

SAP NetWeaver Process Integration 7.1  
Introduction to Business Activity Monitoring  
Infrastructure



SAP NetWeaver Regional Implementation Group  
SAP NetWeaver Product Management  
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# Agenda



1. Introduction
2. BAM Concept and Status
3. Summary

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- 1. Introduction**
- 2. BAM Concept and Status**
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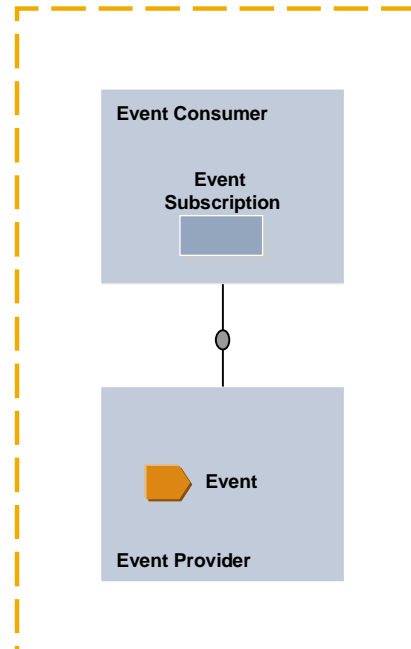


- I am **not aware** of **significant business needs** that are relevant for me before it is too late.
- Events are not **actionable** today – Is this just another wave of notifications that we have to deal with?
- Events are not **tangible for business users** – What kinds of business events are managed in my landscape today?  
Where and how do I set up new scenarios?
- Missing “**chattiness**” of today’s applications and systems – Events remain unnoticed or without sufficient context.
- **The unknown** – Do event-driven architectures affect my service-oriented architecture (SOA) strategy? What kind of event management capabilities do I really need?



## Event-Driven Architecture (EDA)

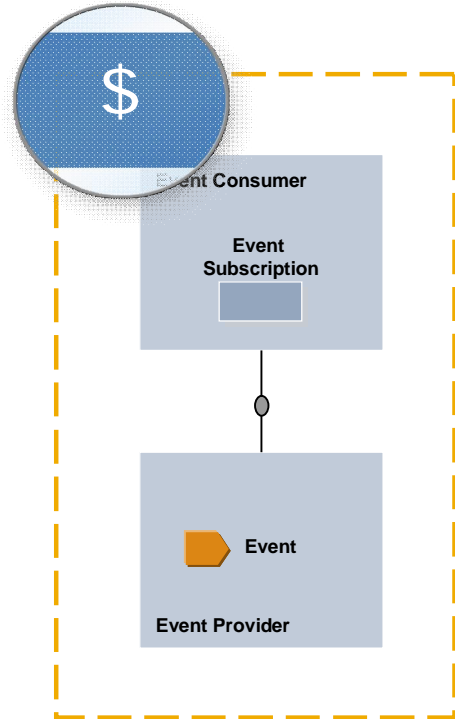
- A software architecture paradigm
  - Defining a methodology how loosely coupled systems can be engineered to sense and respond to events
  - Events – state change of a business object in, for example, a process context
  - Event-driven applications comprise event providers and event consumers
- Event consumer
  - Subscribes to services of an event manager
- Event provider
  - Raises and publishes events to the event manager



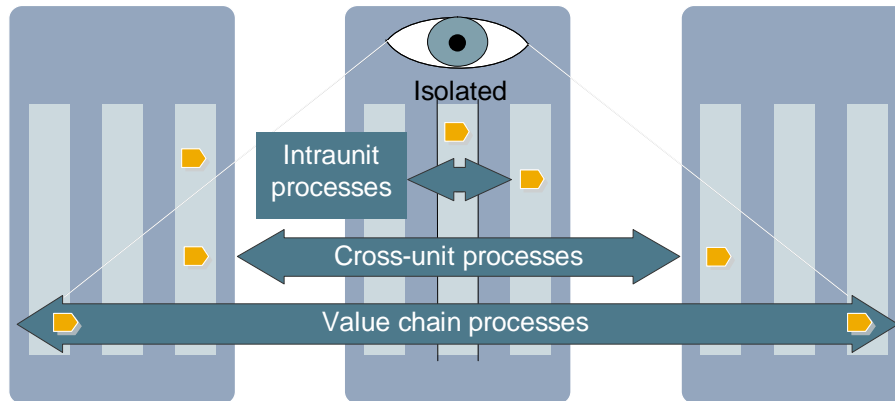


## Benefits

- Gain new level of transparency
- Enable dynamic and collaborative business processes
- Steer task-centric user interaction
- Anticipate and resolve significant business events



