

# SAP NetWeaver Web Dynpro Java

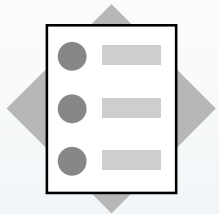


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**After completing this unit, you will understand:**

- **The basic concepts behind Web Dynpro**
- **The basic architecture of a Web Dynpro Component**
- **New features for Web Dynpro in SAP NW CE.**

# Agenda

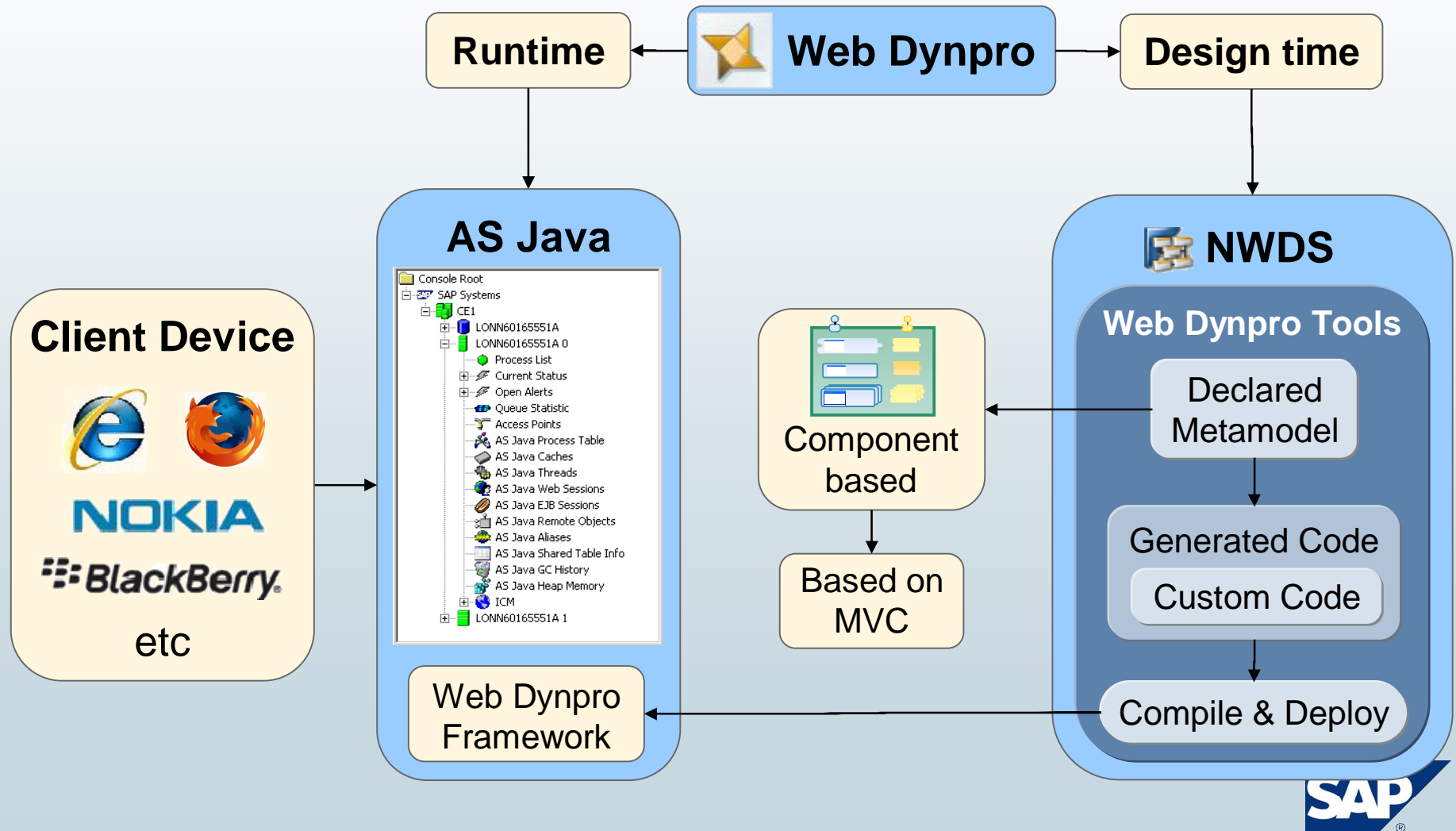


1. **Web Dynpro for NetWeaver CE 7.1**
2. Architecture of Web Dynpro
3. Status and Outlook

# What is Web Dynpro?



Web Dynpro is SAP's standard toolset for UI development and execution.



