

Razvoj formi pomoću JDeveloper i ADF

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Oracle Application Development Framework

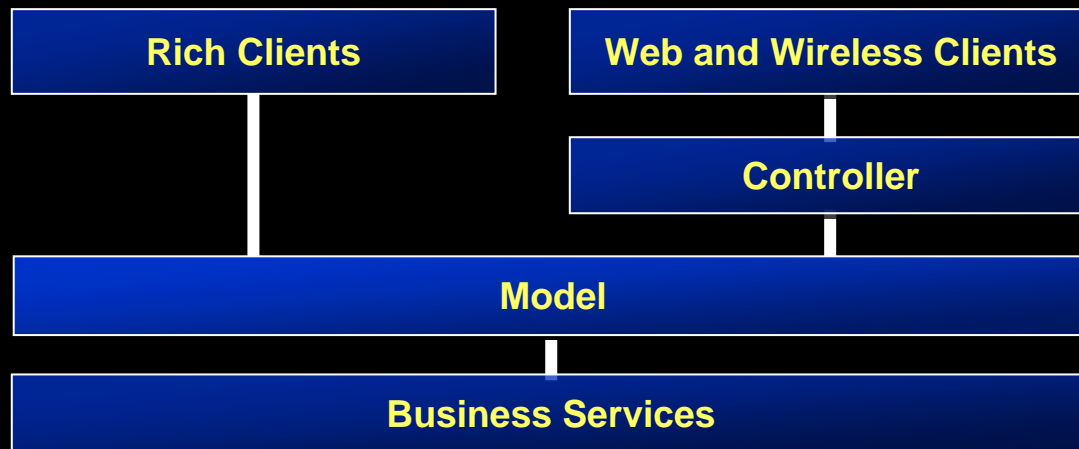
- Reduces the complexity of J2EE development by providing visual and declarative development
- Increases development productivity
 - Less coding, more reuse
 - Focus on the application, not the “plumbing”
- Encourages J2EE best practices by implementing standard J2EE design patterns (MVC)
- Provides a flexible and extensible environment by allowing multiple technology choices and development styles



Oracle ADF

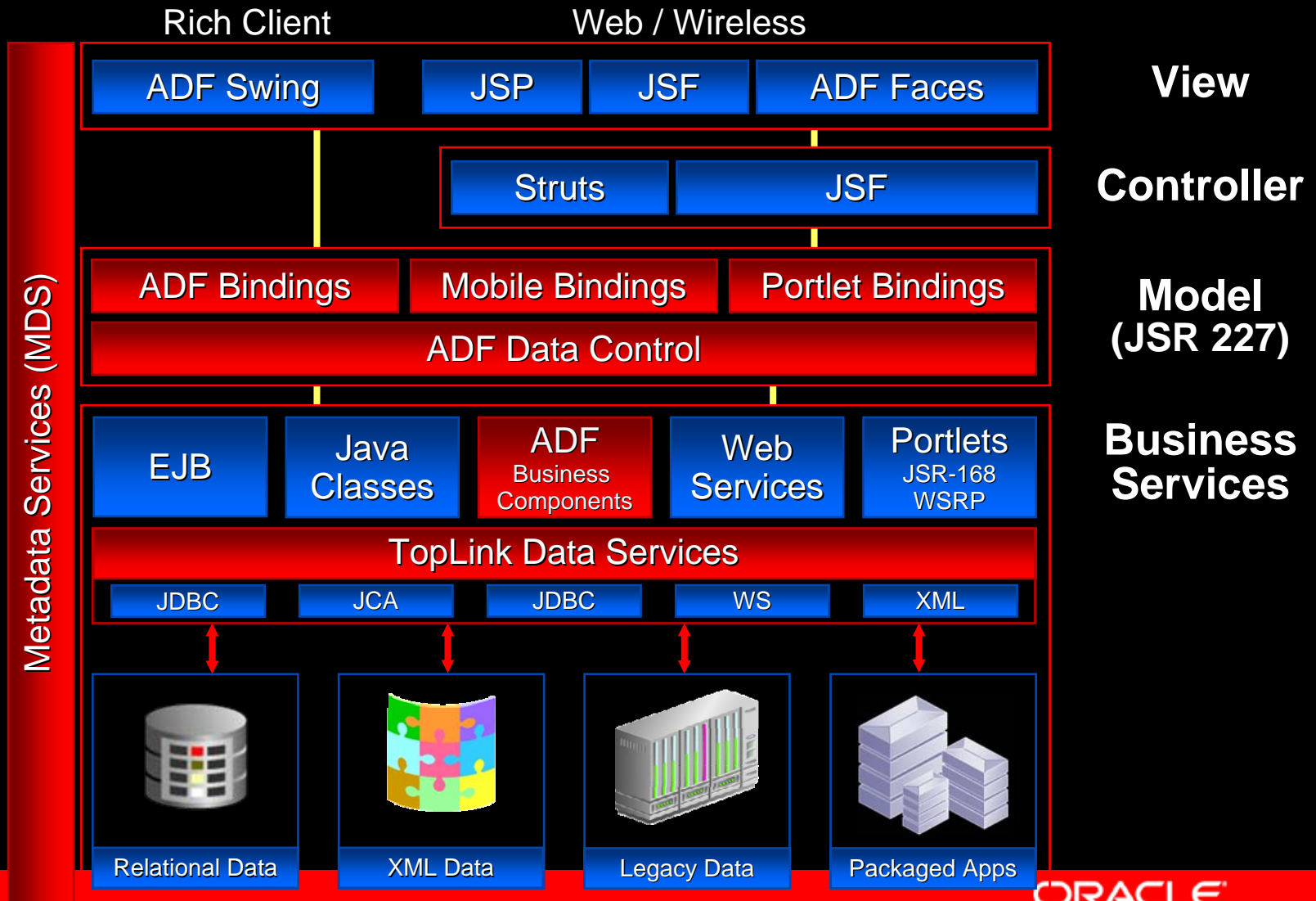
End-to-end J2EE Framework

- Implements standard J2EE best practices
- Model-View-Controller (MVC) design pattern



- Focus on the application, not the “plumbing”
- Consolidation and evolution of previous frameworks

