



IBM Software Group

SAP integration workshop

SAP NetWeaver Composition Environment Version 7.1 and SAP xApps



@business on demand.

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Welcome to the SAP NetWeaver Composition Environment presentation as part of the SAP Integration Workshop. This presentation will discuss the SAP tools to generate xApps, combined with an explanation of the xApps and the general service idea. Finally this presentation will discuss the xApps that are already available in the market.

SAP NetWeaver Composition Environment – Key capabilities

- **A lean, robust application server based on Java EE 5 technology**
 - ▶ latest Java EE 5 features, Service Data Objects (SDO) 2.1
- **An integrated environment for Java application development**
- Eclipse 3.2, Java EE 5, EJB 3.0 and JSF 1.2
- **Model-driven tools for increased development productivity**
 - ▶ Visual Composer
 - ▶ Web Dynpro
 - ▶ Composite Application Framework
- **Service orchestration into user-centric collaborative workflows by means of reusable building blocks**
 - ▶ Guided Procedures
- **UDDI-based service registry for service provisioning and discovery**
 - ▶ Includes UDDI v3-based service registry
- **User interaction by a lightweight portal**
 - ▶ Includes portal stub

2

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Here is a short summary about the key capabilities of SAP NetWeaver Composition Environment.

The environment is based on JavaEE 5 technology and delivers an integrated environment to develop applications based on this API version.

This development environment is Eclipse 3.2 based and supports the actual versions of Java, EJB and JSF.

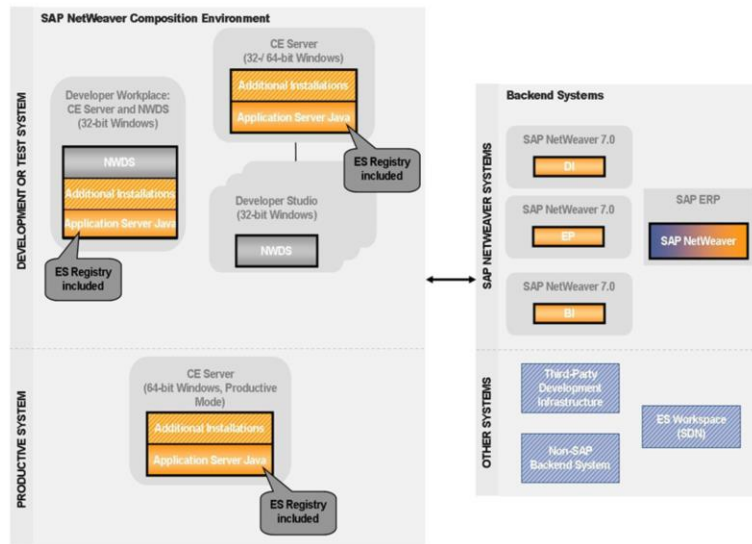
The offering includes different model-driven tools to increase the productivity in different working scopes. The visual composer is more business driven and a tool to easy assemble services in a visual editor. The Web Dynpro environment offers more possibilities to work with code and build a specialized solution. Last the Composite Application Framework is focused on the build of reusable applications and services.

These collaborative workflows are called “guided procedures” and are again reusable services for other processes.

The CE includes a UDDI version 3 based service registry for service provisioning and discovery. This Enterprise service registry offers more possibilities then a native UDDI.

As a user interface the CE includes a lightweight portal stub, so the applications can then be easily transferred to a full portal environment.

SAP NW CE – System landscape



In the NetWeaver CE landscape there are two main blocks.

The source of information, illustrated on the right, could be any SAP or Third Party server.

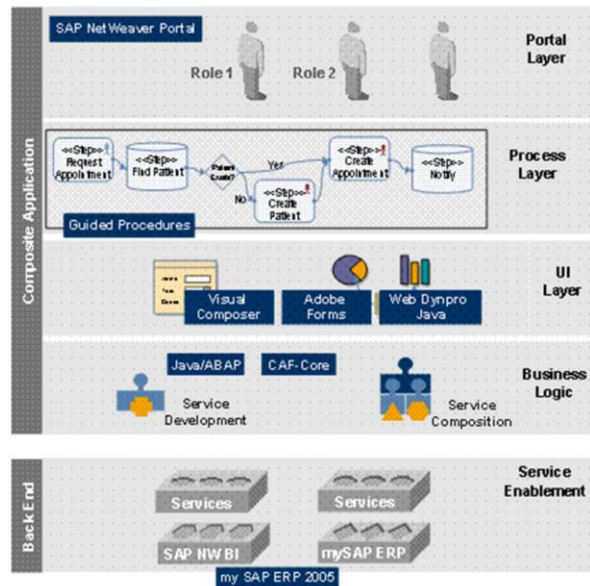
In the development environment you have two options.