# What is Web Dynpro ?



## A Programming Model for User Interfaces

- Defines a standard structure for user interface applications
  - Derived from the MVC (“model-view-controller”) design pattern

## A Set of Tools for User Interface Design

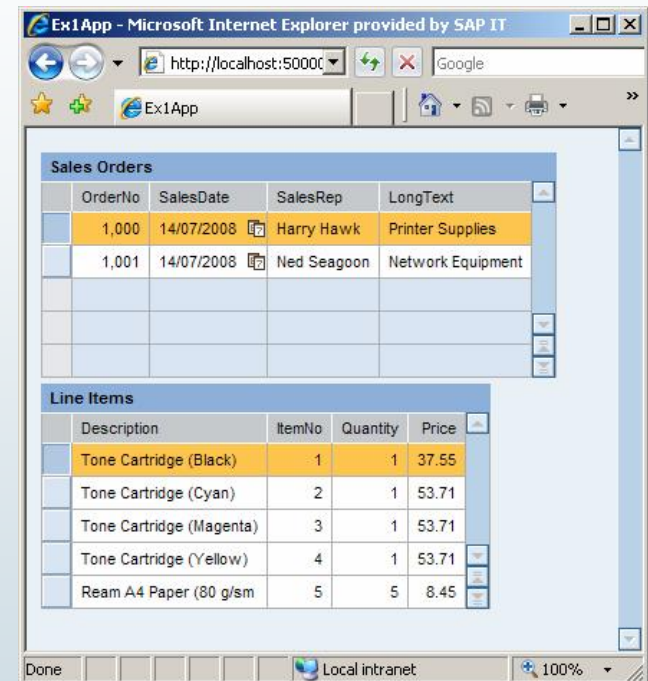
- Focus on graphical modelling
  - Code is generated from meta-model declarations
- Integrated in SAP NetWeaver Developer Studio

## A Runtime Environment for Applications

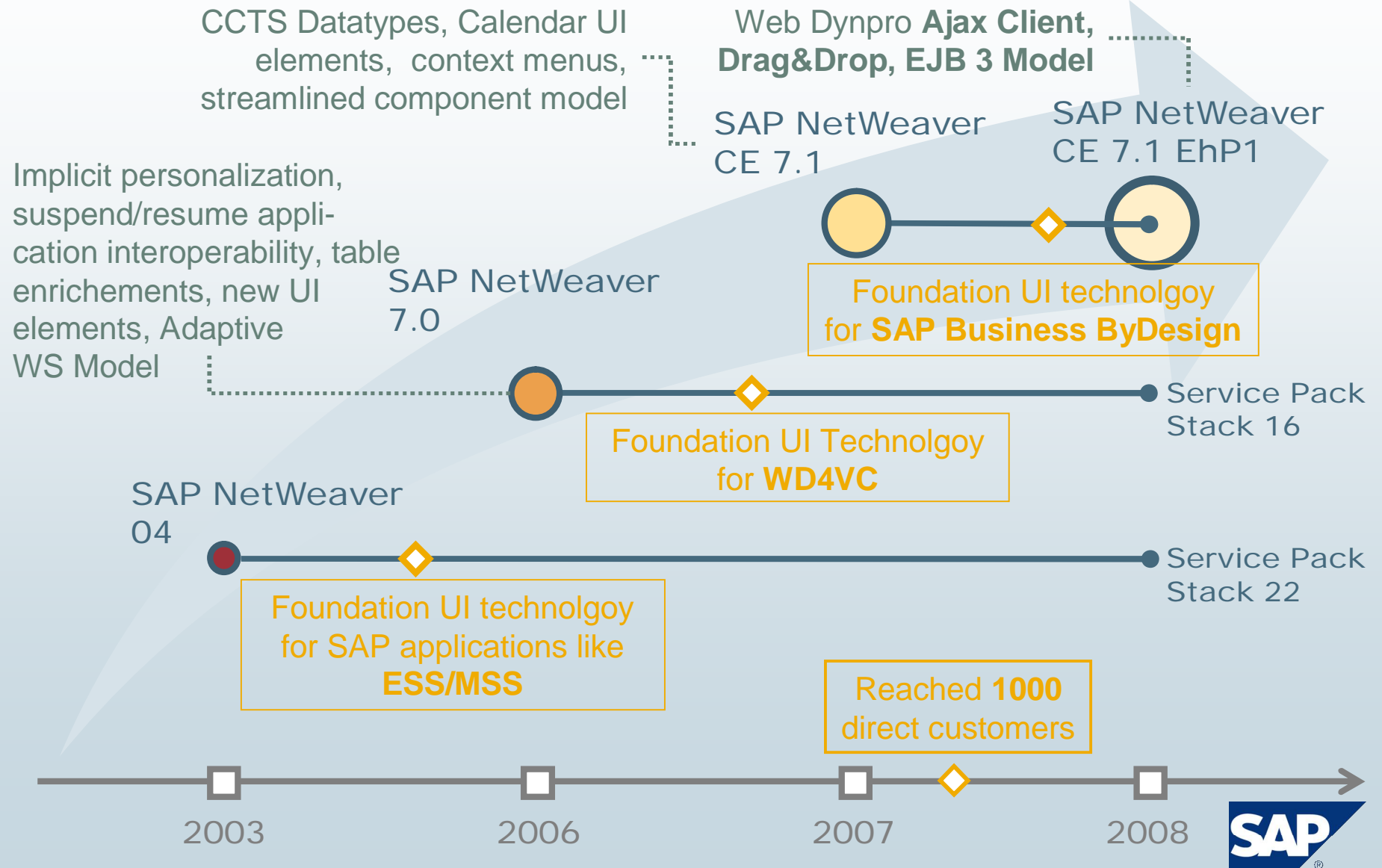
- Framework running on SAP’s J2EE server offers common services

