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SAP and SAF – a long-term relationship

- One decade of co-innovation between SAP and SAF on SAP Forecasting and Replenishment
- Acquisition of SAF finalized on September 27th
- Major decisions and benefits
  - Integration of SAF product offering into SAP portfolio enable more flexibility in going to market
  - Increasing expertise in sales, consulting and development for one of the most critical Retail business scenarios
  - Joining forces in product strategy on our way forward to the next generation of solutions
  - Extension of current offering for Forecasting and Replenishment in Retail and beyond
  - Industry know-how and science meet on future platforms – in-memory, mobile technology
Overview of SAP road map for Forecasting & Replenishment

Solution today

Planned innovations

Future direction

F&R
CAR, UDF
Integrated Planning
On Shelf Availability
Demand Planning, Replenishment, Allocation

Plan and market better
Supply and distribute better
Sell and service better
Operate better
Overview of SAP road map for Forecasting & Replenishment

Solution today

Planned innovations

Future direction

Plan and market better
Supply and distribute better
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Operate better

F&R
CAR, UDF
On Shelf Availability
Retail 2012
Solution portfolio

- Shopper insight
- Merchandise and assortment
  - Product, store, and customer lifecycle
  - Lifecycle pricing
- Marketing and promotions
  - Loyalty management

- Finance
  - Real estate and asset management
  - Human capital
  - Risk and compliance
  - Sustainable operations

- Business intelligence
  - IT operational and service excellence
  - Enterprise information management
  - Enterprise data warehousing
  - Business integration
  - User productivity

- Integrated demand and replenishment planning

- Sourcing and buying
- Integrated product development
  - Private label production
- Logistics and fulfillment management
  - Supply chain performance mgmt

- Store and point of sale
  - E-commerce
  - M-commerce
  - Social media
  - Customer service contact center
- Customer service management
  - Multichannel order management

Focus innovations in 2011
SAP Forecasting & Replenishment

Branding

One brand

Two deployment options

Your solution

SAP® Forecasting and Replenishment for Retail

SAP® Forecasting and Replenishment for Retail – for use with SAP Merchandising for Retail

(standard integration)

SAP® Forecasting and Replenishment for Retail – for use with other merchandising solutions

(open integration)

Flexible deployment - tailored to customers’ needs
Uniform pricing - attractive also for midmarket companies
One future roadmap
SAP Forecasting & Replenishment
Customers, sub-segments, implementations

- **All regions:** EMEA, NA, LA and APJ
- **All sizes:** LE, ME
  - A 20 bn CHF multi format Retailer in Switzerland
  - A 50 mil EUR supermarket chain in Dominican Republic
- **All segments:**
  - General Merchandise: DIY, furniture, consumer electronics, etc.
  - Grocery, convenience, drugstores
  - Fashion / department stores
- **All scenarios:**
  - Store replenishment
  - DC replenishment
  - Multi-level replenishment
- **All deployment options:**
  - Integrated with SAP Merchandising
  - Open Integration / stand-alone
SAP Forecasting & Replenishment
Customer successes

- Reduction of inventory level by 20% with increase of service degree to 98.5%
- Reduction of out-of-stocks by 75% with simultaneous reduction of warehouse stock by 10%
- Reduction of inventory levels in the store by 13% with almost complete elimination of order costs (96%)
- Almost full automation of replenishment process through high acceptance rate of generated order suggestions with reduction of out-of-stocks from 8 to 2%
- Increased sales by more than 1% and about 70% OOS reduction in some locations due to automated replenishment

Other references: Axfood, COOP Norge, Dohle Handelsgruppe (Hit), EDEKA, Grupo El Arbol, Jysk, MassStores, Tegut, Pick’n’Pay
SAP Forecasting & Replenishment
Solution Highlights