## Visibility Beyond Function



### BEFORE

- Silos and functions
- Single disparate events
- Many alerts, single event resolution
- Poor process context

### AFTER

- Process visibility
- Filtered and aggregated events
- Business-driven event resolution
- Rich process context

# Agenda



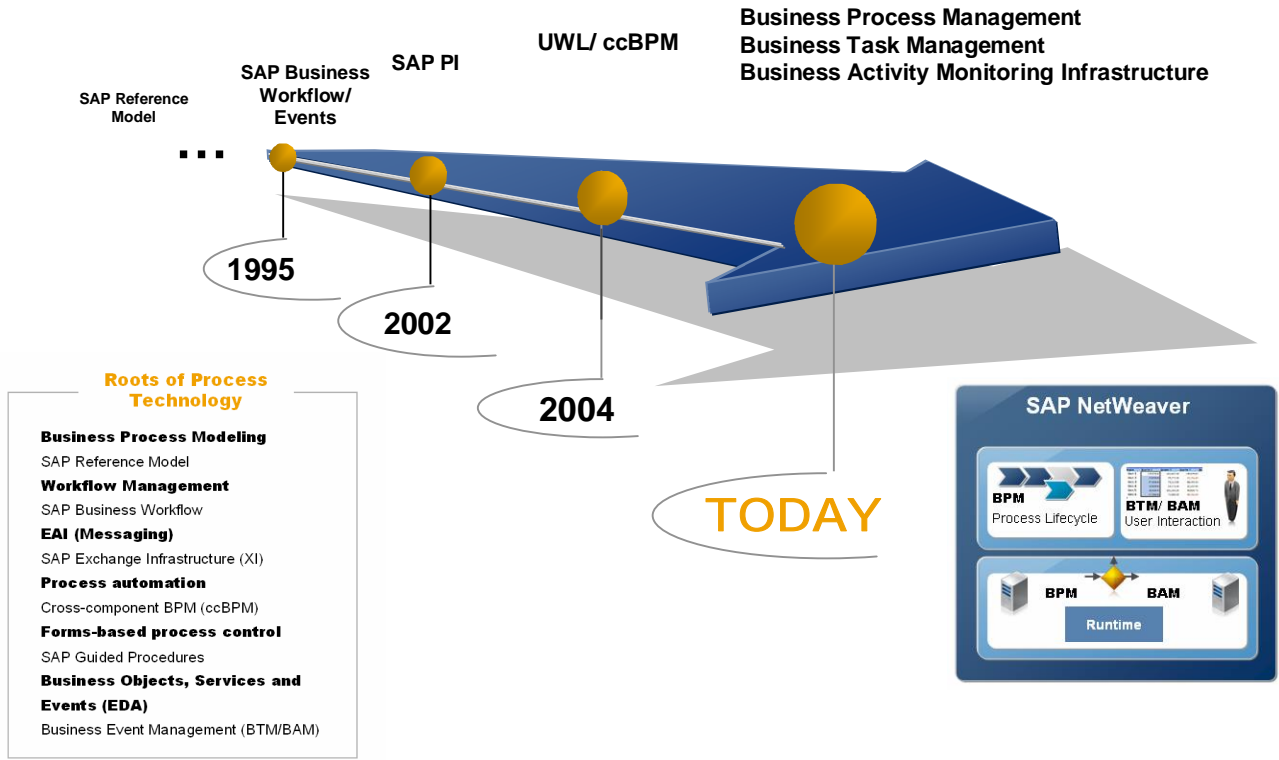
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# Evolution of Business Process and Event Management



