavio:**  
Leveraging [SAP Signavio](#) for business process intelligence, enabling organizations to optimize and transform their processes efficiently.
- **Hybrid cloud expertise:**  
Combining on-premise and cloud solutions to offer flexible, scalable, and secure environments that meet diverse business needs.





# Decision matrix for customization approaches

When migrating to SAP S/4HANA, it's crucial to evaluate the various customization approaches available to ensure that the chosen strategy aligns with your business needs and goals. Using the following decision matrix, you can compare traditional and modern customization methods based on key criteria.

## Criteria for evaluation



### 1. Flexibility

The ability to adapt and scale the system as business needs evolve.



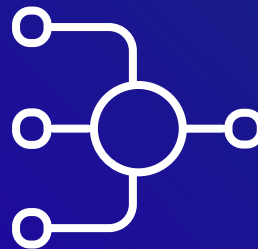
### 2. User experience

The impact on end-user productivity and ease of use.



### 3. Future upgrades

The ease with which the system can be updated and upgraded.



### 4. Compliance

The ability to meet industry-specific regulatory requirements.



### 5. Operational efficiency

The overall efficiency and effectiveness of business processes.

# Decision matrix

Criteria	Traditional customization	Modern customization
<b>Flexibility</b>	<ul style="list-style-type: none"> <li>- Limited flexibility due to hard-coded customizations</li> <li>- Difficult to scale and adapt to new business requirements</li> </ul>	<ul style="list-style-type: none"> <li>- High flexibility with modular extensions and APIs</li> <li>- Easily scalable and adaptable to changing needs</li> </ul>
<b>User experience</b>	<ul style="list-style-type: none"> <li>- Often results in complex, cluttered interfaces</li> <li>- Custom UIs may not integrate seamlessly with core SAP updates</li> </ul>	<ul style="list-style-type: none"> <li>- Enhanced user experience with streamlined, modern interfaces</li> <li>- Customizations typically enhance usability without disrupting core functionalities</li> </ul>
<b>Future upgrades</b>	<ul style="list-style-type: none"> <li>- Complicated and time-consuming</li> <li>- High risk of breaking custom code with each upgrade</li> </ul>	<ul style="list-style-type: none"> <li>- Simplifies upgrades as core ERP remains untouched</li> <li>- Easier to implement new features and updates</li> </ul>
<b>Compliance</b>	<ul style="list-style-type: none"> <li>- Customizations can make it harder to maintain compliance</li> <li>- Increased risk of non-compliance due to outdated processes</li> </ul>	<ul style="list-style-type: none"> <li>- Easier to maintain compliance with modular, up-to-date extensions</li> <li>- Built-in tools and services for regulatory adherence</li> </ul>
<b>Operational efficiency</b>	<ul style="list-style-type: none"> <li>- Can lead to inefficiencies due to outdated or redundant custom code</li> <li>- Higher maintenance overhead</li> </ul>	<ul style="list-style-type: none"> <li>- Improves efficiency with streamlined processes and modern tools</li> <li>- Lower maintenance costs and efforts</li> </ul>

The decision matrix illustrates that modern customization approaches generally offer greater flexibility, enhanced user experience, simplified upgrades, better compliance, and improved operational efficiency compared to traditional methods. However, they require a higher initial investment in skills and training. On the other hand, traditional customization can leverage existing skill sets and configurations but often at the cost of long-term efficiency and ease of upgrades.

# Customization strategies in RISE with SAP

When migrating to SAP S/4HANA using the RISE with SAP solution, businesses can choose between different customization strategies based on their specific needs and objectives. Two primary strategies are “Migrate then clean” and “Migrate to clean core.” Each strategy has its unique advantages and challenges, which organizations must consider carefully to ensure a successful migration.

## 1. Migrate then clean

The “Migrate then clean” strategy involves maintaining existing customizations during the initial migration phase and addressing the optimization and cleaning of these customizations post-migration. This approach allows organizations to transition to SAP S/4HANA quickly, preserving their current processes and configurations.

## 2. Migrate to clean core

The “Migrate to clean core” strategy involves a thorough analysis of current customizations to identify and retain only the essential ones. This approach emphasizes evaluating new functionalities and remodeling business processes to align with SAP S/4HANA best practices, aiming to maintain a clean core ERP system.