Solution Highlights

- Fully automated store replenishment for optimized product availability
- Advanced DC replenishment with truck load optimization to meet supplier restrictions
- Sophisticated algorithms, yet robust, high-volume processing capabilities
- Transparency and insight into results provided throughout all steps of the process
- One solution for multi-level optimization
- Packaged offering available for fast track implementation
- Two deployment options – fully integrated with SAP Merchandising as well as open integration (stand-alone)

Key Benefits

- Reduction of cost of ordering, inventory and logistics cost along with reduction of carbon footprint
- Support for ranging decisions and supply chain transformation
- Visibility and usability to keep track of all relevant KIP’s in the organization
- Reduced TCO through deployment of one solution serving all scenarios

SAP Forecasting and Replenishment provides automated capabilities for demand-driven replenishment to synchronize inventories along the supply chain, improve in-stock positions and reduce cost.
F&R Optimization Services for Retail

Decision >> Piloting >> Implementation >> Rollout >> Operation >> Optimal Reality >> Profitability

- Feasibility Study
- Modeling Service - Store DIF
- Modeling Service - Product DIF
- Strategic Inventory Parameter Optimization
- Pack Size Opt.
- What-if Analysis

*DIF = Demand Influencing Factor

Solution today
SAP Forecasting & Replenishment
Latest innovations

Solution Enhancements
- Enhanced capabilities for truck load optimization
- Forecast improvements
- Enhancements in order forecast (order forecast for aggregation)
- Consider time-dependent data for promotions
- More detailed information about automated calculation steps
- Improved user interfaces, e.g. within the replenishment workbench
- Improved exception handling
- Enhanced connectivity of SAP F&R with SAP ERP for Retail, e.g. source list integration and transit stock consideration

Key Benefits
- Reduction of purchasing and logistical cost
- Increased forecast accuracy leads to better results
- Improved support of multi echelon scenarios with the new Order Forecast for aggregation
- Improved accuracy of promotional forecasts
- Improved traceability of automated processes
- Better usability for increased efficiency
- Reduced TCO through better integration with SAP ERP for Retail

Release 5.2 of SAP Forecasting and Replenishment Standard Integration provides more sophisticated functionality for DC replenishment as well as usability improvements.
SAP Forecasting & Replenishment
Latest innovations

Solution Enhancements

- Investment Buying
- Enhanced capabilities for truck load optimization
- Forecast improvements
- Enhancements in order forecast (order forecast for aggregation)
- Consider time-dependent information for promotions
- More detailed information about automated calculation steps
- Improved management of unknown DIFs
- Improved usability of DataAnalyzer

Key Benefits

- Reduce purchasing costs and take advantage of supplier promotions
- Reduction of purchasing and logistical cost
- Increased forecast accuracy leads to better order proposals
- Improved support of multi echelon scenarios with the new Order Forecast for aggregation
- Improved accuracy of promotional forecasts
- Improved traceability of automated processes
- Higher degree of automation
- Increased efficiency

Release 2.2 of SAP Forecasting and Replenishment Open Integration provides more sophisticated functionality for DC replenishment as well as usability improvements.

Solution today
Overview of SAP road map for Forecasting & Replenishment

Solution today

Planned innovations

Future direction

- Plan and market better
- Supply and distribute better
- Sell and service better
- Operate better

F&R
CAR, UDF
On Shelf Availability
SAP Forecasting & Replenishment
Planned enhancements for F&R stand-alone

Solution Enhancements

Usability improvements
- Order Lists Table enhancements
- Fast Actions buttons
- User preferences as tabs, with small button
- Configurable widths of columns
- Extended screen resolution and browser compatibility
- Customer specific exception descriptions
- Display polling time, polling day

Performance improvements
- Pre-calculation of active predictors in B
- Pre-calculation of demand in BI

Functional improvements
- Completion of order review process
- Filtering / sorting by customer specific info
- Exception acknowledgement for order lists
- Reporting API

Key Benefits
- Increased flexibility and configurability of user interface
- Better response times
- Valuable customer specific enhancements added to standard product

Planned innovations
Solution Enhancements

- Consideration of customer sales orders as exceptional demand
- Enhanced integration of SAP PMR with SAP F&R