## SAP NetWeaver

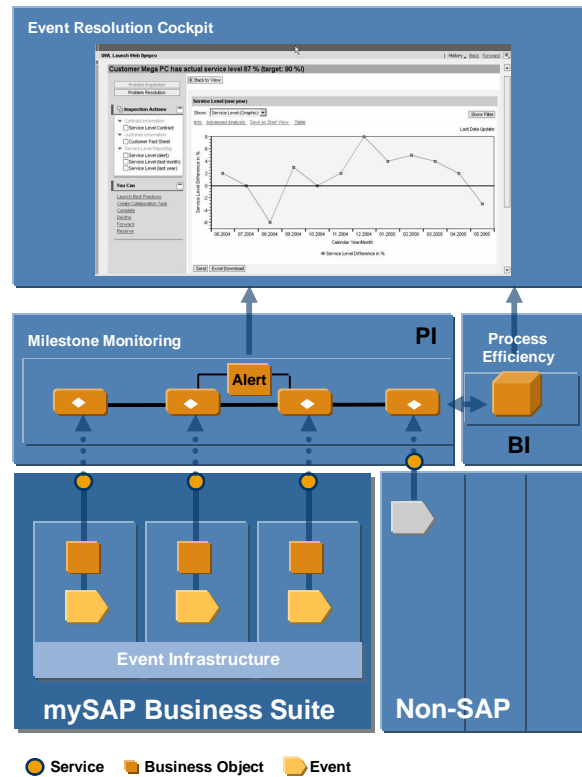




## Business Activity Monitoring

A framework (technical infrastructure) that enables users to

- Act on significant events and take the correct action in the right work context
- Monitor, measure, and improve the efficiency of business processes