## A Technology for Software Modularization

- Components help structure projects and support pattern-based UIs



# Web Dynpro Java Product History From 2003 to Now





### Model-Driven Development

- MVC Programming Model
- Ease of Development based on Declaration and Code-Generation
- Web Dynpro Tools

### Client Abstraction

- Client-Device-Independance
- Predefined UI-Element-Library
- Generic UI Services, Valuehelp, I18N, P13N\*, Accessibility

**Standard  
SAP NetWeaver  
Web-UI-Framework**

### Model Abstraction

- Common Model Interface
- Separation of Business Logic and Presentation Logic

### Component Model

- Reuse, Maintainability, Extensibility, Flexibility
- Loose Component Coupling using Interface Definitions

# Web Dynpro Main Benefits



- Deliver an Enterprise Quality Web Development Environment

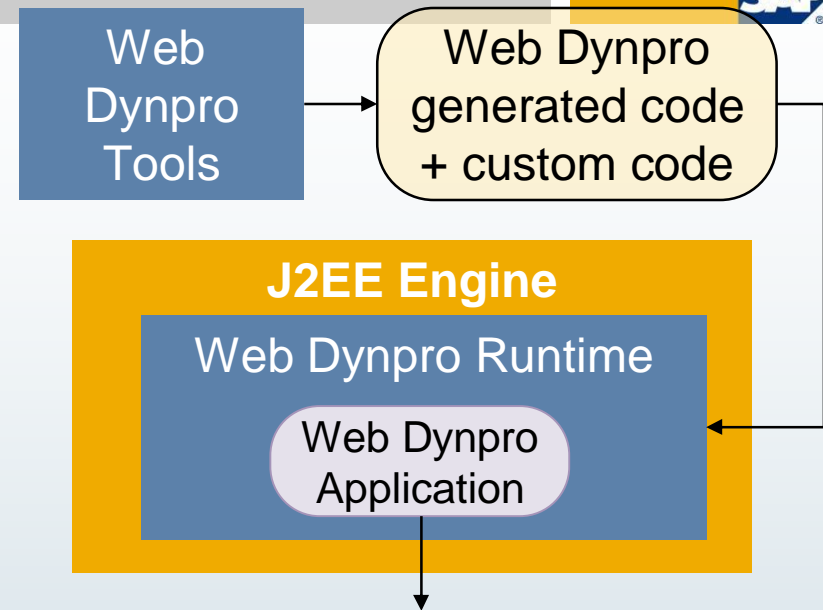
- Minimize coding, maximize design
- Strict separation between layout and logic
- Support arbitrary backend systems
- Support reuse of components
- Configuration of UI patterns
- Support web services and data-binding

- Achieve Client Independence

- Run on multiple platforms
- Zero client footprint

- Improve User Experience through a "High Fidelity Web UI"

- Flicker-free screen, minimal refreshes





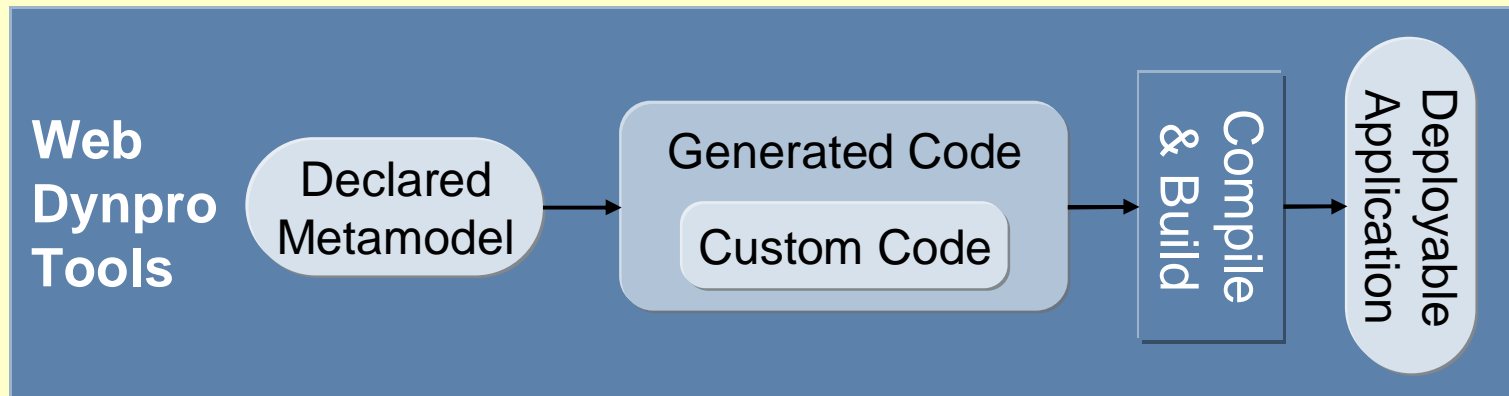
# Demo

# Agenda



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## SAP NetWeaver Developer Studio



### **Metamodel Declarations**

Guarantees that all applications have a standardised architecture

Good for graphical tool support

- Screen Layout and Nesting
- Navigation and Error Handling
- Data Flow
- Componentization
- etc...

