SAP Integrated Business Planning
Strategy & Roadmap

Thomas Klemm
Chief Product Owner SAP IBP, SAP SE

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Intelligent Suite: Deliver intelligence across value chains

Out-of-the-box integration leveraging SAP Cloud Platform, the SAP Analytics Cloud solution, and a common data foundation with SAP HANA and SAP Data Hub

Best-in-class UX with consistent experience across the entire portfolio

Modular, making it easy to consume and cost-effective to operate.

Easy to extend, allowing customers and partners to customize solutions quickly

Intelligence embedded in the applications making the workflows smarter

Integration | Business Objects | Master Data | Orchestration
25 Industries | 180+ Countries
Plan and Respond with
SAP’s Integrated Business Planning Solution

Supply Chain Control Tower
Exception Handling and Business Network Collaboration

Sales & Operations
Strategic and Tactical Decision Processes

Demand
Statistical Forecasting, Consensus Planning & Demand Sensing

Inventory
Multi-Stage Inventory Optimization & DDMRP

Response & Supply
Allocations & Deployment Planning, Order Rescheduling
Unconstrained & Constrained Supply Planning

SAP HANA
## Release Cycles

Continuous Innovation Delivered Quarterly

<table>
<thead>
<tr>
<th>Quality</th>
<th>Stability</th>
<th>Performance</th>
<th>Features &amp; Usability</th>
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<td>(Planned) Release</td>
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### 2017
- Release 1905
- Release 1902
- Release 1811
- Release 1808

### 2018
- **Release 1805**
- Release 1802
- Release 1711
- Release 1708

### 2019
- Latest Release

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Strong Growth Continued in 2017
Testament to a Solid Strategy and Strong Product

Customers Expand their IBP Footprint

# OF IBP COMPONENTS LICENSED PER CUSTOMER

- # IBP apps: 1
- # IBP apps: 2
- # IBP apps: 3
- # IBP apps: 4
- # IBP apps: 5

400+ IBP Customers Worldwide
Strategic Topics & Key Areas of Investment

Cloud Operations
- Scaling & Performance
- Security
- Test Automation

Integration & Business Network Collaboration
- Flexible & Robust Integration
- Forecast Collaboration

Usability
- Advanced Visualization
- Embedded Analytics
- Process Automation
- Flexible Modelling & Configuration

Advanced Planning
- Seamless Planning Processes
- Order-based Planning
- Demand-Driven MRP
- Industry-specific support

Machine Learning
- Sophisticated Algorithms
- Decision Support

This is the current state of planning and may be changed by SAP at any time.
Legend

= Planned Innovations or Product Direction
Usability

Strategic Topics & Key Areas of Investment
IBP Excel Add-In
Moving Fast Forward

- Flexible Time Axis
- Totals & Subtotals
- Fixing of key figure values

New with 1805

- Planning Notes
- Value-Based Filters

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WebUI: Analytics & Dashboards
Key Usability Investments in 2017 & Ongoing Investments in 2018

- New Analytics and Dashboard apps
- Export to .csv and Navigation to Excel
- New charts and color palletes
- External API for key figure data

- Top n value filters
- Enhanced Geo charts
- Patterns and reference lines
- Key figure planning notes on chart elements

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WebUI: Exception Management
Key Enhancements Planned in 2018

Major investments in the Alert Configuration, Overview and Monitor

- Configurable Alert Overview
- Navigation from an alert to the S/4 HANA Stock Requirements List
- Overviews of cases and the ability to customize views
- Scheduling of alert calculation
- Alert notifications to proactively trigger review by the user

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WebUI: Model Configuration
Ongoing SAP Fiori Transformation

- Enhanced **performance** (e.g. UI load times)
- Improved **usability** incl. easy cross-navigation, filtering, sorting …
- Better **quality** due to subsequent code clean-up, refactoring, and automated tests
- New **features** such as .CSV download
WebUI: Model Configuration
Simplified Key Figure Calculation

- Enhanced calculation definition, e.g. IBP_LPA to support last period aggregation without helper planning levels, helper key figures and L-Code

- New SAP Fiori app to visualize and simulate key figure calculations

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WebUI: SAP CoPilot
New Messaging and Collaboration Tool

- Enables collaboration between online IBP users
- Chat with other users and share information essential for working on a particular issue together
- Exchange notes, screenshots, and object details that are automatically wrapped up by SAP CoPilot
- Available in the SAP Fiori launchpad and in SAP Fiori apps

Interface for intelligent capabilities

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WebUI: Planning Data Entry
Fiori app to adjust data in IBP

Adjust Data via IBP Excel Add-In

Planned: Adjust Data via WebUI

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Advanced Planning

Strategic Topics & Key Areas of Investment
S&OP Process Management
Major Rework and Extension Project