Key Benefits

- Reduction of out-of-stocks due to unplanned orders
- Improved transparency and visibility in F&R
- Aligned promotional forecast quantities in promotion planning and replenishment.
- Significant reduction of data maintenance for promotional periods

Release 5.2, SP03 of SAP Forecasting and Replenishment Standard Integration provides improvements in transparency and integration.
Customer Activity Repository
Foundation for predictive retail applications

Dashboards

Retail Analytics Model & KPIs
- Social Media
- Click Stream
- Goods Movements
- Market Data
- Demographics
- Assortment
- Locations
- Customer
- Promotions
- Merchandise
- Multi-Channel Sales
- Inventory

Customer Activity Repository

BW / HANA

Predictive Analytics
- Financial Planning
- Merchandise Planning
- Assortment Planning
- Price Optimization
- Markdown Optimization
- Promotion Planning (PMR)
- POS Sales Audit
- Loss Prevention Analytics
- Customer Segmentation
- Demand Planning
- Replenishment & Allocation
- OnShelf Availability
- Custom Solutions
- Partner Solutions

Mobile
Web Channel
POS

Multiple Channels

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Customer Activity Repository

Solution Enhancements

- Predefined data model to capture sales transactions across channels in one consolidated repository
- Enriched data model to support flexible reporting and analytics
- Real time feed of sales data from any channel
- Data cleansing, auditing and enrichment as well as error resolution functionality provided through POS DM
- Instant aggregation to any desired level while data is kept at lowest level
- Foundation for predictive applications (e.g. MAP, PMR, F&R)
- Unified forecasting enables prediction of future sales and one version of truth

Key Benefits

- Real time visibility into consumer sales data across channel and channels specific down to transaction level
- Instant aggregation to any desired level without losing the detailed information (keep data at lowest level)
- Support flexible, high speed analytics and calculation of mass data
- Avoid replication of POS data and perform extensive calculations and predictive analytics where the data resides
- Common foundation and one version of truth for predictive applications
- Historic and predictive sales data available in one view

The first release of the in-memory based Customer Activity Repository provides real time access and visibility into consumer sales data across channels. A game changing foundation to process and analyze consumer behavior and impact on future business in real time.
Inventory Analytics
On-Shelf Availability

Solution Enhancements

- Analyze on-shelf-availability for all types of products – slow or fast movers – using scientific algorithms which analyze sales patterns.
- Provide historic analysis at aggregate levels as well as real time analysis based on real time POS data.
- Based on POS DM using in-memory technology (HANA).
- No perpetual inventory at store level is needed.
- If available, system inventory and other information can be used to analyze possible root cause.
- Available on iPAD, easy to use for store associates, alert driven.

Key Benefits

- Store Managers and VP of Sales can analyze on-shelf availability at aggregate level to detect patterns of occurrence (e.g. weekdays, categories, daytimes, etc), analyze root causes and take corrective measures to prevent them from happening in the future.
- Store associates can detect on-shelf availability in real time for promotional and non-promotional products, respond directly and take corrective actions.
- Perpetual inventory at store level is no prerequisite but can be used to provide additional information to analyze root cause.
- Helps store managers to optimize resource deployment.

On-Shelf-Availability analysis provides visibility to on-shelf situations in retail stores. It can be used to analyze patterns of out-of-shelf situations after the fact to proactively prevent them in the future or it can be used to detect and visualize on-shelf availability situations when they happen in real time and take immediate actions to prevent further lost sales.