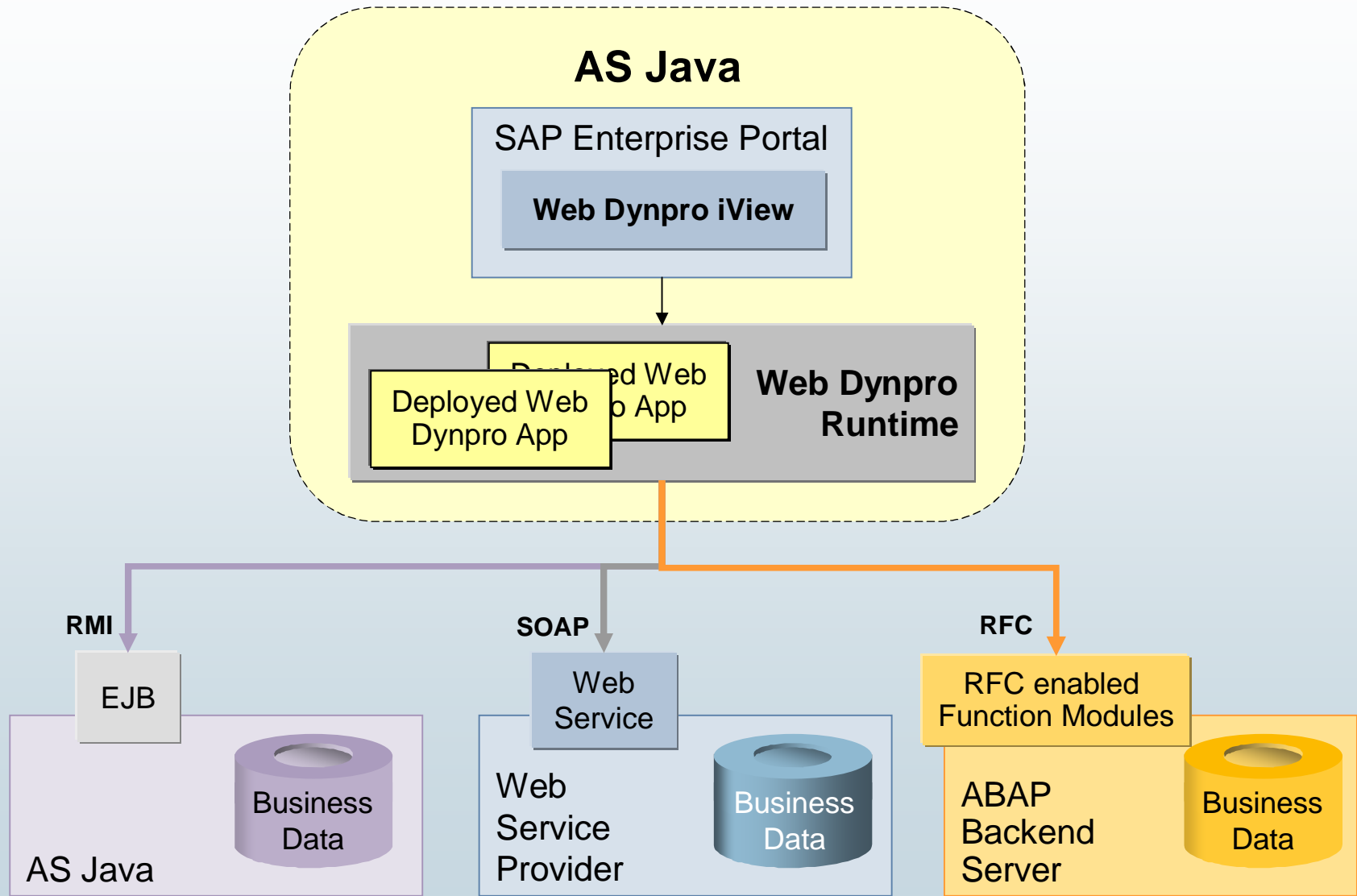
### **Custom Coding**

Custom business logic implemented within the framework of generated code

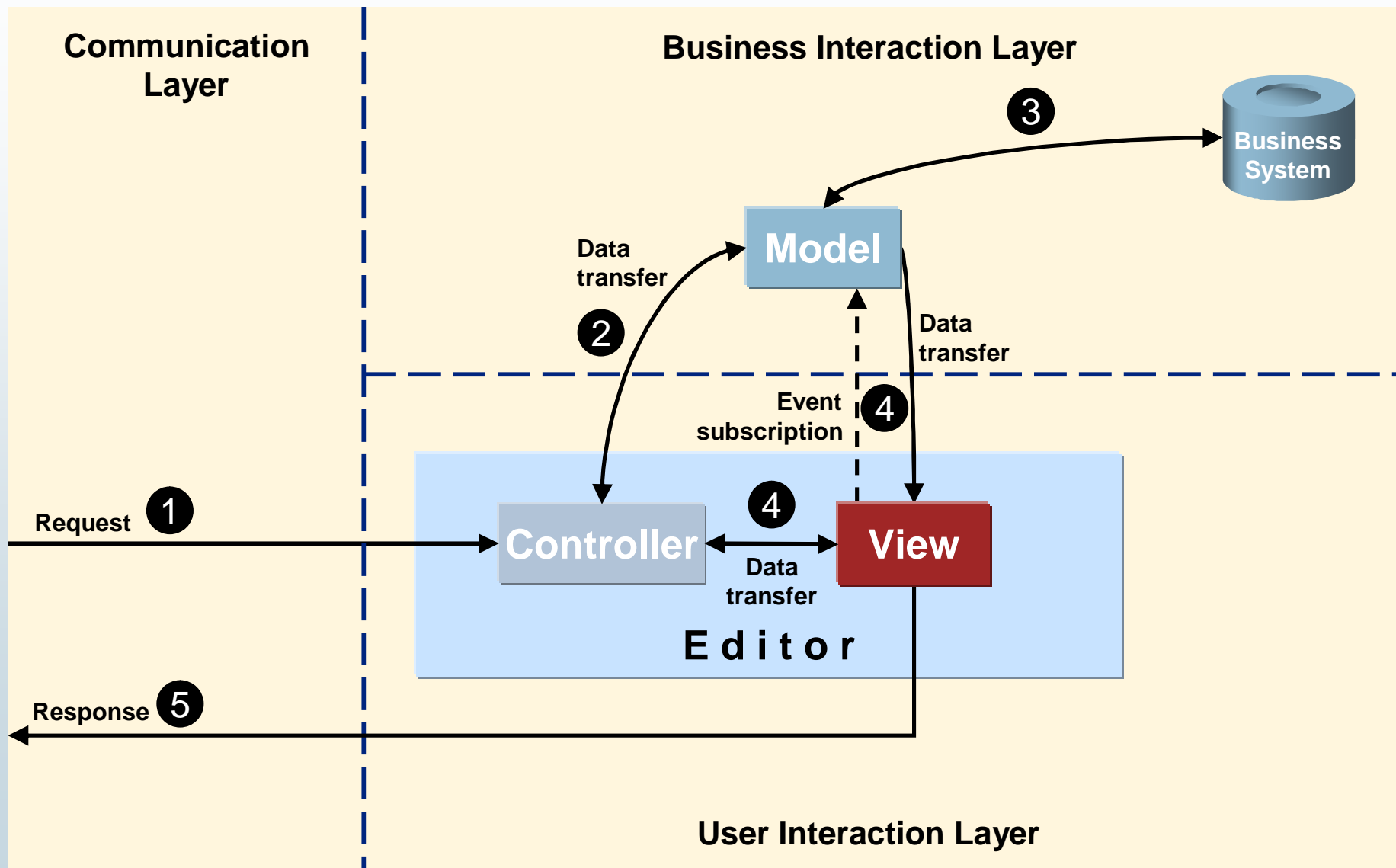
Good for data-driven, dynamic apps

- Implementation of business rules
- Dynamic screen modifications
- Access to backend systems (via models)
- Portal eventing
- etc...

