



# The SAP BTP Playbook

## Your Essential Guide to Business Technology Platform Success

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### Executive Summary

Welcome to your comprehensive guide to SAP Business Technology Platform (BTP). Whether you're an IT leader evaluating BTP, a developer getting started, or a business stakeholder trying to understand the potential, this playbook will give you the foundational knowledge and frameworks to navigate the BTP ecosystem confidently.

#### What You'll Learn:

- Core components of SAP BTP and how they work together
  - Key decision frameworks for BTP implementation
  - Best practices from real-world deployments
  - Quick reference guides for common BTP scenarios
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## Chapter 1: Understanding SAP BTP

### What is SAP BTP?

SAP Business Technology Platform is a unified, open platform-as-a-service (PaaS) that brings together data management, analytics, application development, automation, and integration capabilities in a single environment.

### The Four Core Pillars of BTP:

1. **Database & Data Management** - Store, process, and manage data at scale
2. **Analytics** - Transform data into insights and intelligent actions
3. **Application Development & Integration** - Build, extend, and integrate applications
4. **Intelligent Technologies** - Leverage AI, ML, and automation capabilities

## Why BTP Matters Now

The shift to cloud, the need for real-time insights, and the demand for agile application development have made BTP essential for organizations running SAP solutions. BTP enables:

- **Extension without customization** (Clean Core approach)
  - **Integration across hybrid landscapes**
  - **Rapid innovation with low-code/no-code tools**
  - **Unified data strategy** across SAP and non-SAP systems
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## Chapter 2: The BTP Ecosystem Map

### Understanding the BTP Cockpit

The BTP Cockpit is your command center. Here's what you need to know:

#### Key Navigation Elements:

- **Global Account** - Top-level container for your BTP environment
- **Subaccounts** - Organizational units for projects, departments, or environments
- **Directories** - Group subaccounts for better organization
- **Entitlements** - Your service quotas and allocations
- **Service Marketplace** - Catalog of available BTP services

**Pro Tip:** Structure your subaccounts by business unit, project, or environment (Dev/Test/Prod) based on your governance model.

### The BTP Services Catalogue

BTP offers 100+ services across multiple categories. Here are the most critical ones to understand:

#### Integration Services:

- SAP Integration Suite
- API Management
- Cloud Integration
- Open Connectors

#### Data & Analytics:

- SAP Datasphere
- SAP Analytics Cloud

- Data Intelligence

### **Development:**

- SAP Build Apps (low-code)
- Cloud Foundry
- Kyma Runtime

### **Foundation Services:**

- Cloud Connector
  - Connectivity Service
  - Destination Service
  - Authorization & Trust Management
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## **Chapter 3: The Clean Core Strategy**

### **What is Clean Core?**

Clean Core is SAP's strategic approach to keeping your SAP systems standardized and upgrade-friendly by moving customizations and extensions to BTP.

### **The Clean Core Principle:**

**DON'T:** Customize SAP standard code directly **DO:** Extend functionality using BTP side-by-side extensions

### **Benefits of Clean Core**

1. **Faster upgrades** - No custom code conflicts during updates
2. **Lower TCO** - Reduced maintenance overhead
3. **Agility** - Rapid deployment of new capabilities
4. **Future-proof** - Align with SAP's cloud-first strategy

### **Clean Core Implementation Framework**

#### **Step 1: Assess**

- Inventory existing customizations
- Categorize by complexity and business value
- Identify extension candidates

#### **Step 2: Plan**

- Prioritize based on ROI and risk
- Define your extension architecture
- Establish governance guidelines

### Step 3: Execute

- Build extensions on BTP
- Migrate users gradually
- Retire old customizations

### Step 4: Maintain

- Monitor extension performance
  - Continuously optimize
  - Keep core clean going forward
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## Chapter 4: Integration Architecture on BTP

### Understanding Integration Suite

Integration Suite is the heart of your BTP integration strategy, combining multiple capabilities:

- **Cloud Integration** - Design and deploy integration flows
- **API Management** - Publish, secure, and monetize APIs
- **Open Connectors** - Pre-built connections to 170+ applications
- **Integration Advisor** - AI-powered mapping recommendations

### The Integration Decision Framework

Use this framework to choose the right integration approach:

Scenario	Recommended Approach	Key Service
Real-time SAP to SAP	OData/API	Cloud Integration
Batch data sync	iFlow with scheduler	Cloud Integration
Third-party app integration	Pre-built connector	Open Connectors
External API exposure	API proxy	API Management
Legacy system connection	RFC/IDOC	Cloud Connector

### Cloud Connector Essentials

The Cloud Connector is your secure tunnel between on-premise systems and BTP.

## **Key Concepts:**

- Acts as a reverse proxy
- No inbound ports needed in your firewall
- Supports multiple protocols (HTTP, RFC, LDAP)
- Installed in your on-premise DMZ

## **Setup Checklist:**

- Download and install Cloud Connector
  - Connect to BTP subaccount
  - Configure access control lists
  - Map internal to virtual hosts
  - Test connectivity
  - Enable monitoring
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# **Chapter 5: Data Strategy with Datasphere**

## **What is SAP Datasphere?**

Datasphere (formerly Data Warehouse Cloud) is BTP's unified data service for combining, modeling, and sharing data across your business.