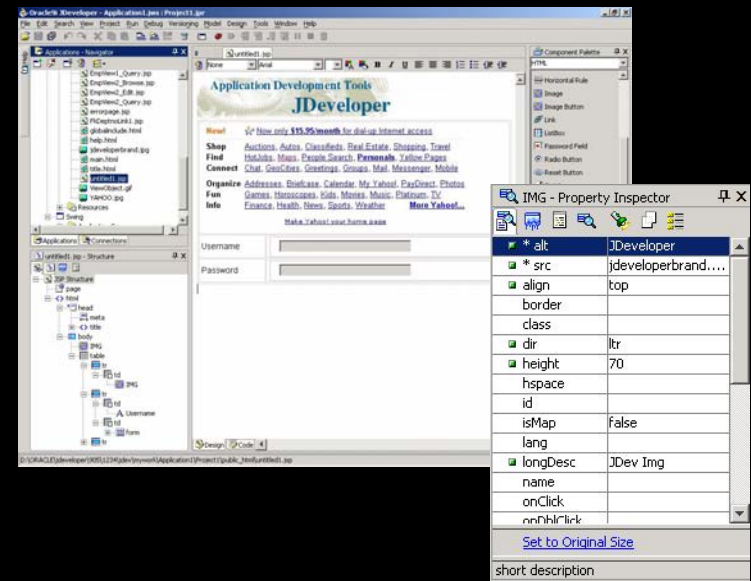
Oracle ADF Architecture



Oracle ADF

Visual and Declarative Development

- End-to-end Application Development
 - J2EE & Services
- Visual
 - WYSIWYG editors
 - UML modelers
 - Structure pane
- Declarative
 - Structure pane
 - Property inspector
- Code View/Design View Synchronization
 - No separate generation step - always synchronized
 - Underlying code always accessible



Development Tools

- **JDeveloper (IDE)**
- **ADF Business Components**
- **TopLink**
- **ADF Faces**
- **JHeadstart**
- **BI Publisher**

New Tools : Old Tools

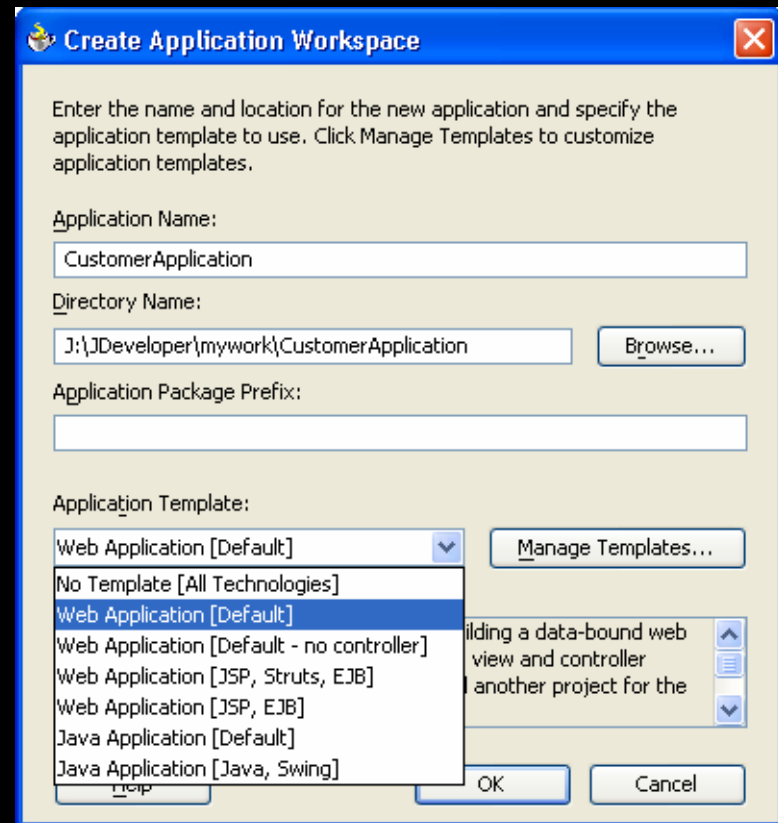
	Forms	Reports	Designer
JDeveloper	All	Web Reports	DB Design
ADF BC	Block, BR		DB Design
TopLink	Block, BR		DB Design
ADF Faces	Layout, SR		
JHeadstart			Appl. Design and Gen.
BI Publisher		All	

Building an Application

1. Create an application workspace.
2. Select the technology scope.
3. Design the business services for the Model.
4. Design the application page flow for the Controller.
5. Create pages for the View.

Creating an Application Workspace

1. Click New Application (Workspace before 10.1.3).
2. Enter a name.
3. Select the application template.



Business Services Choices

- **ADF Business Components**
- **TopLink**
- EJB
- Web Services
- JavaBeans
- Build Your Own

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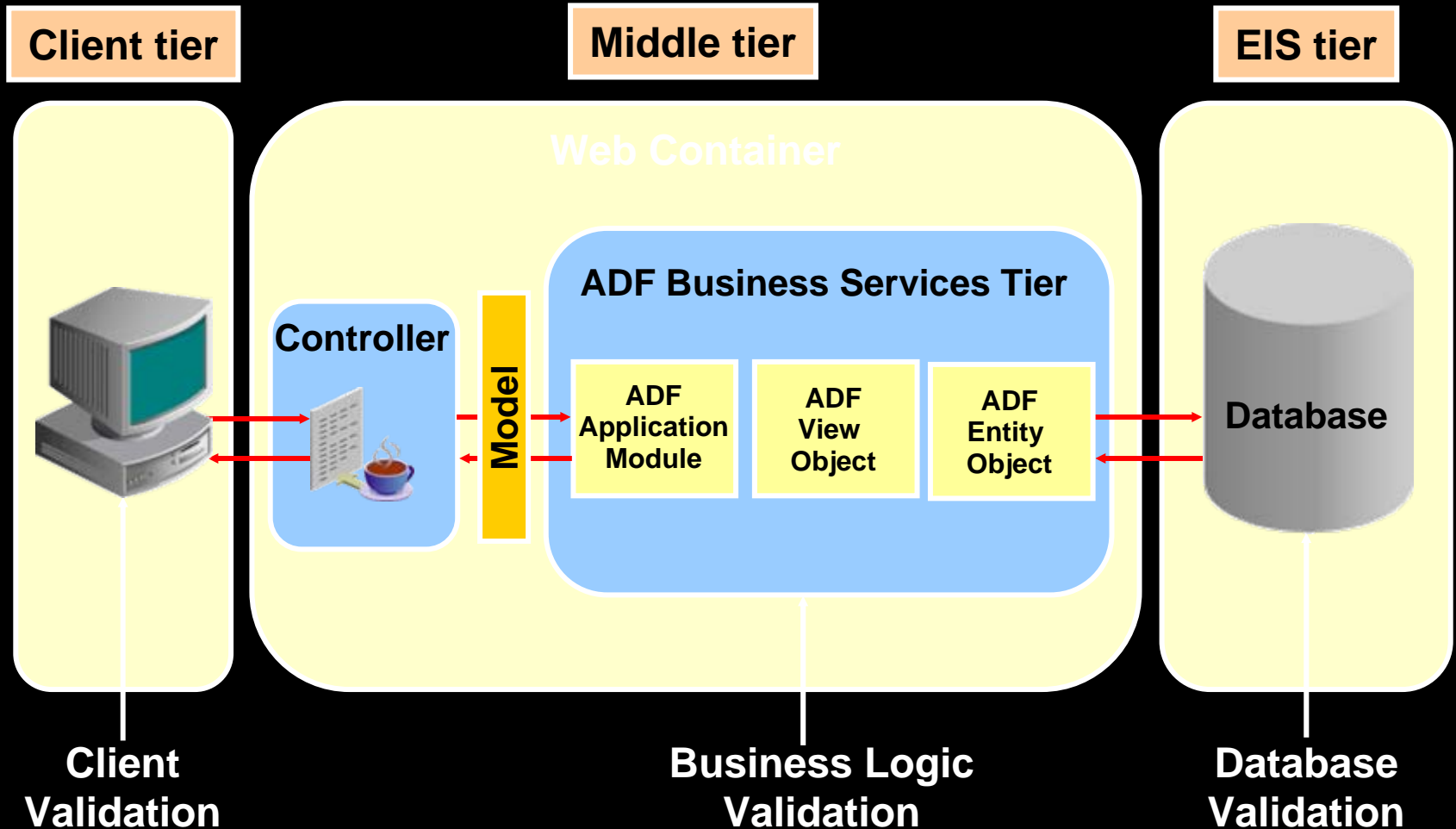
ADF Business Components