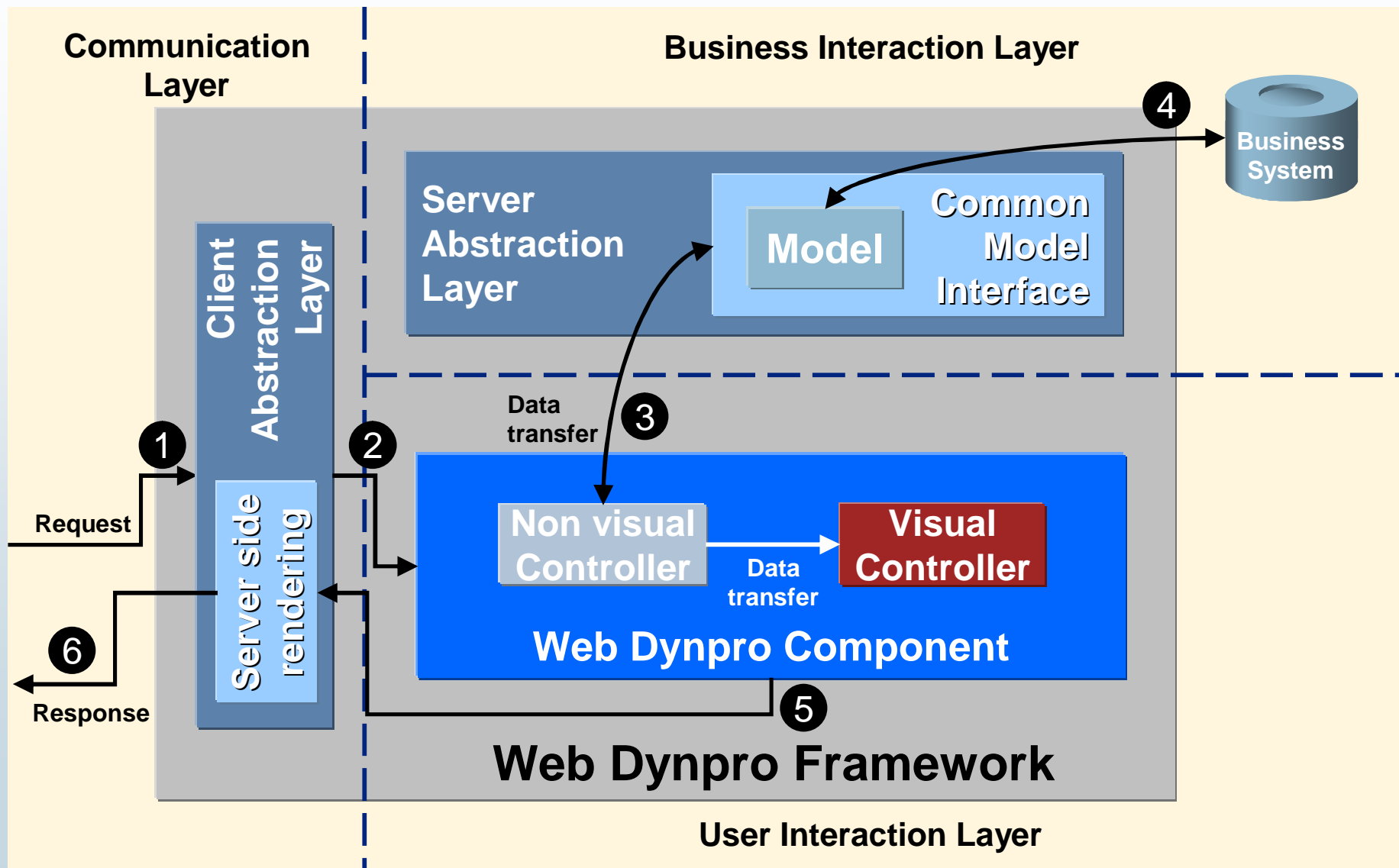
# Access to Backend Systems from Web Dynpro