- Management and Visualization of the S&OP Process
- S&OP Tasks in IBP Excel Add-in
- Key figure editability based on S&OP process status
- Process Feeds and Logs
- Process Notifications
- Assumptions and Risk Management
- Change History Analytics
- Process Adherance kpis

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Shelf Life Visibility
Enhance industry-specific support

- Capture batch information to **track remaining shelf life** and batch quantities
- Capture **minimum-shelf-life** requirement per customer demand
- **Match batches to customer demands** based on earliest expiring batches matched to Customers with highest shelf life requirements
- **Visibility into expiring batches** that need to be replenished or written off
- Delivered as LCODE in Unified Planning Area

**Shelf Life Planning in time-series based supply heuristic**
Taking expiration dates of inventory into account to re-plan accordingly

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Demand Planning
From Classic Planning Capabilities, to Smart Planning, to Full Automation

Time Series Analysis
Automatically analyze sales patterns in your data e.g. for trends and seasonality to streamline the forecasting process

- ABC & XYZ Segmentation
- Forecast Accuracy Calculations
- Product Lifecycle Management
- Statistical Forecasting Algorithms
- Demand Sensing
- Best Fit
- Manual Planning Capabilities

Forecast Automation
Fully automized forecasting process incl forecast level optimization

- New Algorithms: Auto-ARIMA, Automated Exponential Smoothing & Brown's
- Time Series Analysis (Planned 1808)
- Machine Learning Algorithm: Gradient Boosting (Planned 1811)
- Forecast Automation (Future Direction)

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Inventory Management

Mature Solution moving towards Strategic Inventory Management

Inventory Optimization
- Forecast Error
- Root Cause Analysis
- Optimization for Safety Stock
- Make to Order
- Forms of Inventory

Continuous Innovation

Drive Maturity of Inventory Optimization
- Maximum Storage Constraints
- Validity dates for sources of supply

Strategic Inventory Management
- Service Level Optimization
- Optimization based on budget constraints
- Product Lifecycle Management, e.g. Inventory during demand ramp-down

Expand DDMRP process coverage

Demand Driven MRP
- Strategic Inventory Positioning
- Buffer Profiles and Levels

Moving towards Strategic Inventory Management

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Inventory Management

Releasing Demand-Driven MRP (DDMRP)

With 1802, SAP IBP for inventory supports the first two components of DDMRP as defined by the Demand-Driven Institute

New DDMRP operators

- “Recommend Decoupling Points (Solve)”
- “Calculate DDMRP buffer levels”

New Fiori app for decoupling point scenario comparisons
Response and Supply Planning
Order-based Planning incl Planning Algorithms & Infrastructure

Time series-based Supply Optimization and Heuristic
Continuous Innovation

Order-based Response Management

Order-based Deployment Planning

Order-based Supply Optimization

Drive Maturity of TS Supply Planning
- Multiple Modes of Transport
- Shelf-Life Planning for TS Heuristic

Continue Focus on High Tech Industry
- Forward pegging against available supply

Expand Consumer Products Coverage
- Fair share planning to fulfill demands & Advanced forecast consumption

Modelling Flexibility and Extensibility
- Version dependent master data & Support of multiple planning areas

Visibility & Analysis of Planning Results
- e.g. Supply and Resource Usage Analysis

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Machine Learning
Strategic Topics & Key Areas of Investment
Selected Machine Learning (ML) Use Cases in IBP

**Demand Sensing**
- Pattern Recognition
- Forecast Accuracy
- Available

**Additional ML forecasting algorithms**, e.g. Gradient Boosting
- Forecast Accuracy
- Planned with IBP 1811

**ML supporting New Product Introduction**
- Forecast Accuracy
- PoC with Customer Data

**Use ML to analyse segmentation groups**
- Automation & Usability

**Automatic Exception Handling & intelligent Decision Support (DSC)**
- Automation & Usability

**Flexible determination of Master Data**
- Using ML, e.g. lead times
- Modelling
- Future / Research Phase

**Machine Learning Customer Workgroup Established in January 2018**

Interested? Contact: Christian.Lenze@sap.com

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Integration & Business Network Collaboration

Strategic Topics & Key Areas of Investment
Data Integration
Flexibility, Scalability, and Fast Implementation

SAP Cloud Platform Integration (CPI-DS)
- Pre-packaged content reduces TCO during Implementation
- Core scenarios are covered as pre-packaged content that customers can flexibly adapt to their needs

Next Steps:
- Integration with SAP S/4HANA Cloud via API
- More content for integration with SAP S/4HANA and SAP ERP
- Outbound Integration to SAP Hybris Cloud for Customer
- Harmonise the add-on and reuse as additional input channel for time series data