- Declarative “SQL based” persistence
 - Declarative, familiar approach for 4gl developers
- Wizards, Editors, and UML Modelers
 - Visually design and modify declarative component settings
- XML-Configured, Lightweight JavaBeans
- *ApplicationModule* - Business Service Component
 - Use as JavaBean, EJB, Web Service
- *ViewObject* - Data Access Component
 - Performs SQL queries and coordinates with entity objects
- *EntityObject* - Business Domain Component
 - Encapsulates business domain data and validation

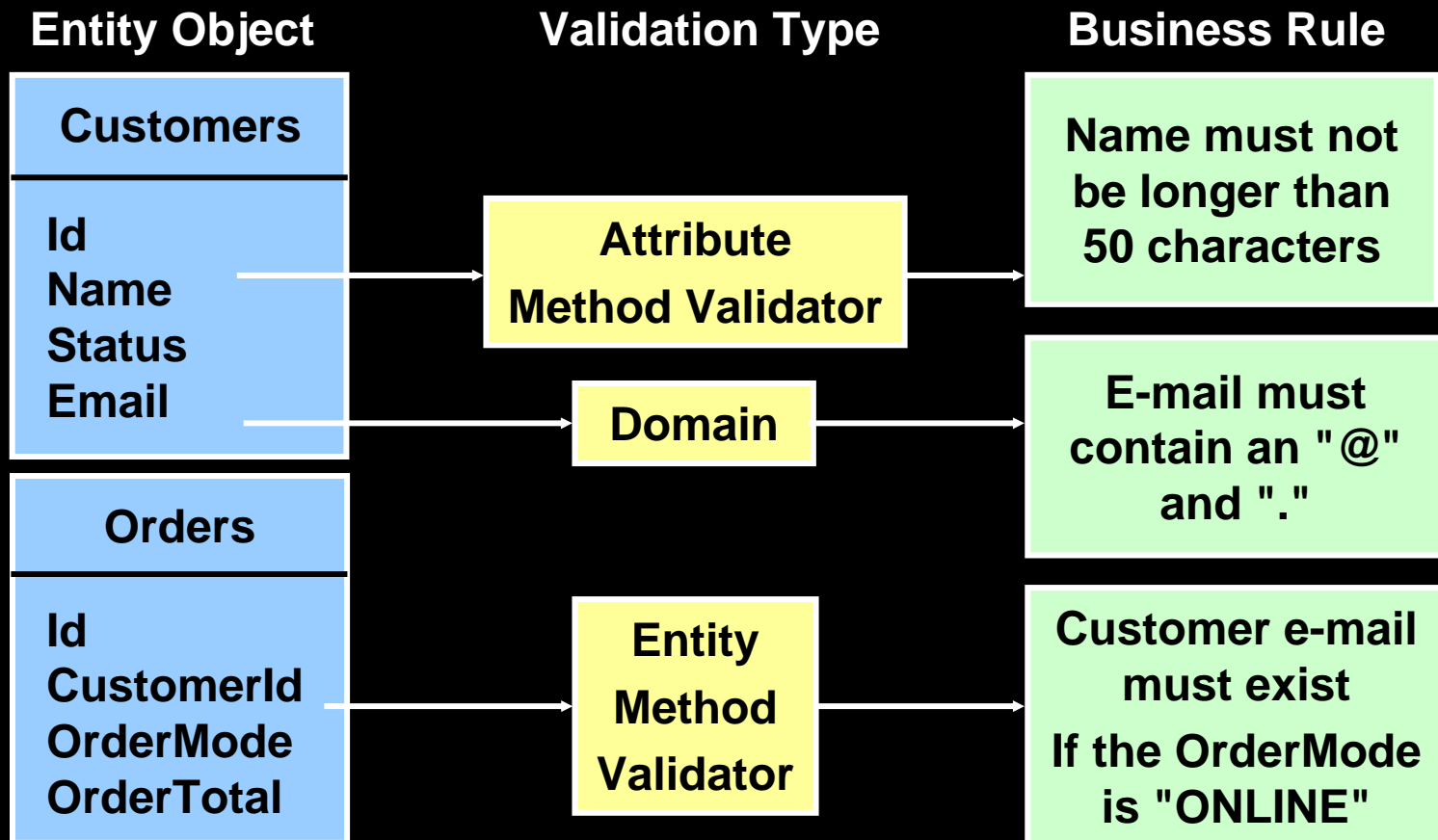
TopLink

- Object-Relational Mapping
 - JPA: Java Persistence API (EJB 3.0/SE)
 - POJO in any Java container/architecture (EE/SE)
 - EJB 2.1 CMP and BMP (OC4J)
- Object-XML
 - JAXB
 - Non-Intrusive (meet in the middle) mapping
- EIS mapping using JCA Resource Adapters
 - XML mapping leveraging OXM and CCI mapping
 - Support MQSeries, OracleAQ, Sun JCA, XML Files, ...