# A Typical Implementation of the MVC Pattern



# MVC as Implemented Within Web Dynpro

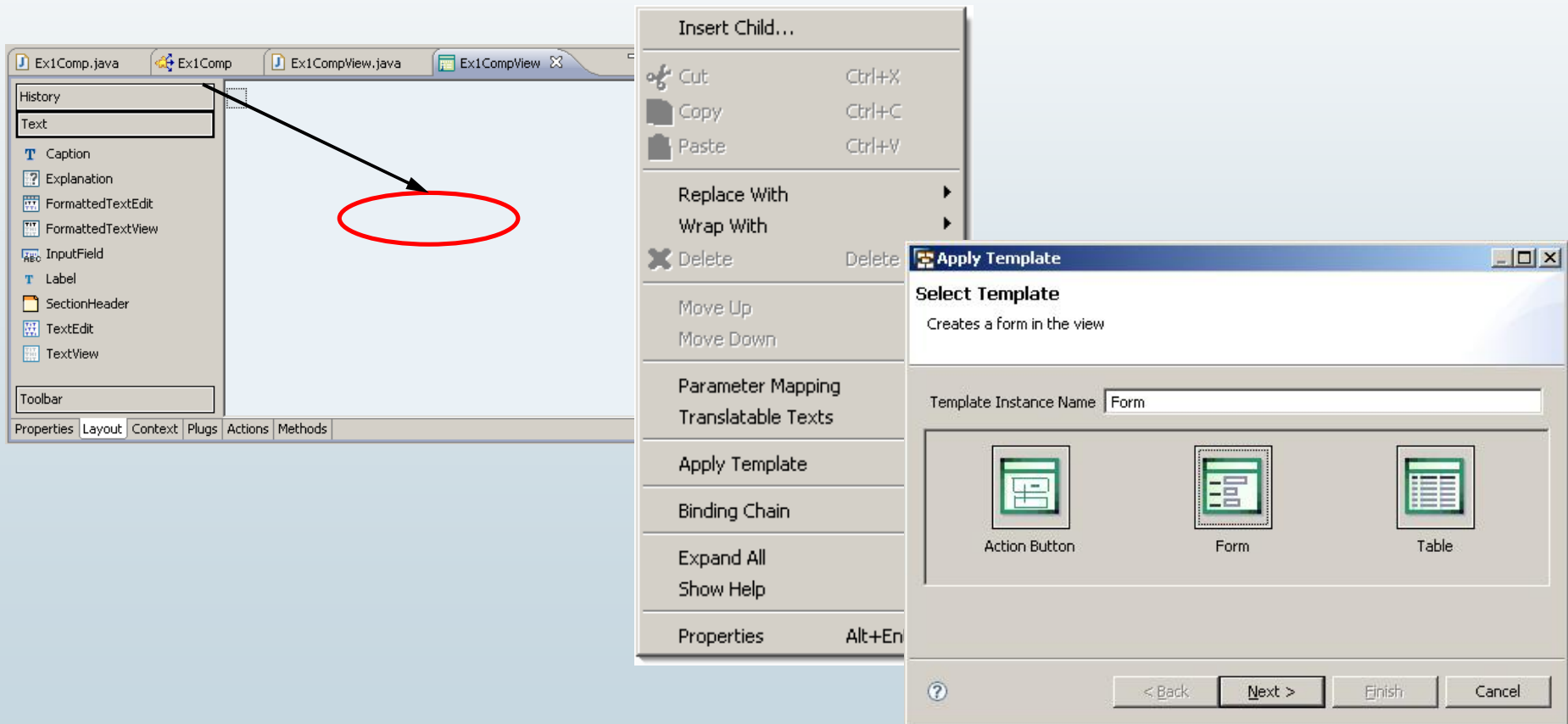


# Creating a Web Dynpro View - WYSIWYG



A view layout can be constructed in one of three ways. Either by:

- Dragging and dropping the individual UI elements onto the screen one at a time
- By using the “Insert Child” menu option in the Outline view
- Using the template wizard to create UI elements based on attributes found in the context