**Choosing the right customization strategy is crucial for a successful SAP S/4HANA migration. The “Migrate then clean” approach offers a quicker transition with reduced change management needs but may carry forward inefficiencies and delay benefit realization. Conversely, the “Migrate to clean core” strategy promotes best practices, simplifies future updates, and reduces implementation complexity but requires significant upfront change management efforts.**

# Recommendations and best practices

## Making the right choices

Migrating to SAP S/4HANA requires careful consideration of customization approaches to ensure that the chosen path aligns with your business needs and long-term goals. Both traditional and modern customization methods offer distinct advantages and challenges that must be evaluated.

Following on the next page are our recommendations and best practices for traditional customization, modern customization, and hybrid approaches.



# For traditional customization

## When to consider

- When the organization has highly specific business processes that cannot be met by standard SAP functionalities.
- When there is a need to maintain existing customizations that are critical for daily operations.
- When the business has in-house expertise and resources capable of managing and maintaining custom code.

## Key factors to manage

- **Complexity:** Traditional customization can increase the complexity of the system. It's crucial to manage and document custom code thoroughly.
- **Maintenance:** Ensure that there are processes in place for maintaining and updating custom code to keep up with SAP updates.
- **Compliance:** Regularly review customizations to ensure they remain compliant with industry regulations and standards.

## Tips for success

- **Detailed documentation:** Maintain comprehensive documentation of all customizations to facilitate maintenance and future upgrades.
- **Testing:** Implement rigorous testing procedures to ensure that customizations do not disrupt core functionalities.
- **Governance:** Establish a governance framework to manage and control customization efforts, ensuring they align with business goals and IT standards.

# For modern customization

## When to consider

- When there is a desire to maintain a clean core and leverage the latest SAP innovations.
- When scalability, flexibility, and ease of maintenance are priorities.
- When the organization is looking to reduce long-term costs and simplify future upgrades.

## Key factors to manage

- **Skill development:** Invest in training and upskilling IT staff to effectively use modern tools like APIs, cloud extensions, and SAP BTP.
- **Integration:** Ensure seamless integration of custom applications with core SAP and other systems.
- **Data security:** Implement robust data security measures for custom applications running on cloud platforms.

## Tips for success

- **Leverage SAP BTP:** Utilize the full suite of tools offered by SAP BTP to extend and integrate SAP S/4HANA functionalities without altering the core system.
- **Agile development:** Adopt agile methodologies to allow for iterative development and quick adaptation to changing business needs.
- **Modular design:** Design custom applications and extensions in a modular way to facilitate easy updates and scalability.

# Hybrid approach

## When to consider

- When there is a need to balance the benefits of both traditional and modern customization methods.
- When certain critical customizations must be retained while adopting new functionalities and best practices.
- When the organization is transitioning from heavily customized legacy systems to a more flexible and modern ERP environment.

## How to balance the two methods

- **Selective customization:** Identify and retain essential customizations that provide significant business value while transitioning other functionalities to modern approaches.
- **Incremental migration:** Gradually phase out legacy customizations by incrementally adopting cloud-based extensions and APIs.
- **Dual governance:** Implement a dual governance model to manage traditional customizations alongside new developments, ensuring coherence and alignment with business goals.

## Tips for success

- **Comprehensive assessment:** Conduct a thorough assessment of existing customizations to determine which ones should be retained, modified, or replaced.
- **Strategic planning:** Develop a strategic plan that outlines the phased adoption of modern customization techniques while managing legacy customizations.
- **Continuous improvement:** Regularly review and optimize the hybrid customization strategy to ensure it continues to meet evolving business needs and technological advancements.

In summary, selecting the appropriate customization approach for your SAP S/4HANA migration is crucial for aligning your ERP system with your business goals and operational requirements. Traditional customization is suitable for retaining critical, specific processes but requires rigorous management. Modern customization offers flexibility and ease of maintenance but necessitates investment in new skills. A hybrid approach provides a balanced path, leveraging the strengths of both traditional and modern methods.





# Strategic guidance from Fujitsu

Fujitsu provides strategic guidance to help you choose the right customization approach. Our experts work closely with you to assess your current environment, identify critical customizations, and develop a tailored migration plan that maximizes the benefits of SAP S/4HANA.

Whether you need a traditional, modern, or hybrid customization approach, Fujitsu's comprehensive support ensures a smooth and successful migration journey.



## Get started

Ready to take the next step on your SAP S/4HANA migration journey with a trusted partner? Contact Fujitsu's SAP experts to learn how our solutions and guidance can help you achieve your business objectives and transform your operations. Let's work together to build an intelligent enterprise that thrives on innovation and efficiency. Reach out to us for a consultation and get your organization ready for a successful SAP S/4HANA migration.

Contact [mitsuo.nimura@fujitsu.com](mailto:mitsuo.nimura@fujitsu.com)



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