Business Logic Validation



Add Custom Validation



Building an Application

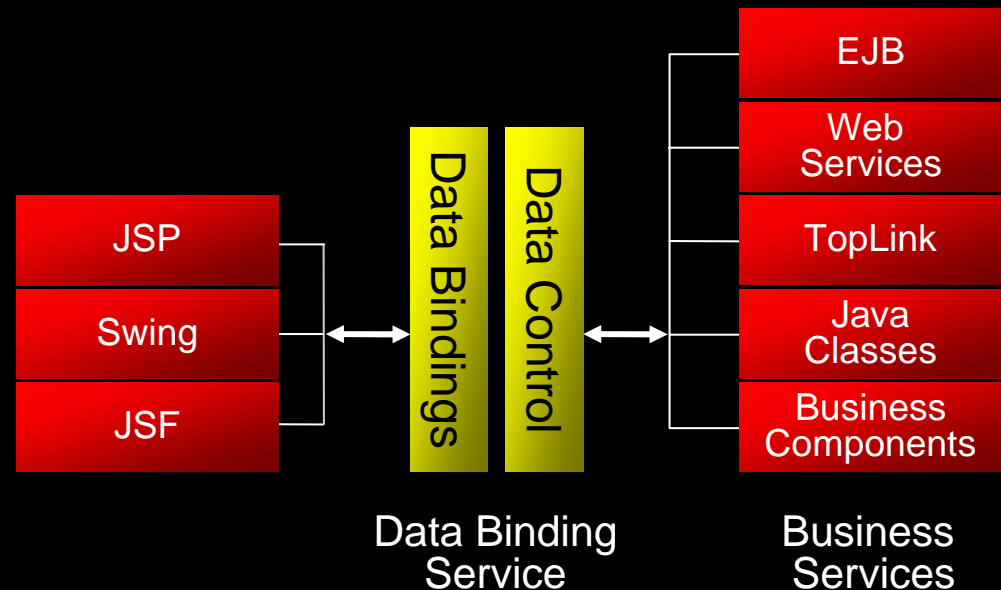
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Building an Application

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2. Select the technology scope.
3. Design the business services for the Model.
4. Design the application page flow for the Controller.
5. **Create pages for the View.**

JSR 227 – J2EE Data Binding

- Data Controls
 - Unified description of any Business Service
 - Collections
 - Attributes
 - Operations
- Data Bindings
 - Usages



Using JHeadstart

- **Develop new application**
- **Migrate Forms modules
from Designer to ADF Faces**

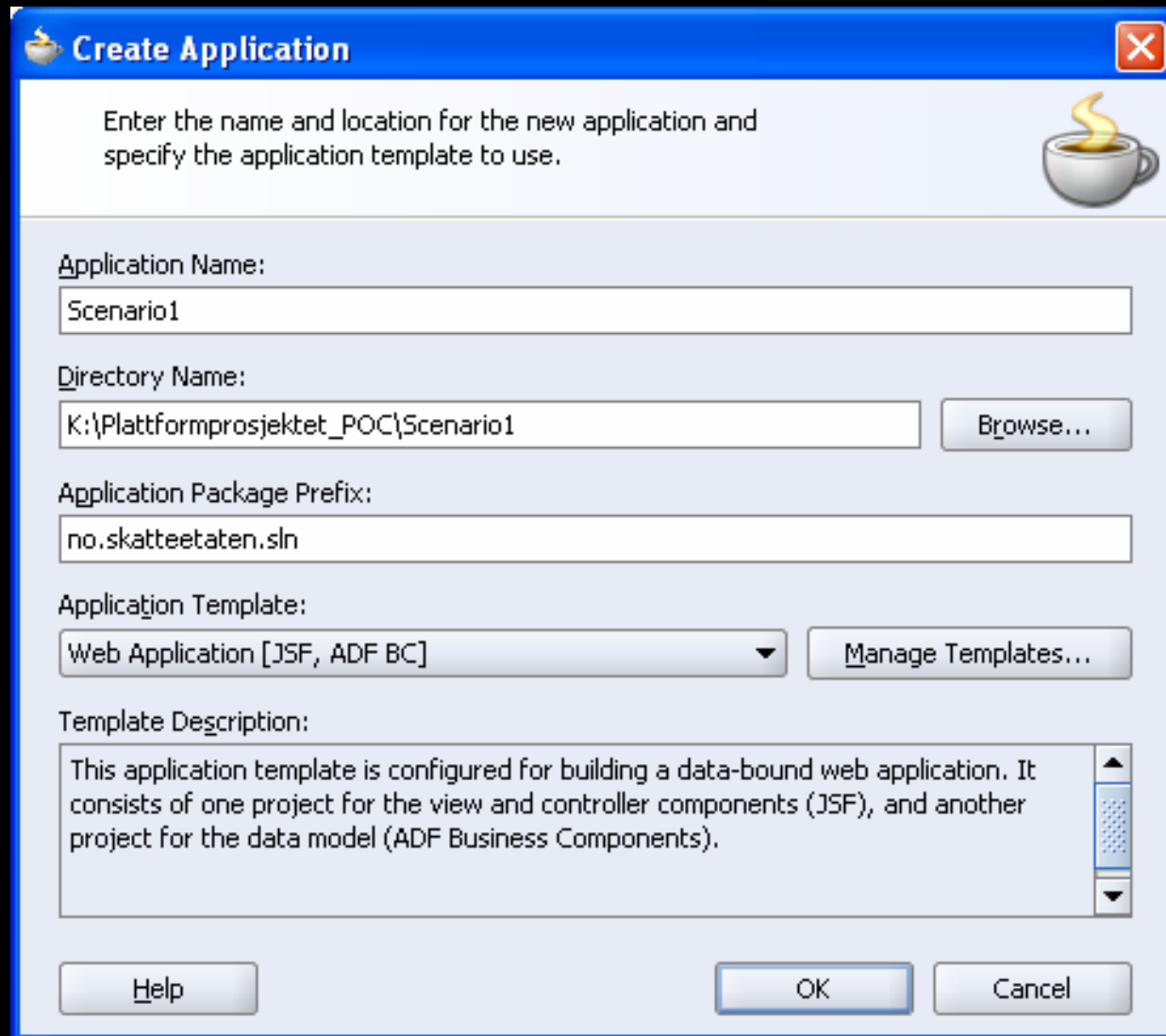
Using JHeadstart to Develop a New Application

1. **Create an application workspace (JSF, ADF BC)**
2. **Specify base classes and database connection for Model**
3. **Create new ADF BCs in the Model project (from database tables)**
4. **Adjust the Data Model of the Application Module**
5. **Test the Application Module**
6. **Enable JHS in the ViewController project**
7. **Create the initial JHS Application Definition**
8. **Edit (refine) JHS Application Definition**
9. **Generate the application, run and test**
10. **Repete steps 8-9 until satisfied**

Using JHeadstart to Migrate Forms from Designer

1. **Create an application workspace**
2. **Enable JHS on ViewController project**
3. **Create new JHeadstart Designer Generator on Model project**
4. **Select Designer Workarea connection**
5. **Select Forms module(s) from Designer workarea/application**
6. **Select database connection for ADF BC**
7. **Specify ADF BC package name**
8. **Specify base classes and View project**
9. **Check summary and run JDG**
10. **Edit JHS application definition**
11. **Generate application and run**

Create an application workspace



Create Application

Enter the name and location for the new application and specify the application template to use.