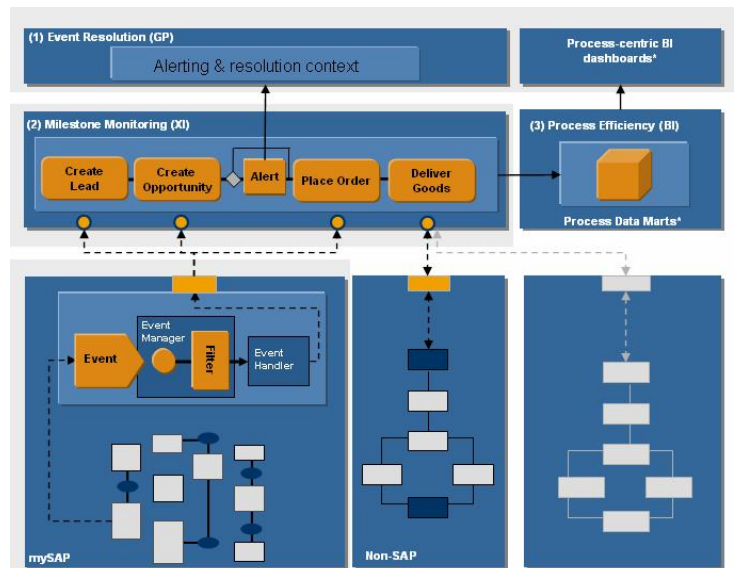


# Key Capabilities Business Activity Monitoring (BAM)



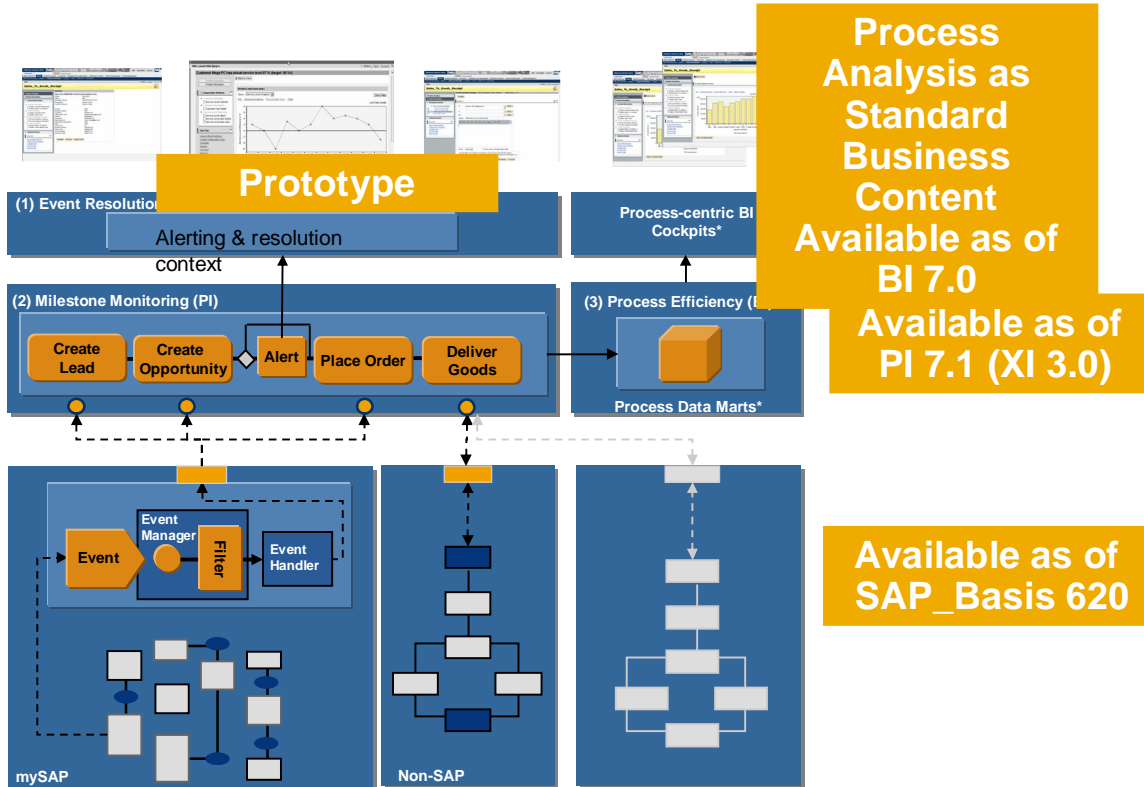
## What's new?

- **Event Resolution Cockpit**
  - Central context storage
  - Event Resolution Templates to guide users context-sensitively through problem inspection and resolution
- **Process Milestone Monitoring**
  - Event-based monitoring of key process milestones
  - Subscription and handling of business process events
  - BPM modeling (BPEL)
- **Process Efficiency**
  - Analysis of efficiency of processes
  - Based on milestone monitoring
- **Embedded Event Infrastructure**
  - Infrastructure, embedded in mySAP Business Suite applications
  - Enables collecting, pre-filtering and publication of events for inter-system usage across SAP and Non-SAP systems



- BAM combines existing and new functionality into a consistent framework for SAP, ISV's and customers.

# Status Business Activity Monitoring (BAM)

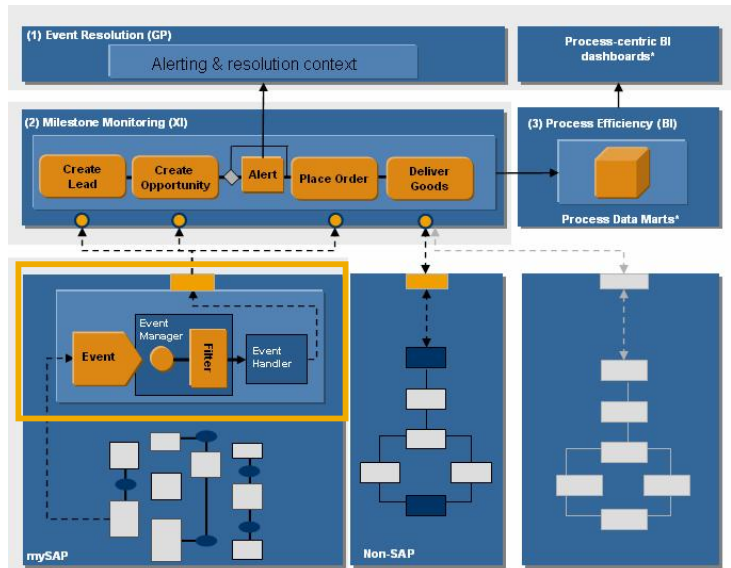


- Milestone Monitoring is already available as of SAP Exchange Infrastructure (XI) 3.0 (SAP NetWeaver2004). Sap NetWeaver PI7.1 provides new functionalities which makes user much convenient to define a milestone monitoring process.
- Event Resolution part is a prototype and not released to customer.
- Process Analysis is delivered with SAP NetWeaver 7.0 BI Content Add-On 2.
- Event Infrastructure is available as of SAP\_Basis 620.