The Development Workplace combines the tools and the CE server on one physical box so you have a complete development environment installed together.

But if you plan to work with different Developer Studio instances on one CE Server, for example, in a development department, this is also possible.

In a production environment you just need the runtime CE server and deploy the generated applications on it.

SAP NW CE – Composite applications layers



In the composite application layer you see the commonality to the IBM story. But there is one difference.

In the backend there are the granular services which offer operations and information. These get leveraged in a business logic to build reusable services.

Now SAP has a user interface layer which is not represented in the IBM story. The difference is that SAP builds here already user interfaces in WebDynpro.

In the process layer SAP combines the service components including the user interface to guided procedures which get performed by you in a portal layer.

Over all you see the SOA thinking in building reusable services out of granular back-end services.

SAP NW CE – Windows®

	Windows 2003
	Server 2003 on x64 (64-bit)
SQL Server 2005	X
MaxDB 7.6	X

Availability: NW CE server

(Java / JEE core layer and all components running on top of it)

- ▶ Unicode only
- ▶ 64 bit only
- ▶ SAP JVM only

	Windows XP
SQL Server 2005	X
MaxDB 7.6	X

Availability: NW CE Single PC Installation / Developer Workplace



Here is the Platform Available Matrix for Windows.

As you see the CE is supported on WinXP 32bit for a single pc installation called developer workplace and Windows 2003 Server 64bit for the stand-alone Netweaver CE server installation.

On both systems the Microsoft SQL Server and MaxDB are supported. IBM DB2 is on the way to get supported, always check the newest release notes.

Browser support for users and administration

Rendering Technology	Browser	IE 7	Firefox 1.5, 2.0
		Windows XP (incl. SP2)	Windows XP (incl. SP2)
Web Dynpro		X	X
Adobe Interactive Forms		X	X
Adobe Flex		X	X

- This matrix shows generic NetWeaver support only and does not make statements about browser support in specific applications □□
- Browsers based on Firefox 1.5/2.0 engine will be supported “as-is”, that is, the reference for SAP support is Firefox 1.5/2.0 only. □□
- In general, the highest available patch level of a browser is recommended (for functional correctness, security etc) □□
- Client platforms are supported in 32 bit mode only

6

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For the client platform there is support for the 32bit versions of Internet Explorer and Firefox.

But make sure you have always the highest available version and patch level installed.

xApp

***SAP xApps are composite applications
based on Enterprise Services Architecture
that implement Next Business Practices***

Composite Application: “apps on apps”

**ESA: Service-oriented architecture for adaptive
business solutions, built on NetWeaver**

**Next Business Practice: innovation for competitive
advantage (Pralhad)**



The next slides will focus on the xApps. To start, the term xApp needs to be explained. The SAP xApps are composite applications based on Enterprise Service Architecture that implement Next Business practices.