Application Name:
Scenario1

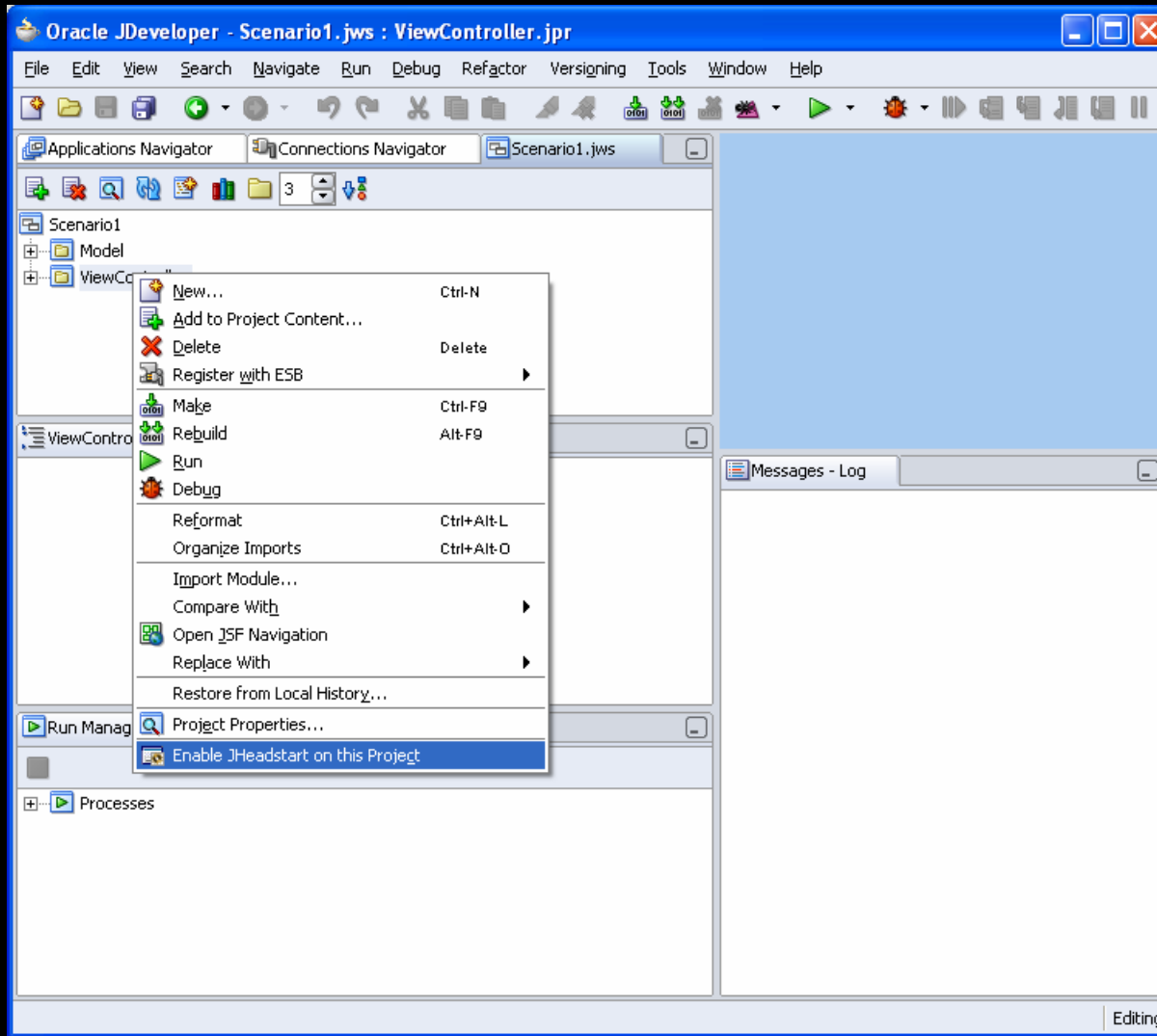
Directory Name:
K:\Plattformprosjektet_POC\Scenario1

Application Package Prefix:
no.skatteetaten.sln

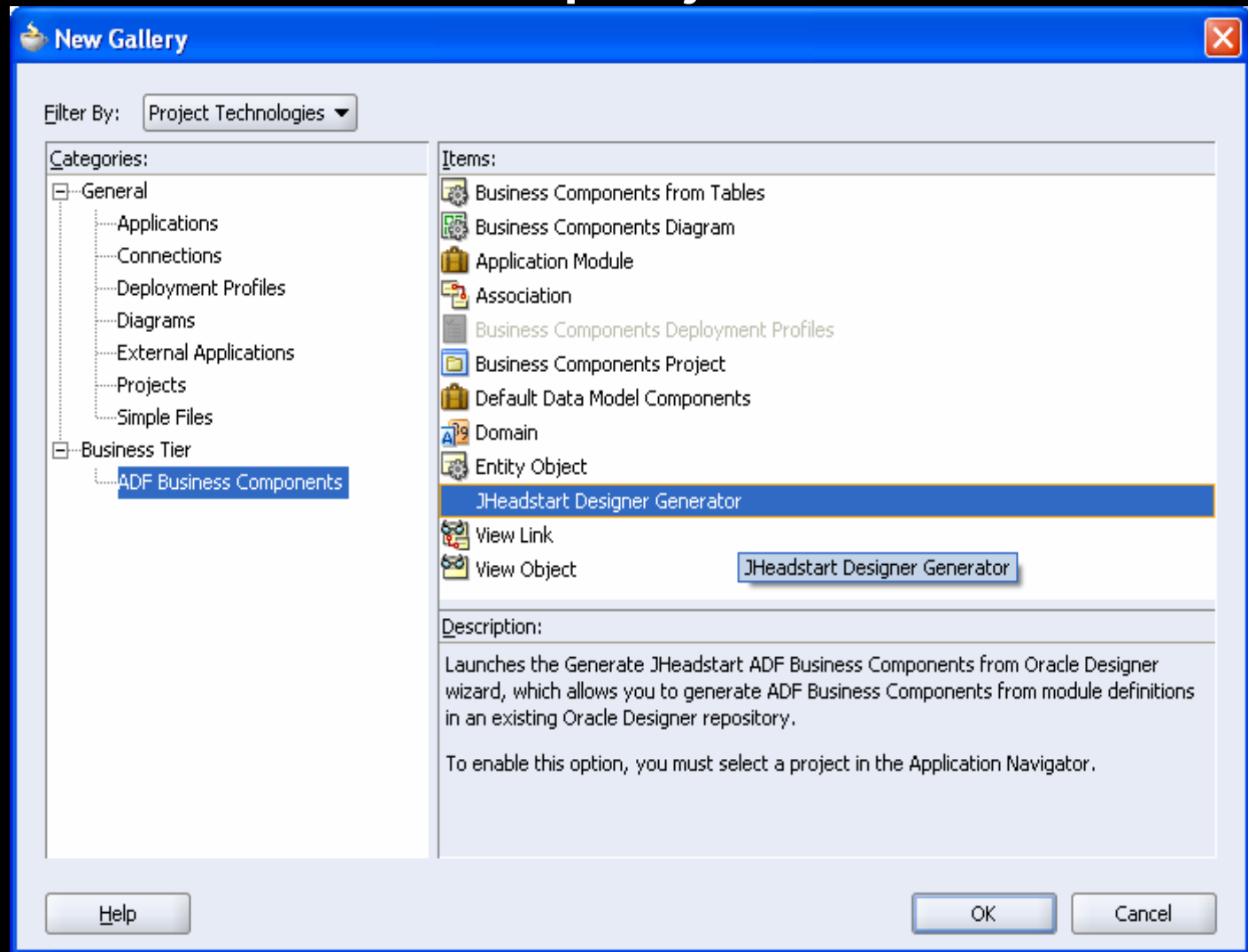
Application Template:
Web Application [JSF, ADF BC]