SAP Smart Data Integration (SDI)
- Currently used for order-data integration

Next Steps:
- Grow flexibility by supporting multiple planning area, multiple ERP integration for order-based data
- Make the integration model extensible to consolidate to one master data integration model for IBP

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Business Network Collaboration
End-to-end, Multi-tier Collaboration

Supplier Collaboration
- Forecast Commit
- Inventory Visibility

Channels
- File Upload by internal user
- IBP to SAP Ariba Integration

Fast adoption of new planning scenarios

End-to-End Process Management and Coverage

Supplier Collaboration
- Supplier Managed Inventory (SMI)

Customer Collaboration
- Demand Forecast
- Vendor-Managed Inventory (VMI)

Enhance Channel Coverage
- IBP WebUI to change data
- IBP to SNC Integration
- IBP to IBP Integration
- IBP to Private Network

Process Management
- Alerts
- Status Overview

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**Business Network Collaboration**

**Demand Forecast Collaboration and WebUI for external partners**

- **Planner using a PC** (Internal User)
- **Sales Representative at customer location using a tablet** (Internal User)
- **Customer using PC or Tablet** (External IBP user)

- Customer / Sales representative updates forecast in IBP WebUI
- IBP makes forecast available to customer / sales representative in IBP WebUI
- Collaboration on Consensus Forecast

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Cloud Operations

Strategic Topics & Key Areas of Investment
Cloud Operations
The real value of the cloud is innovation

SAP provides the business process know-how and technology for you to exploit the cloud for true competitive advantage

- Companies need Software to Run, but the IT infrastructure is not their core competency
- Cloud Operations reduces non-value add activities like building and maintaining infrastructure, or provisioning and upgrading software

Hardware & Maintenance

Security, Data Protection & Privacy

- Cybersecurity? Ironclad Data Centers? New Data Protection Regulations?
- Focus on your business and customer relationships, while knowing that your data is safe and reliable

Innovation

- Companies need to constantly innovate to remain competitive
- Fast Time to Upgrade means also Fast Time to Adoption of New Innovations in Your Business

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Improved IBP Upgrade Experience
Faster Adoption of new Releases

More than 10,000 SAP-internal automated tests running every day

SAP Development
(Application and Security Patches & Release)

1
Upgrade Notification Sent to Customer

SAP Internal Testing & Validation
(Patch & Release)

2
Planned measures communicated to customers

Customer Productive System Upgrade
(Patch & Release)

3
Upgrade Notification Sent to Customer

Customer Test System Upgrade
(Patch & Release)

4

Customer Testing
1 Week Testing Phase for Test System / No Excel Upgrade Necessary
Planned: Test Automation Capabilities

5

Customer Beta Testing with Selected Customers

Planned: Test Automation in Customer Systems

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Improved IBP Upgrade Experience
SAP Regression Test Service

Efficiently test your customer-specific configuration & reduce manual test effort during the quarterly release upgrades

- UI-driven test tool that performs a customer specific test script
- Is designed to compare multiple IBP planning views at once and identifies deviations in planning levels (attributes) and key figures values
- Can also be used to check the outcome of data integration jobs (e.g. via SAP Cloud Integration) by comparing the according key figure values
- Creates a new planning view during the test run and compares all cells with the reference sheet

Contact: Patrick Weber (patrick.weber01@sap.com)
Manage and Monitor
SAP Solution Manager Connection

Control multiple SAP systems to monitor and analyze critical processes and messages

Future Direction:
- Consistency Checks
  (Compare Master Data in IBP with other systems)
- Import and Export
  of Data Model and Dependent Objects

Exception Monitoring & Application Logs
Job Scheduling
incl tracking and monitoring of jobs via Solution Manager

SAP IBP

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Manage and Monitor
System Monitoring directly in IBP Customer Systems

• Resource Consumption KPIs per hour
• Job Scheduling Statistics

• Excel Sessions Statistics
• Planning Object Statistics
• Time Series Statistics
• Forecast Algorithm Statistics
• Planning Function Statistics
Extensibility

Strategic Topics & Key Areas of Investment
Extensibility Options in IBP
Build-in & Side-by-Side Extensibility with SAP Cloud Platform (SCP)

Customer & Partner extensions

- Comprehensive development platform to build extension applications (Java, etc.)
- Leverage SCP application services (Mobile Documents, Output Management etc.)
- Enable additional Fiori and Mobile user experience
- Integrate with other SAP Cloud Applications and 3rd party solutions

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Prevent disruptions, and when this is not fully possible, reduce the time from incident to reaction by eliminating the latency linked with both processes and tools.
Extensibility Options in IBP
Customer Example- Master Data Maintenance via Custom Fiori apps