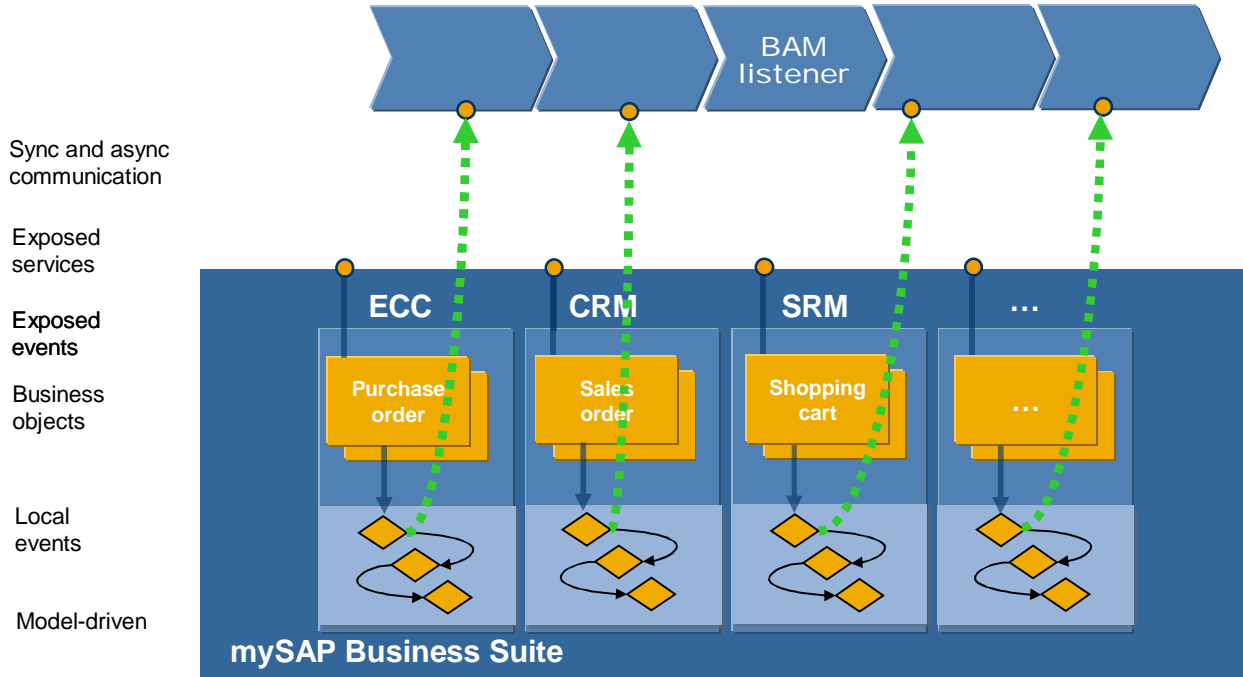


## Event Infrastructure

- Infrastructure embedded in mySAP Business Suite applications
- Enables collecting, pre-filtering, and publication of events for cross-system use across SAP systems



# Monitoring Event Creation and Filtering How It all Comes Together



### Event enabling

- Propagate significant events beyond the application system boundaries ("chattiness")

### Scenario characteristics

- BAM listener as passive component needs to be notified
- Applications are communicative – raise events

- Milestone Monitoring Process subscribes from which events it should be notified.
- Local events (sales order is created etc) will be sent to Milestone Monitoring Process via Event Infrastructure.



### Transaction SWF\_BAM:

- **Embedded Event Infrastructure**

- Infrastructure embedded in mySAP Business Suite applications.
- Enables collecting, pre-filtering, and publication of events for cross-system usage across SAP and non-SAP systems.