Template Description:
This application template is configured for building a data-bound web application. It consists of one project for the view and controller components (JSF), and another project for the data model (ADF Business Components).

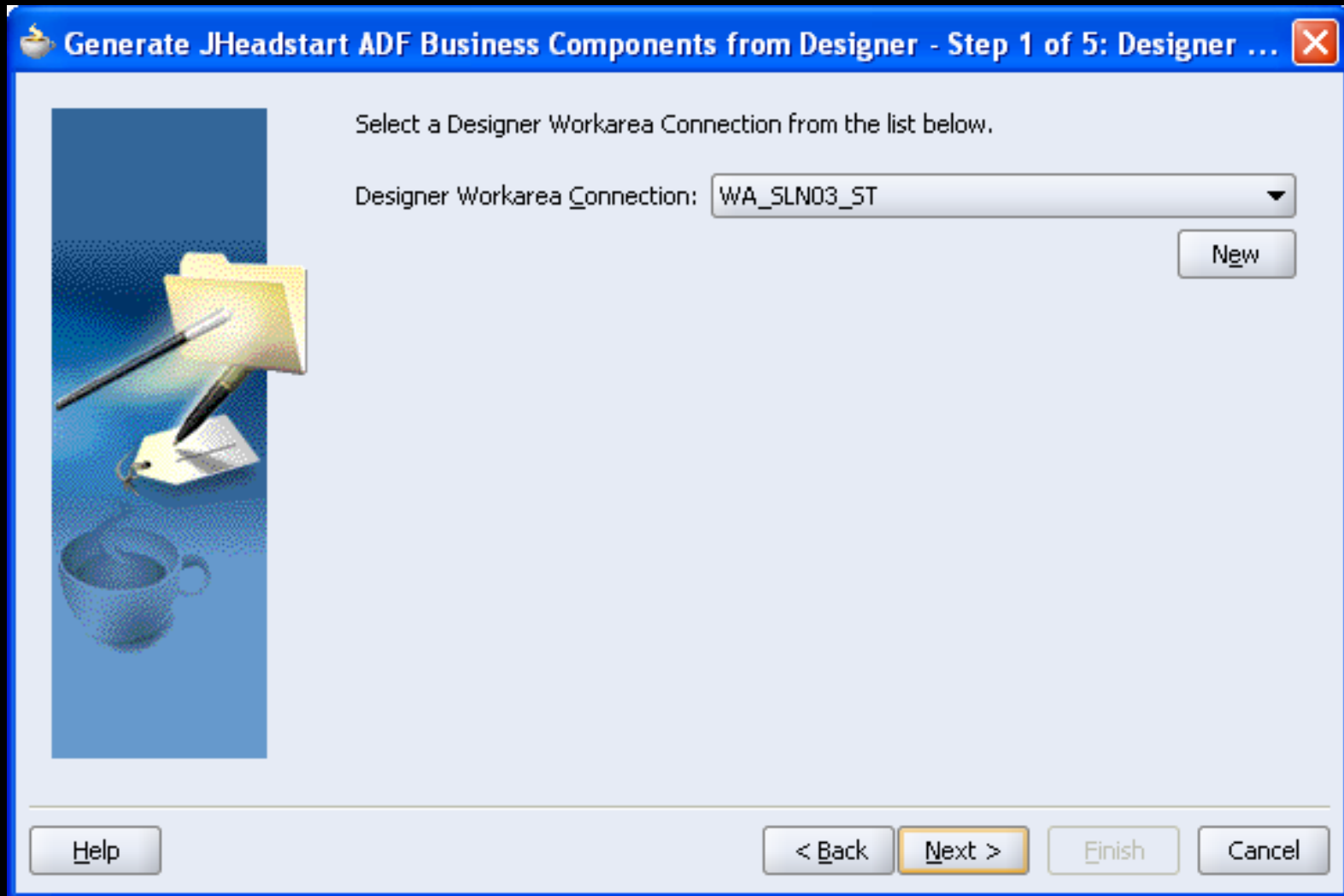
Enable JHS on ViewController project



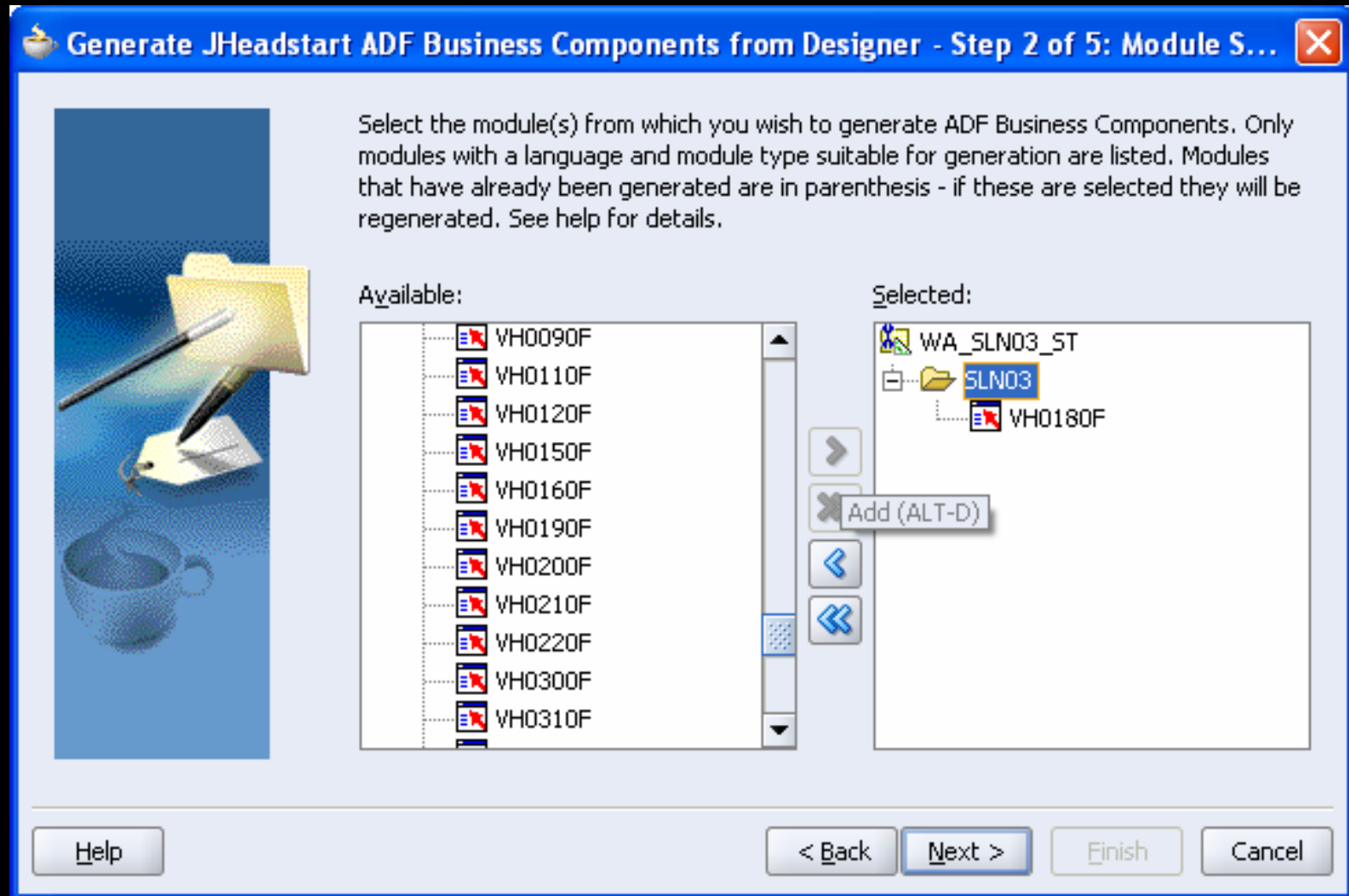
Create new JHeadstart Designer Generator on Model project




Select Designer Workarea connection



Select Forms module(s) from Designer




Select database connection for ADF BC

 ✕


Select the connection to your database for ADF Business Components. This should contain the tables generated from your table definitions in Designer.


Connection Name: ▼ New



Help < Back Next > Finish Cancel

Specify ADF BC package name

 ✕



Choose whether to generate the ADF Business Components to default package names based on the module names, or enter a package name.

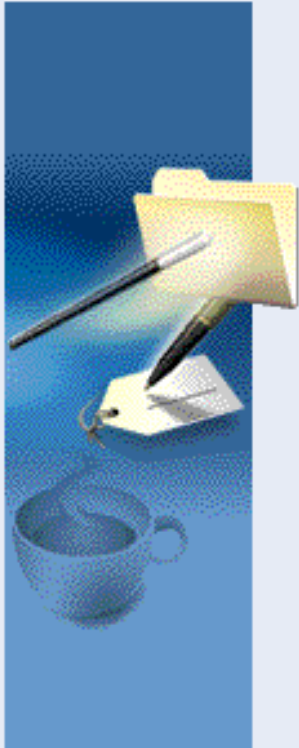
Use Default Package Names

Specify Package Name

Package Name:

Specify JHeadstart specific settings

Generate JHeadstart ADF Business Components from Designer - Step 5 of 5: ADF Busi...



JHeadstart Specific settings:

Service Name: Scenario1

ADF BC Application Module: Scenario1Service

View Controller Project:

Entity Object Class Extends: Model.jpr
ViewController.jpr

Application Module Class Extends: oracle.jheadstart.model.adfbc.v2.JhsApplicationModuleImpl

Help < Back Next > Finish Cancel

Check summary and run JDG

Generate JHeadstart ADF Business Components from Designer - Summary

You have finished setting up the generation of ADF Business Components.

Workarea Connection: WA_SLN03_ST
ADF Business Components database: sln03
ADF Business Components package name: no.skatteetaten.sln.model

Modules selected for generation (the implementation name is used):

Short Name	Implementation Name	Action