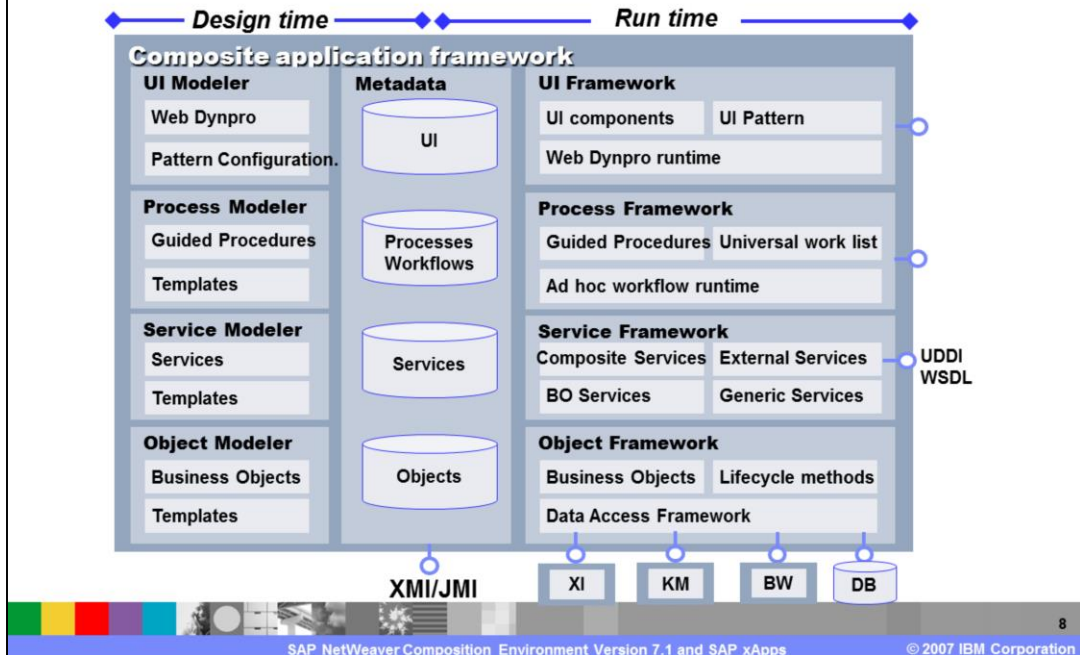
Again there are three buzz words in this explanation.

The composite applications are applications which are built out of a bunch of other applications or services.

The ESA is now also known as eSOA. It is a service oriented architecture for business solutions, build on NetWeaver technology.

In Next Business Practices SAP, see the future of solutions for customer needs.

Anatomy of the composite application framework

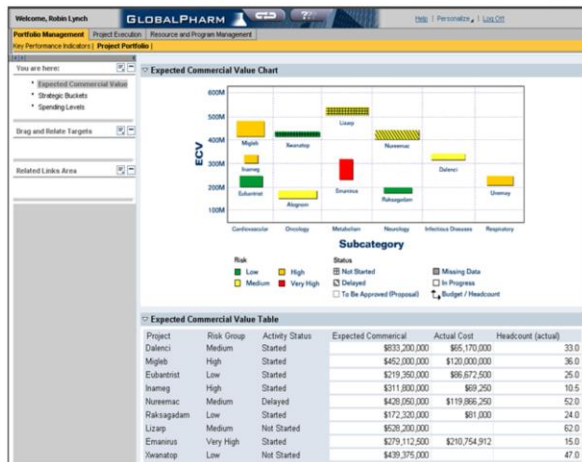


This slide shows the composite application framework in more detail. There are a lot of components grouped in this framework.

The composite application framework has components for user interfaces, processes, services and objects and is always in a design time modeling and a runtime framework. The bridge between design and runtime are the stored metadata in XML.

Applications build with all these components are available as xApps. The next slides will discuss six different xApps and their benefits.

SAP xApp resource and program management



Improve productivity by effectively monitoring, analyzing and managing major enterprise projects

Improve time-to-market by speeding up project delivery cycles for strategic initiatives and get the right resources to the right projects

Reduce project failure rates by identifying and addressing at-risk projects earlier

Reduce personnel costs by improving utilization, reduce turnover and associated new-hire costs

•SAP xRPM is designed to improve the running of complex R&D and IT projects by focusing on portfolio and resource management across heterogeneous project systems.

The first xApp introduction is the xApp Resource and Program management also known as xRPM.

SAP xRPM is designed to improve the execution of complex R&D and IT projects by focusing on portfolio and resource management across heterogeneous project systems.

The targets of this solution are:

Improve productivity by effectively monitoring, analyzing and managing major enterprise projects.

Improve time-to-market by speeding up project delivery cycles for strategic initiatives and get the right resources to the right projects.

Reduce project failure rates by identifying and addressing at-risk projects earlier.

Reduce personnel costs by improving utilization, reduce turnover and associated new-hire costs.

SAP xApp product definition

Notification Inbox

Type	Subject	Received
Task	Deadline passed for survey of Handheld Features	06/14/03
Assignment	Review Product Concept Risk Analysis: Notebook	06/10/03
Notification	Product Design Review: Digital Photo Printer	06/09/03
Assignment	Review team goals and progress for quarter	06/08/03

My Concepts

Name	Revenue	Profit	Risk	Progress	Status
1	100M	\$2.2M	High	In Progress	In Progress
2	100M	\$3.1M	Medium	Approved	Approved
3	100M	\$1.2M	Low	In Progress	In Progress
4	100M	\$1.1M	High	Cancelled	Cancelled

Analyst News

Recent Whims Shows Hackers Love Patched Products: Gartner, 06/11
The recent security attack on Microsoft's SQL Server shows the vulnerability of products that need frequent security patches. Enterprises that use SQL...