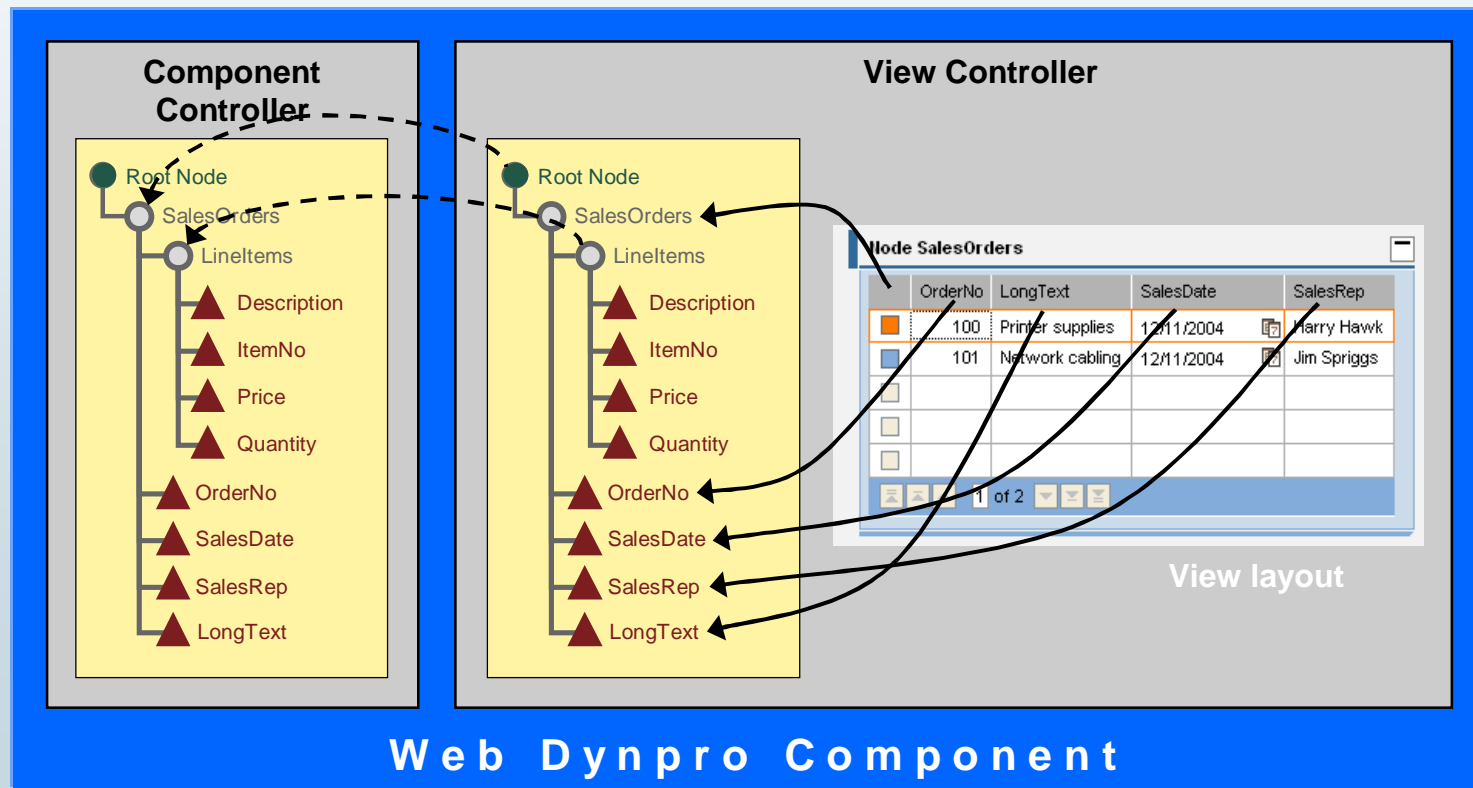


# Sharing Data - The Web Dynpro Context

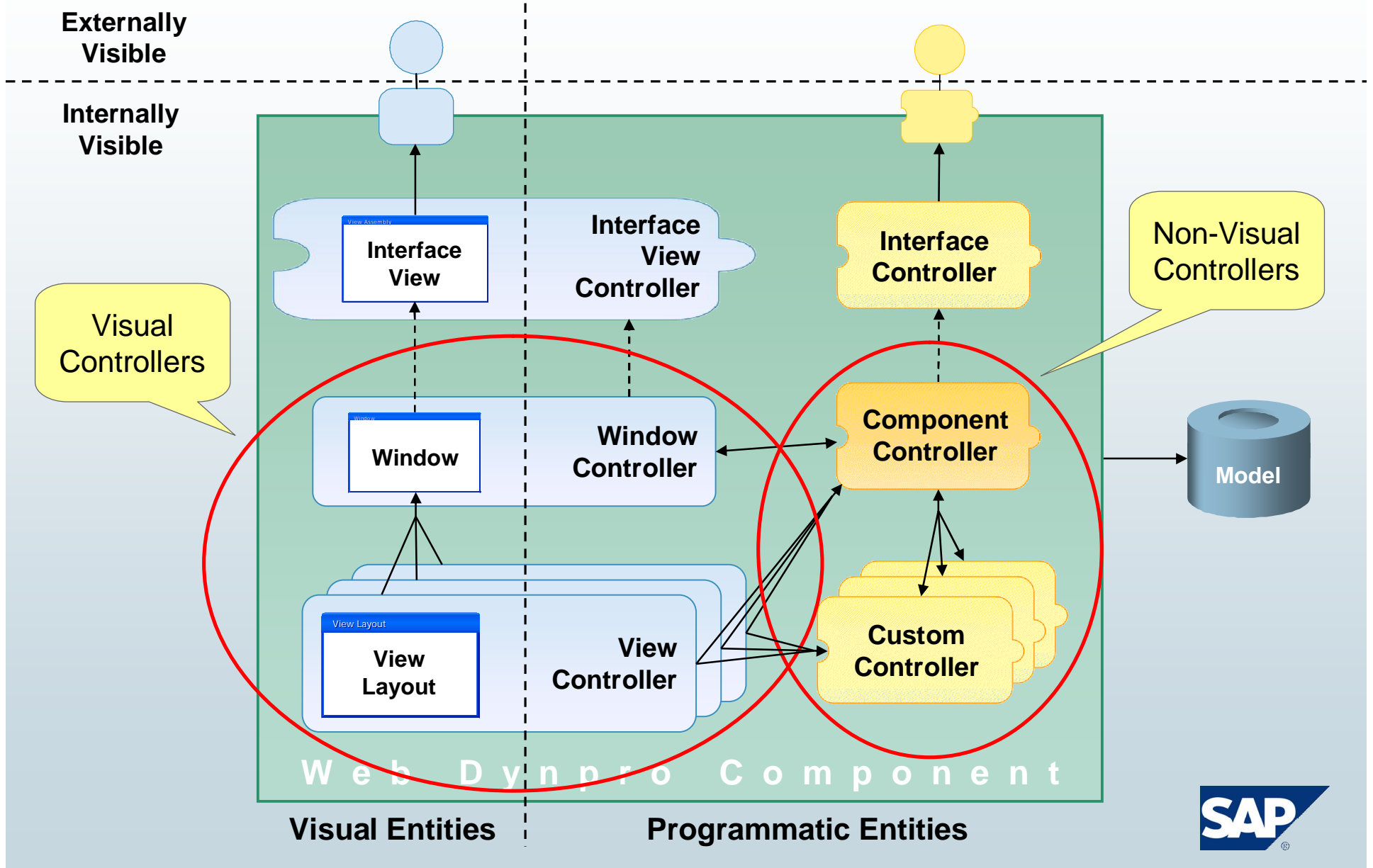


Why do Web Dynpro controllers have a context?

- To provide a standardized data storage structure common to all controllers
- To allow data to be shared easily between controllers (context mapping)
- To act as a data supplier for UI element properties (view controllers only)



# Web Dynpro Controllers



# Agenda



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## EJB Model Import

Enhanced Web Dynpro **UI Element Library** with new elements and new ColumnLayout

- RowRepeater, Calendar, Hierarchical Calendar, MessageBasedTrigger, FormatedTextView, ContextMenu,

## Highly Enhanced **Component Architecture**

- Window Controller, Window Plugs
- View Containers within Component Interface View Definitions
- Inheritance of Component Interfaces

Support of **CCTS Datatypes** within Web Dynpro Context and UI

## Enhanced **Context** capabilities

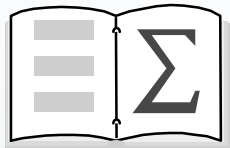
- Universal context elements overcome separation in value/model elements
- CMI-based: Paging, Sorting, Filtering

## Enhanced **Web Dynpro Tools** in the *NW Dev Studio* (name?)

- Component Modeler, WYSIWIG View Designer, Context Debugger, (Technical) Documentation Support, Component Migration Tool

Much More ....





**You should now be able to understand:**

- **The basic concept behind Web Dynpro.**
- **The basic architecture of a Web Dynpro Component.**
- **New features for Web Dynpro in SAP NW CE.**

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