## **Core Capabilities:**

- Data integration from SAP and non-SAP sources
- Business semantic modeling
- Data marketplace and sharing
- Native SAC integration

## **Datasphere Architecture Pattern**

### **Typical Solution Flow:**

1. **Extract** - Connect to source systems (SAP and non-SAP)
2. **Load** - Bring data into Datasphere spaces
3. **Model** - Create business semantic models
4. **Consume** - Feed analytics, apps, or other systems

## **Data Modeling Best Practices**

### **The Three-Layer Approach:**

1. **Raw/Staging Layer** - Land data as-is from sources
2. **Harmonized Layer** - Cleanse and standardize
3. **Consumption Layer** - Business views for end users

### Golden Rules:

- Keep raw data immutable
  - Document business logic in the model
  - Use spaces to separate domains
  - Leverage reusable dimensions
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## Chapter 6: Solution Architecture Patterns

### BTP Architecture Principles

#### 1. Separation of Concerns

- Keep integration logic separate from business logic
- Use dedicated subaccounts for different purposes

#### 2. Loose Coupling

- Use APIs and events over direct dependencies
- Design for resilience and failure handling

#### 3. Reusability

- Build once, use many times
- Create standard templates and patterns

#### 4. Security by Design

- Apply least privilege access
- Encrypt data in transit and at rest
- Regular security audits

### Common Architecture Patterns

#### Pattern 1: The Extension Pattern

SAP S/4HANA (Core) → BTP Extension App → End Users



OData/API

**Use Case:** Add custom UI or functionality without modifying core

### **Pattern 2: The Integration Hub Pattern**

Multiple Source Systems → Integration Suite → Target Systems



API Management

**Use Case:** Central integration layer for all system connections

### **Pattern 3: The Analytics Pattern**

SAP Systems + Non-SAP → Datasphere → SAP Analytics Cloud



Data Models

**Use Case:** Unified reporting across all data sources

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## **Chapter 7: Influencing Factors for BTP Success**

### **The 6 Critical Success Factors**

#### **1. Executive Sponsorship**

- Secure C-level commitment
- Align BTP strategy with business goals
- Allocate adequate budget and resources

#### **2. Skills and Training**

- Upskill existing teams
- Hire specialized BTP talent
- Partner with experienced consultants

#### **3. Governance Model**

- Define clear ownership
- Establish development standards
- Create approval workflows

#### **4. Architecture Standards**

- Document patterns and anti-patterns

- Create reusable components
- Maintain architecture decision records

## 5. Contract Optimization

- Understand licensing models (CPEA vs. subscription)
- Monitor consumption and optimize
- Plan for growth

## 6. Change Management

- Communicate the "why" clearly
- Involve stakeholders early
- Celebrate quick wins

## What Good Looks Like: Success Indicators

### Technical Indicators:

- Sub-second API response times
- 99.9%+ integration uptime
- Automated deployment pipelines
- Comprehensive monitoring

### Business Indicators:

- Reduced time-to-market for new features
- Decreased IT operational costs
- Increased business user satisfaction
- Measurable process improvements

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## Chapter 8: BTP Contract Essentials

### Understanding BTP Licensing

#### Two Main Models:

##### 1. Cloud Platform Enterprise Agreement (CPEA)

- Consumption-based pricing
- Pay for what you use
- Measured in cloud credits
- Better for variable workloads

## 2. Subscription-Based

- Fixed monthly/annual fee
- Predictable costs
- Specific service packages
- Better for stable, known workloads

## Cost Optimization Strategies

1. **Right-size your services** - Don't over-provision
  2. **Use dev/test subaccounts** - Lower-cost environments for non-production
  3. **Monitor consumption** - Set up alerts for unusual usage
  4. **Archive unused resources** - Delete old subaccounts and services
  5. **Negotiate volume discounts** - Consolidate purchases
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# Chapter 9: Monitoring and Operations

## Integration Suite Monitoring Best Practices

### What to Monitor:

- Message processing status
- API call volumes and latency
- Error rates and types
- System availability

### Key Metrics:

- **Throughput** - Messages processed per hour
- **Latency** - Average processing time
- **Error Rate** - Failed messages percentage
- **Resource Utilization** - CPU, memory, storage

**Pro Tip:** Set up proactive alerts before users report issues.

## The Monitoring Dashboard Framework

### Create dashboards for three audiences:

1. **Operations Team** - Real-time system health
2. **Development Team** - Error details and logs
3. **Business Stakeholders** - SLA compliance and trends

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# **Chapter 10: Your BTP Roadmap**

## **Phase 1: Foundation (Months 1-3)**

- Set up BTP global account and subaccounts
- Configure Cloud Connector
- Train core team on BTP basics
- Define governance model
- Complete first proof of concept

## **Phase 2: Scaling (Months 4-9)**

- Deploy first production integration
- Implement monitoring and alerting
- Expand team skills
- Document standards and patterns
- Launch 3-5 key use cases