IBP Analytics

IBP Excel Add-In

Custom Fiori app

SAP Cloud Platform Integration Data Services (CPI-DS)

Customer’s On Premise System Landscape (e.g. ERP, APO, …)

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Wrap Up
SAP Integrated Business Planning
Product road map overview

Key new functionality and processes

- Locking/fixing of key figure values in the SAP Integrated Business Planning, add-in for Microsoft Excel
- Shelf-life visibility enhancements
- Promotion creation via Analyze Promotions Fiori app
- Demand-driven MRP: Critical path indicators and decoupling point reason
- Expose network trees in inventory operators
- Tactical supply planning: Forecast consumption
- Order-based planning: Fair share
- Supply Optimization: Cost-based optimization on order data
- New SAP Fiori app for basic system monitoring
- SAP CoPilot enablement

Key new functionality and processes

- Model configuration: New SAP Fiori app to visualize the key figure calculation
- Analytics: Top n values filter
- Time-dependent planning notes on cell level in the SAP Integrated Business Planning, add-in for Microsoft Excel
- Exception management: Configurable alert overviews
- S&OP Process Feeds and Process Dashboard enhancements
- Data realignment in demand management
- Time series analysis in demand management
- Component lead-time offset in order-based planning & version-specific master data
- Outbound integration from SAP Integrated Business Planning to SAP Hybris Cloud for Customer

Key new functionality and processes

- Value-based filter in the SAP Integrated Business Planning, add-in for Microsoft Excel
- Model configuration: Simplified key figure calculations
- Exception management: Case overviews
- S&OP Process Notifications
- S&OP assumptions risks and opportunities based planning
- New forecast algorithm in demand management: Gradient boosting
- Tactical supply planning: Shelf-life planning
- Inventory optimization using maximum constraints
- Multiple modes of transport in order-based planning

Key new functionality and processes

- Analytics: Key figure comments on chart elements
- Exception management: Alert notifications & Contextual navigation from an alert to S/4 HANA Stock Requirements List
- Change History Analytics Fiori App
- S&OP Recurring Processes
- Collaborative S&OP with External Partners
- New forecast algorithm in demand management: Naïve algorithms
- Forecast automation: Anomaly detection
- Business network collaboration: Demand forecast collaboration and Web UI for interenterprise collaboration
- Demand-driven MRP: Outbound integration of decoupling point indicators and buffer profiles to S/4 HANA
- Order-based planning: Maximum lateness of demands

1. Potential data protection and privacy features include simplified deletion of personal data, reporting of personal data to an identified data subject, restricted access to personal data, masking of personal data, read access logging to special categories of personal data, change logging of personal data, and consent management mechanisms. 2. This is the current state of planning and may be changed by SAP at any time without notice.
### SAP’s Supply Chain Planning Solution in a Nutshell

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<thead>
<tr>
<th>Supply Chain Planning</th>
<th>Integration</th>
<th>Strategy</th>
<th>Analyst Perspective</th>
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<tbody>
<tr>
<td>SAP is the <strong>market leader</strong> in Supply Chain Management solutions</td>
<td><strong>End to end integration</strong> from planning to execution</td>
<td><strong>SAP offers</strong> an innovative solution portfolio that enables companies to realize <strong>digital transformation in their supply chain</strong></td>
<td>SAP is a “Leader” in the Gartner Magic Quadrant for both Supply Chain Planning and Sales &amp; Operations Planning (S&amp;OP) with its IBP solution</td>
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<tr>
<td>IBP is the new <strong>world class platform</strong> for end to end supply chain planning on all levels</td>
<td><strong>User friendly, flexible interfaces with fast implementation times</strong></td>
<td><strong>IBP is addressing key strategic topics such as machine learning</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Industries</th>
<th>Partners</th>
<th>Support &amp; Maintenance</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Players from 9 different industries</strong> successfully run IBP</td>
<td><strong>&gt; 60 SAP Partners globally,</strong> focused on SAP IBP consulting practices and continuous enablement</td>
<td><strong>SAP Service and Support Professionals work 24x7 worldwide</strong></td>
<td><strong>400+ IBP customers</strong> live or in implementation since solution launch in 2011</td>
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<tr>
<td>Including Automotive, Consumer Products, Chemicals, Distribution/Retail, High Tech, Life Sciences, Manufacturing, Mill Products &amp; Mining, and Services industries</td>
<td></td>
<td><strong>Highly Secure Global Data Centers</strong> in different regions are running IBP</td>
<td><strong>Customer influence &amp; network program</strong> and strong community</td>
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Thank you!

Thomas Klemm

Chief Product Owner - SAP Integrated Business Planning
SAP SE