- **Available as of SAP\_Basis 6.20.**

- **For details please refer to SAP Note 879121.**

## Monitoring Event Creation Transaction SWF\_BAM



The screenshot displays the SAP Business Activity Monitoring Administration interface. It shows two tables for event linkages, each with columns for Activation, Data flow, and Condition. The top table is for 'Event Linkage: App. Object PI Proxy' and the bottom table is for 'Event Linkage: App. Object Alert Category'.

A.	B.	C.	Cate...	Object Type	Event	Proxy Object	IFR Name	IFR Namespace	Condition
			BO	FORMABSENC	CHANGED	DO_USBAM_TEST	BAM_test	http://sap.com/RN/Test01	&_EVT_OBJECT.DEPARTMENT& < 5000...
			BO	FORMABSENC	CREATED	DO_CAT_PING	CAT_PING	urn:sap-com:document:sap:rfc:functi...	
			BO	FORMABSENC	DELETED	DO_CAT_PING	CAT_PING	urn:sap-com:document:sap:rfc:functi...	

A.	B.	C.	Cate...	Object Type	Event	Alert Category	Description	Condition
			BO	FORMABSENC	CHANGED	ALERT1		
			BO	FORMABSENC	CHANGED	BOOK_SOLD_OUT	Book Sold Out	

### ■ Here you have two possibilities:

- Link event to message proxy to publicate event to SAP NetWeaver Process Integration. Message proxy should be defined within PI. You can also use condition to filter events before they are published to SAP PI, for example, if a sales order is changed and the sales order value > 1000 Euros, this event should be published to SAP PI.
- Link event to alert category which is defined with the SAP central alert framework (transaction ALRTCATDEF). Meaning that if an event is occuring then an alert can be triggered. The same as event linkage to message proxy, you can use conditions to select a certain events to trigger an alert.