Home Display Pkts First, Mobile Later: Forrester, 06/11
Deployment of enterprise mobile data crept up to 24% for the last 12 months, but almost half of all firms are considering adding mobile computing...

New Ideas and Concepts

New Ideas
15 submitted in last week, 30 submitted last month, 12 to review

Concepts
5 created in last week, 15 created last month, 7 in review

Innovation Cycle

ES&J Pharma
3 new messages, 2 replies

File Services and Server Farms
2 new messages, 0 replies

Gadgets and Tools
12 new messages, 1 reply

Location Based Services
8 new messages, 4 replies

Survey Results

New Network Storage Device Product Name

Product Name	Number of Votes
DataMax	100
Storage Pro	200
Terahp	150

Effective product definition:
capture and evaluate requirements to develop needed products and services

Efficient innovation process:
visible, managed, and reusable processes reduces delays and errors

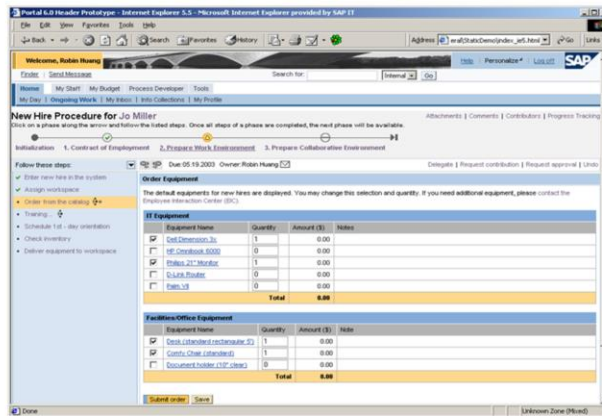
SAP xPD is designed to address the hurdles and inefficiencies of the critical product development processes: idea and requirements management, product definition, and design evaluation processes.

The xApp Product Definition is also known as xPD.

SAP xPD is designed to address the hurdles and inefficiencies of the critical product development processes: idea and requirements management, product definition, and design evaluation processes.

The targets of this solution are to produce effective product definition, by capturing and evaluating requirements to develop needed products and services and to use an efficient innovation process through visible, managed, and reusable processes which reduces delays and errors.

SAP xApp employee process management



Improves the quality of work by providing standardized processes

Ensures flexibility through ad hoc changes

Enables efficient interaction with co-workers through role-based collaboration

Enforces guidelines and corporate policies by providing business process templates

Allows rollout of best and next practices through business process templates

•SAP xApp EPM focuses on employee productivity by streamlining frequently occurring tasks – with a powerful and flexible tool for defining and managing workflows. It's the solution to guide you through your daily employee centric processes.

The xApp Employee Process Management is also known as xEPM.

SAP xApp EPM focuses on employee productivity by streamlining frequently occurring tasks – with a powerful and flexible tool for defining and managing workflows. It's the solution to guide you through your daily employee centric processes.

The targets of this solution are to improve the quality of work by providing standardized processes, ensure flexibility through ad hoc changes, enable efficient interaction with co-workers through role-based collaboration, enforce guidelines and corporate policies by providing business process templates and to allow rollout of best and next practices through business process templates.

SAP xApp knowledge network

The screenshot displays the SAP xApp knowledge network interface. At the top, it shows the user's name, 'Joshua Miller', and a 'Summary' tab. Below this, there is a 'Search History' section with a search form and a list of search results. The main content area shows a user profile for 'Joshua Miller' with details such as 'SAP America', 'Phone: +1 650', 'Department: HR Development', and 'Title: Asst. 4th Generation, ABAP Objects, JANA, COBOL, Delphi, Shell, IBM, Perl, Java Script Programming, Rational Rose, Software Ergonomics, Paper and Electronic Prototyping, JDBC, Java Database Connectivity'. A 'Qualifications' tab is selected, showing a list of skills and their proficiency levels. The 'My People' section on the right shows a list of consulting networks and a search bar.