## **Phase 3: Optimization (Months 10-18)**

- Review and optimize costs
- Implement advanced features (AI/ML)
- Scale to more business units
- Build center of excellence
- Measure ROI and business impact

## **Phase 4: Innovation (Ongoing)**

- Continuous improvement
  - Explore emerging BTP services
  - Share best practices across organization
  - Contribute to BTP community
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# **Quick Reference Guides**

## **BTP Connectivity Cheat Sheet**

### **Connecting SAP to SAP:**

- OData services (preferred)
- RFC connections via Cloud Connector

- IDocs through Cloud Integration

### **Connecting Non-SAP to SAP:**

- REST APIs
- SOAP web services
- Open Connectors for SaaS apps
- JDBC for databases

### **Connecting SAP to Analytics:**

- Native SAC integration
- Datasphere connections
- Live vs. replicated data

### **Common BTP URLs**

- **BTP Cockpit:** <https://cockpit.hanatrial.ondemand.com> (trial) or <https://account.hana.ondemand.com> (productive)
- **Integration Suite:** [https://\[tenant\].integrationsuite.cfapps.\[region\].hana.ondemand.com](https://[tenant].integrationsuite.cfapps.[region].hana.ondemand.com)
- **Datasphere:** [https://\[tenant\].datasphere.\[region\].hanacloud.ondemand.com](https://[tenant].datasphere.[region].hanacloud.ondemand.com)
- **SAP Help Portal:** <https://help.sap.com/btp>

### **Troubleshooting Quick Guide**

<b>Issue</b>	<b>Common Cause</b>	<b>Solution</b>
Cloud Connector offline	Network/firewall	Check connectivity, review logs
Integration flow fails	Mapping error	Review payload in monitoring
API 401 error	Authentication issue	Verify OAuth tokens/credentials
Datasphere connection fails	Missing permissions	Check user roles and privileges
Service not available	Entitlement missing	Add service to subaccount

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## **Real-World Case Studies: Key Lessons**

### **Case Study Insights**

#### **Manufacturing Company - Integration Hub**

- **Challenge:** 15+ legacy systems with point-to-point integrations
- **Solution:** Centralized Integration Suite hub
- **Result:** 60% reduction in integration maintenance costs
- **Key Lesson:** Start with highest-pain-point integrations first

## Retail Organization - Clean Core

- **Challenge:** 200+ custom programs blocking S/4HANA upgrade
- **Solution:** Moved extensions to BTP
- **Result:** Upgrade completed 9 months faster
- **Key Lesson:** Categorize customizations by business criticality

## Financial Services - Datasphere Analytics

- **Challenge:** Siloed data across 8 SAP and non-SAP systems
  - **Solution:** Unified data model in Datasphere
  - **Result:** Single source of truth for regulatory reporting
  - **Key Lesson:** Start with one critical business process
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## Your Next Steps

### The BTP Mastery Path

You've now got the essential framework for understanding and implementing SAP BTP. But this is just the beginning.

**To truly master BTP, you need:**

**Hands-on experience** with the BTP Cockpit and key services  **Deep-dive knowledge** of integration patterns and best practices  **Real architecture examples** from experienced practitioners  **Live Q&A** to address your specific scenarios  **Proven frameworks** for successful BTP projects

### Ready to Go Deeper?

This playbook gives you the foundation, but the **BTP Masterclass** provides the complete picture:

### What You'll Gain:

- **Live demos** of BTP Cockpit, Integration Suite, and Datasphere
- **Detailed walkthroughs** of connector setup and configuration
- **Complete solution architectures** with real-world examples
- **Contract negotiation strategies** to optimize your investment
- **Interactive case study analysis** with expert facilitators
- **Networking** with other BTP practitioners

Transform from BTP beginner to confident practitioner in just 2 days.

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## Glossary of BTP Terms

**API Management** - Service for creating, securing, and monitoring APIs

**Clean Core** - Strategy to keep SAP systems standard by moving customizations to BTP

**Cloud Connector** - Secure tunnel between on-premise systems and BTP

**CPEA** - Cloud Platform Enterprise Agreement (consumption-based licensing)

**Datasphere** - Unified data service for data integration and modeling

**Entitlement** - Authorization to use a specific BTP service

**Global Account** - Top-level BTP container for your organization

**iFlow** - Integration flow in Cloud Integration

**Integration Suite** - BTP service combining integration and API capabilities

**OData** - Open Data Protocol for REST APIs

**SAC** - SAP Analytics Cloud

**Subaccount** - Organizational unit within BTP for projects or environments

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## Additional Resources

### Official SAP Resources:

- SAP BTP Documentation: <https://help.sap.com/btp>
- SAP Community: <https://community.sap.com>
- SAP Learning Hub: <https://training.sap.com>

### Stay Updated:

- SAP BTP Release Notes
  - SAP Road Maps Explorer
  - BTP Service Availability
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## About This Playbook

This playbook is designed to give you a solid foundation in SAP BTP concepts, architecture, and best practices. It's based on real-world implementations and lessons learned from dozens of successful BTP projects.

**Want to go deeper?** The BTP Masterclass provides hands-on training, live demonstrations, and expert guidance to accelerate your BTP journey.

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