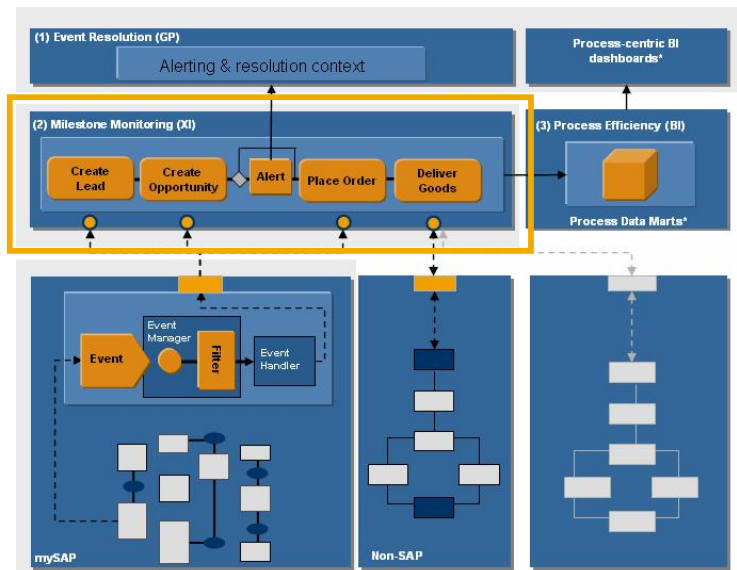


# Process Milestone Monitoring



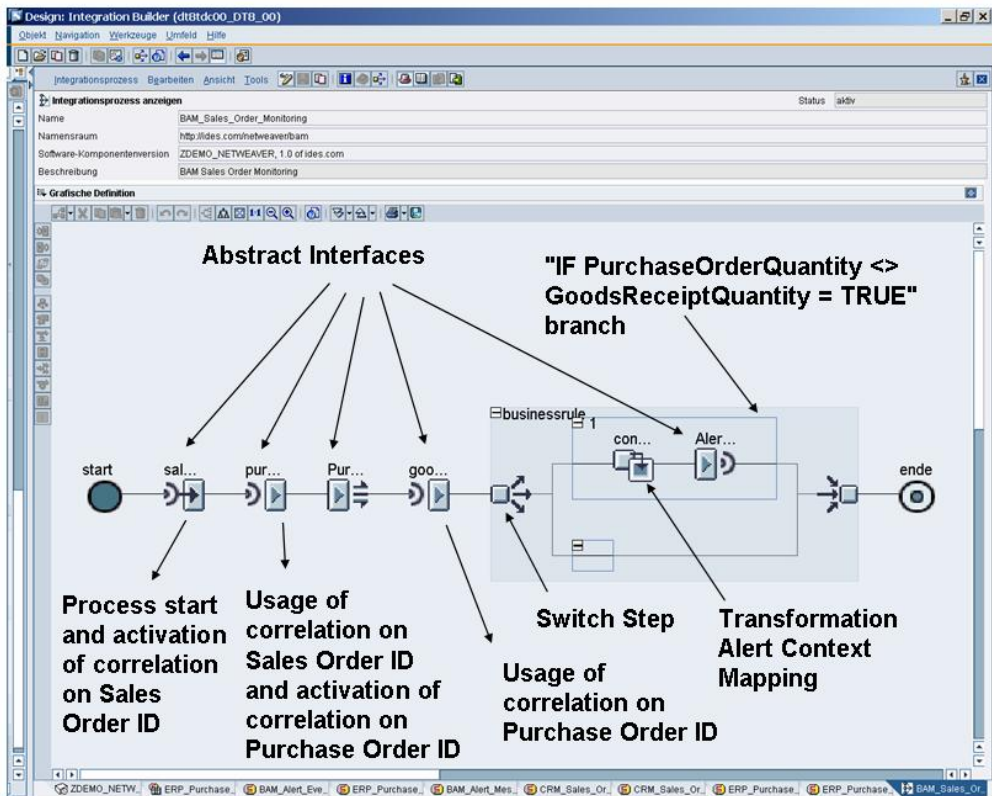
## Process Milestone Monitoring

- Event-based monitoring of key process milestones
- Subscription and handling of business process events
- BPM modeling (BPEL)
- Building consistent business process instances across different application system
- Providing rich business context information
- Basis for process efficiency analysis



- BAM Infrastructure leverages the ccBPM capabilities to define Milestone Monitoring Process.

# Defining Milestone Monitoring Process

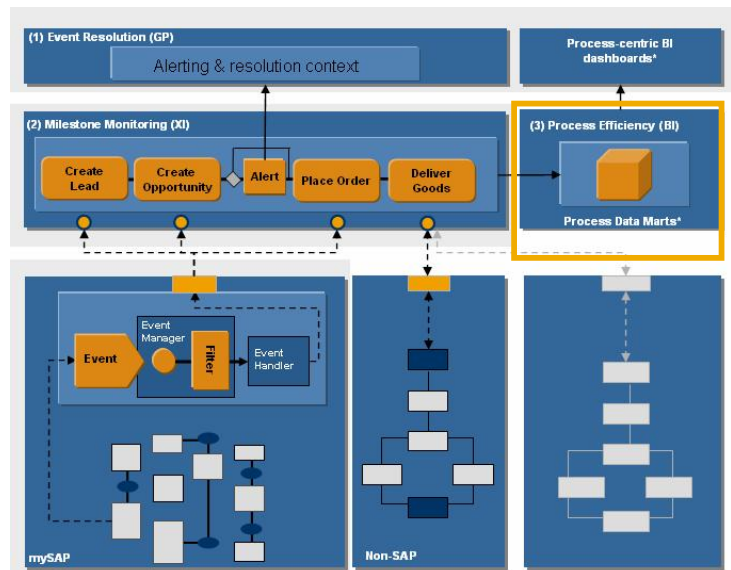


- The BAM sales order process should be defined as a Monitoring Process.
- This process consists of:
  - Three steps: receiving sales order + receiving purchase order + sending purchase order item
  - One step group: receiving goods receipt + transformation (alert context mapping) + BAM alerting
  - Condition statement: if PO quantity does not match goods receipt quantity, then raise an alert



## Process Efficiency Analysis

- **Process reporting with SAP NetWeaver Business Intelligence**
- **Based on the data of Process Milestone Monitoring**