VH0180F	vh0180f	Generate

Click Finish to generate the ADF Business Components, or alternatively click Back to review and change the options.

Help < Back Next > Finish Cancel

Inspect created objects and log

The screenshot displays the Oracle JDeveloper IDE interface. The top menu bar includes File, Edit, View, Search, Navigate, Run, Debug, Refactor, Versigning, Tools, Window, and Help. The Applications Navigator on the left shows a project named 'Scenario1' with a 'Model' package. The package structure includes 'Application Sources' and 'src', with 'no.skatteetaten.sln.model' containing various service and entity classes like 'Scenario1Service', 'SlnGeoeGeoeFk', 'SlnKontor', and 'Vh0180fAppModule'. The bottom right pane shows a log window titled 'Generate JHeadstart ADF Business Components from Designer - Log'. The log contains the following text:

```
.. Attribute SistEndretDato processed based on DataBoundItem:SIST_ENDRET_DATO
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute OpprettetDato processed based on DataBoundItem:OPPRETTET_DATO
Processed: VO Vh0180fLvKoor based on ApplicationModule:VEDLIKEHOLD KONTOR::ModuleComponent:KOOR1::TableUsage:
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute Id processed based on DataBoundItem:ID
.. Attribute KopeKode processed based on DataBoundItem:KOPE_KODE
.. Attribute UtgaattDato processed based on DataBoundItem:UTGAATT_DATO
.. Attribute LKopeNavn processed based on DataBoundItem:L_KOPE_NAVN

Run summary for processing the Domains (DF)
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
Domain RODE_OMRAADE
Domain RONTOR_NIVAA processed.
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
Domain DATO
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
```

The status bar at the bottom indicates 'Messages', 'Running: Embedded OC4J Server', and 'JHeadstart Application Generator'.