Planned innovations
Overview of SAP road map for Forecasting & Replenishment

Solution today

Planned innovations

F&R

CAR, UDF

On Shelf Availability

Plan and market better

Supply and distribute better

Sell and service better

Operate better

Future direction
## Integrated retail planning processes

### Financial Plan
- 3-5 years
  - High level sales plan (sales, margins, markdowns)
  - By channel, month, store type
  - Management objective

### Marketing Plan
- 18 months
  - Number of campaigns
  - Budget for campaigns
  - Profit
  - By channel, customer segment
  - Top-down

### Merchandise Plan
- 12 months
  - For season/quarter
  - Revenue, profit, margin by merch. group
  - By month/week
  - Bottom-up

### Promo, Price, Markdown Plan
- 12 to 0 weeks
  - Promotions, prices and markdowns
  - Hit revenue target from merch. plan
  - By category, by week/day
  - Bottom-up

### Assortment Plan
- 12 months/ 1 season
  - Assortment plan seasonal products
  - Key item plan non-seasonal products
  - Units retail, cost
  - By location group

### Demand (and Supply) Plan
- Continuous / In-season
  - Demand analysis
  - In-Season monitoring
  - Demand / supply match
  - Drive activities, such as ordering, campaigns etc.

### Allocation Plan
- Pre-season / in-season
  - Automatic or system-supported allocation of fixed quantities across multi-level supply network
  - Demand driven allocation in-season

### Replenishment Plan
- Continuous
  - Automatic ordering of re-orderable products
  - Multi-level supply network

### Operational Processes
- Operative horizon
  - Purchasing
  - Inventory Management
  - Warehousing
  - Transportation
  - Etc.
SAP Forecasting and Replenishment
Future direction

**Customer Activity Repository (CAR) on HANA**
Common data foundation for multi channel analytical reporting and predictive applications in Retail

<table>
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<th>2013</th>
<th>2014</th>
<th>2015</th>
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**F&R 5.2 SP03** (for use with SAP Merchandising Software)

**F&R 2.2 SP01** (for use with other Merchandising Software)

- Unified Demand Forecast
- On-Shelf Availability Analysis
- Demand Planning
- Replenishment Planning
- Replenishment & Allocation Planning
- Optimization Services

Planned Delivery

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Appendix: Planned
Merchandise & Assortment
In-Memory Retail Planning

Solution Enhancements

- **Functionality**
  - Cell locking (enhanced)
  - Rules of precedence
- **Implementation**
  - RDS Package for Planning (SAP Planning for Retail – Channel Financial, Merchandise and Key Item Planning)
  - New ABAP based planning modeler
- **Premium Microsoft Office user interface**: SAP Business Objects Analysis, edition for Microsoft Office
  - Conditional formatting
  - Filters by measure
  - Notes at cell level
  - Sort breaks by hierarchy
  - Easy and dynamic calculations
  - Interactive multi dimensional analysis
- **SAP Planning for Retail powered by HANA**
  - Planning engine and Starter Package support

Key Benefits

- **Functionality**
  - Complete session locking
  - Flexible rules based calculation
- **Implementation**
  - Reduced implementation cost
  - Simplified implementation
  - Best business practice templates
- **User Experience**
  - Superior user experience for power users
  - Excel based application design
  - Common user experience for planning and reporting / analytics
  - Easy publishing to MS Power Point and Live Power Point presentations
  - Superior user experience for occasional users
  - Custom / industry specific planning features
- **Performance**
  - High volume, high speed
- **Innovation without disruption**

The SAP Planning Suite for Retail evolves to an in-memory planning application with best in class user experience and a highly flexible planning engine.

Planned innovations

Lab Preview
Solution Enhancements

- Enhance offer construction speed and performance through mass creation and maintenance capabilities
- Enhanced display planning and forecasting capabilities
- More flexible desktop publishing views and integration with third party printing and execution systems
- Option to leverage a HANA based platform with on-demand database
- General usability enhancements and feature updates to improve overall performance

Key Benefits

- Reduce data entry times with automation and reduced clicks
- Integrate with display planning and planogram systems – including forecasting and in-store placement
- Reduce promotional print and execution costs
- Improve financial analytics and performance measurements now possible with speed and flexibility of HANA database

The SAP Promotion Management for Retail application extends to a HANA infrastructure and enhances display planning features, desktop publishing functionality, and general performance and usability.

Planned innovations