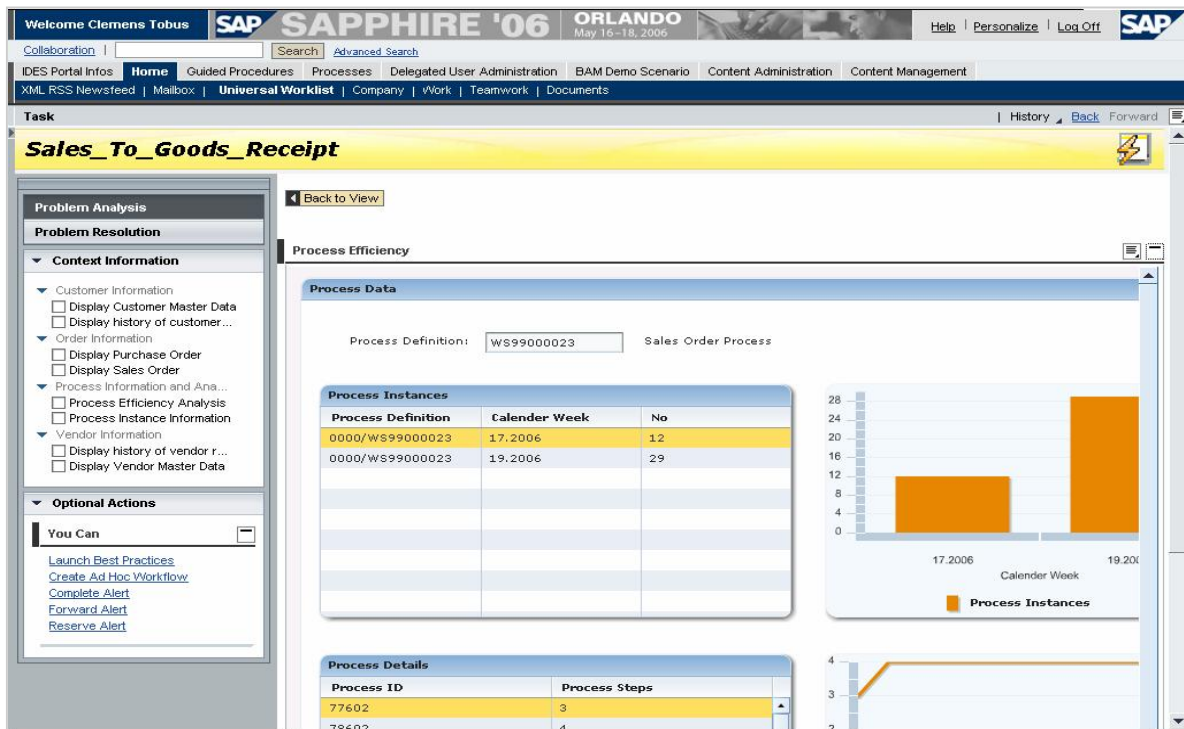


- Process instance data can be loaded into SAP NetWeaver BI for reporting purpose.
- With the delivered standard business content for workflow/process, process efficiency analysis can be undertaken:

Examples:

- How many processes of type 'xyz' were executed?
- What is the average processing time for a process (step)?
- How many steps of type 'xyz' were executed by org unit 'abc'?
- How many approval processes are in (application defined) status 'abc'?
- How many processes are concerned with purchase orders of value > 10.000€?

# Process Efficiency Analysis



- Here is an example about process efficiency analysis which are implemented with SAP NetWeaver Business Intelligence and SAP NetWeaver Visual Composer.

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## Summary



- **BAM is a capability, not a piece of software**
- **SAP understand BAM as a capability which**
  - enables user to act on significant events within the right work context
  - monitor, measure and improve process efficiency
- **Current SAP's BAM offering provides strong BAM Infrastructure:**
  - **Embedded Event Infrastructure** enables collecting, pre-filtering, and publication of events for cross-system use across SAP systems
  - **Process Milestone Monitoring** enables subscription and handling of business process events and also building consistent business process instances
- **Process Efficiency Analysis** provides process related reporting with SAP NetWeaver BI.
- **Event Resolution** as a part of BAM is not released to customer yet.



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