Proficiency	Skill	Skill Family
Expert	Ada	Programming Languages
Expert	4th Generation	Programming Languages
Expert	ABAP Objects	Object Oriented
Expert	JAVA	Programming Languages
Proficient	COBOL	Programming Languages
Advanced	Delphi	Object Oriented
Advanced	Perl/ECG	Internet Programming
Advanced	Perl/Java Script Programming	Internet Programming
Advanced	Rational Rose	CAD/Tool (Graphic Model)
Advanced	Software Ergonomics	Human Computer Interaction
Proficient	Paper- and Electronic Prototyping	Human Computer Interaction
Interest	JDBC: Java Database Connectivity	Database

Increases employee productivity by exposing resources, communities, and experts

Increases enterprise productivity and knowledge assets by collecting knowledge automatically

Efficiently distributes information automatically to co-workers

Increases quality of work through better information and community support

•SAP xKN comprises a variety of functionalities that enable efficient knowledge sharing within a company. It is designed to help employees gather, coordinate and share information much more effectively.

The xApp Knowledge Network is also known as xKN.

SAP xKN comprises a variety of functionalities that enable efficient knowledge sharing within a company. It is designed to help employees gather, coordinate and share information much more effectively.

The targets of this solution are; to increase employee productivity by exposing resources, communities, and experts, increase enterprise productivity and knowledge assets by collecting knowledge automatically, efficiently distribute information automatically to co-workers and

increase quality of work through better information and community support.

SAP xApp mergers and acquisitions



Reduces merger risk by tightly integrating stakeholders and linking plans to execution

Provides decision support in specific post merger scenarios by analyzing and interpreting relevant data

Accelerates the merger process by managing the complex program of change

Makes success repeatable by standardizing the processes and capturing best practices

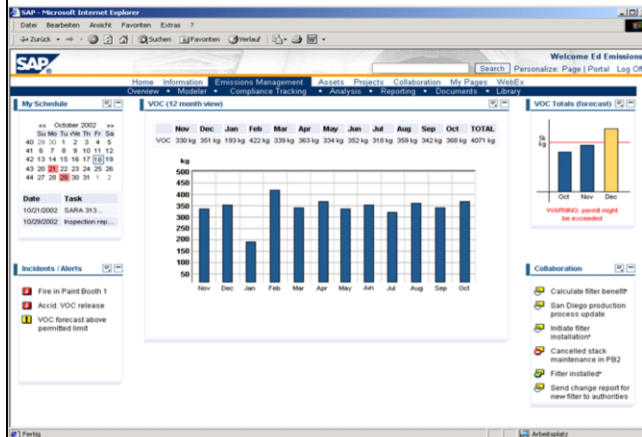
•SAP xMA brings together the right tools, methodologies, technologies and services to provide you with a reliable solution that will enable you to expedite your merger process and increase it's success.

The xApp mergers and acquisitions is also known as xMA.

SAP xMA brings together the right tools, methodologies, technologies and services to provide you with a reliable solution that will enable you to expedite your merger process and increase it's success.

The targets of this solution are; reduces merger risk by tightly integrating stakeholders and linking plans to execution, provide decision support in specific post merger scenarios by analyzing and interpreting relevant data, accelerate the merger process by managing the complex program of change and make success repeatable by standardizing the processes and capturing best practices.

SAP xApp emission management by Technidata



Improvement of process and risk reduction

- consistent information tracking for all processes
- trusted data for enterprise planning and risk management

Total compliance achievement

- fulfillment of required regulations (state, federal, international)
- early identification of deviations and critical issues

Integrated solution with potential

- full integration into the SAP world, utilization of R/3 key data
- functional completeness: tools for modeling, tracking, management

"The biggest barrier, and ultimate failure, of emissions management solutions on the market today, is their inability to easily access and use applications and data that are running manufacturing operations. With the xAPP Emissions Management built on SAP NetWeaver, this barrier is overcome and a highly functional integrated solution can be delivered.", so Jim Bausano, VP, Director Air Quality Services Energy, Environment & Systems CH2MHill



The xApp Emission Management by Technidata is also known as xEM. xAPP Emissions Management delivers a highly functional integrated solution built on SAP NetWeaver, which uses applications and data of running manufacturing operations.

The targets of this solution are; to improve the process and risk reduction by consistent information tracking for all processes, a trusted data for enterprise planning and risk management, total compliance achievement through fulfillment of required regulations from the state, federal or international governments, early identification of deviations and critical issues and an integrated solution with a full integration into the SAP world which also utilize R/3 key data.

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