Edit JHS application definition

The screenshot shows the Oracle JDeveloper IDE interface. The top menu bar includes File, Edit, View, Search, Navigate, Run, Debug, Refactor, Versioning, Tools, Window, and Help. The Applications Navigator on the left shows a project structure with folders for Applications, Scenario1, Model, ViewController, Application Sources, Resources, templates, scripts, properties, Scenario1.ApplicationDefinition.xml, Web Content, public_html, common\regions, jheadstart, jheadstart\css, jheadstart\images, WEB-INF, and WEB-INF\lib. A context menu is open over the Scenario1.ApplicationDefinition.xml file, listing actions such as Open, Delete, Reformat, Validate XML, Make, Rebuild, Compare With, Replace With, Edit JHeadstart Application Definition (highlighted), and Run JHeadstart Application Generator. The bottom pane shows the 'Generate JHeadstart ADF Business Components from Designer - Log' window with the following text:

```
.. Attribute SistEndretDato processed based on DataBoundItem:SIST_ENDRET_DATO
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute OpprettetDato processed based on DataBoundItem:OPPRETTET_DATO
Processed: VO Vh0180flvKoor based on ApplicationModule:VEDLIKEHOLD KONTOR::ModuleComponent:K00R1::TableUsage:
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute Id processed based on DataBoundItem:ID
.. Attribute KopeKode processed based on DataBoundItem:KOPE_KODE
.. Attribute UtgaattDato processed based on DataBoundItem:UTGAATT_DATO
.. Attribute LKopeNavn processed based on DataBoundItem:L_KOPE_NAVN

Run summary for processing the Domains (DF)
WARNING: JDG Composer: Domain is not enumerated, so is therefore not processed.
Domain KODE_OMRAADE
Domain KONTOR_NIVAA processed.
WARNING: JDG Composer: Domain is not enumerated, so is therefore not processed.
Domain DATO
WARNING: JDG Composer: Domain is not enumerated, so is therefore not processed.
```

The status bar at the bottom indicates 'Messages', 'Running: Embedded OC4J Server', and 'JHeadstart Application Generator'.

K:\Plattformprosjektet_POC\Scenario1\ViewController\properties\Scenario1.ApplicationDefinition.xml

Editing

Edit JHS application definition

The screenshot displays the 'Application Definition Editor' for 'Scenario1ApplicationDefinition.xml'. The left pane shows a tree view of the application structure, with 'Koor1vedlikeholdKontor' selected. The right pane shows the configuration for this entity, organized into sections: Identification, Group Layout, Query Settings, and Search Settings.

Section	Property	Value
Identification	Name *	Koor1vedlikeholdKontor
	Short Name	
	Description	
	Use as List of Values (LOV)? *	<input type="checkbox"/>
	Use in Dialog Window? *	<input type="checkbox"/>
	Group Image / Icon	
Group Layout	Layout Style *	form
	Wizard Style Layout? *	<input type="checkbox"/>
	Stack Detail Groups on Same Page? *	<input type="checkbox"/>
Query Settings	Data Collection	Vh0180fAppModule.Vh0180fKoor11
	Data Collection Implementation	Vh0180fKoor1
	Query Bind Parameters	
	Requery Condition	
Search Settings	Advanced Search?	samePage

At the bottom of the editor, there are tabs for 'Properties' and 'Templates', and a set of buttons: 'Help', 'Apply', 'OK', and 'Cancel'.

Generate application...

The screenshot shows the Oracle JDeveloper IDE interface. The main window is titled "Oracle JDeveloper - Scenario1.jws : ViewController.jpr". The Applications Navigator on the left shows a project structure with folders for "Applications", "Model", "ViewController", "Application Sources", "Resources", "templates", "scripts", "properties", and "Web Content". A context menu is open over the "Scenario1ApplicationDefinition.xml" file, with the "Run JHeadstart Application Generator" option selected. The bottom right pane shows the "Generate JHeadstart ADF Business Components from Designer - Log" window, which contains the following text:

```
.. Attribute SistEndretDato processed based on DataBoundItem: SIST_ENDRET_DATO
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute OpprettetDato processed based on DataBoundItem:OPPRETTET_DATO
Processed: VO Vh0180fLvKoor based on ApplicationModule:VEDLIKEHOLD KONTOR::ModuleComponent:K00R1::TableUsage:
.. Attribute Navn processed based on DataBoundItem:NAVN
.. Attribute Id processed based on DataBoundItem:ID
.. Attribute KopeKode processed based on DataBoundItem:KOPE_KODE
.. Attribute UtgaattDato processed based on DataBoundItem:UTGAATT_DATO
.. Attribute LKopeNavn processed based on DataBoundItem:L_KOPE_NAVN

Run summary for processing the Domains (DF)
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
Domain KODE_OMPRAADE
Domain KONTOR_NIVAA processed.
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
Domain DATO
WARNING: JDC Composer: Domain is not enumerated, so is therefore not processed.
```

The status bar at the bottom indicates "Running: Embedded OC4J Server" and "JHeadstart Application Generator". The system tray shows the file path: "K:\Plattformprosjektet_POC\Scenario1\ViewController\properties\Scenario1ApplicationDefinition.xml".

...and run

The screenshot displays the Oracle JDeveloper IDE interface. The main window is titled "Oracle JDeveloper - Scenario1.jws : ViewController.jpr". The "Run" menu is open, showing options such as "Run ViewController.jpr", "Make Scenario1.jws", "Rebuild Scenario1.jws", and "Run Ant on ViewController.jpr". The "Applications Navigator" on the left shows a project structure with folders like "Model", "ViewController", and "Web Content". The "Structure" pane at the bottom left shows "No Structure". The "Run Manager" pane shows "Embedded OC4J Server" running. The "Messages" pane at the bottom right displays the log for the "Embedded OC4J Server", which includes the following text:

```
[Starting OC4J using the following ports: HTTP=8988, RMI=23891, JMS=9227.]
C:\jdev10133\jdev\system\oracle.j2ee.10.1.3.41.57\embedded-oc4j\config>
C:\jdev10133\jdk\bin\javaw.exe -client -classpath C:\jdev10133\j2ee\home\oc4j.jar;C:\jdev10133\jdev\lib\jdev-oc4j-em
[waiting for the server to complete its initialization...]
```

The status bar at the bottom indicates "Starting Embedded OC4J Server." and "Editing".

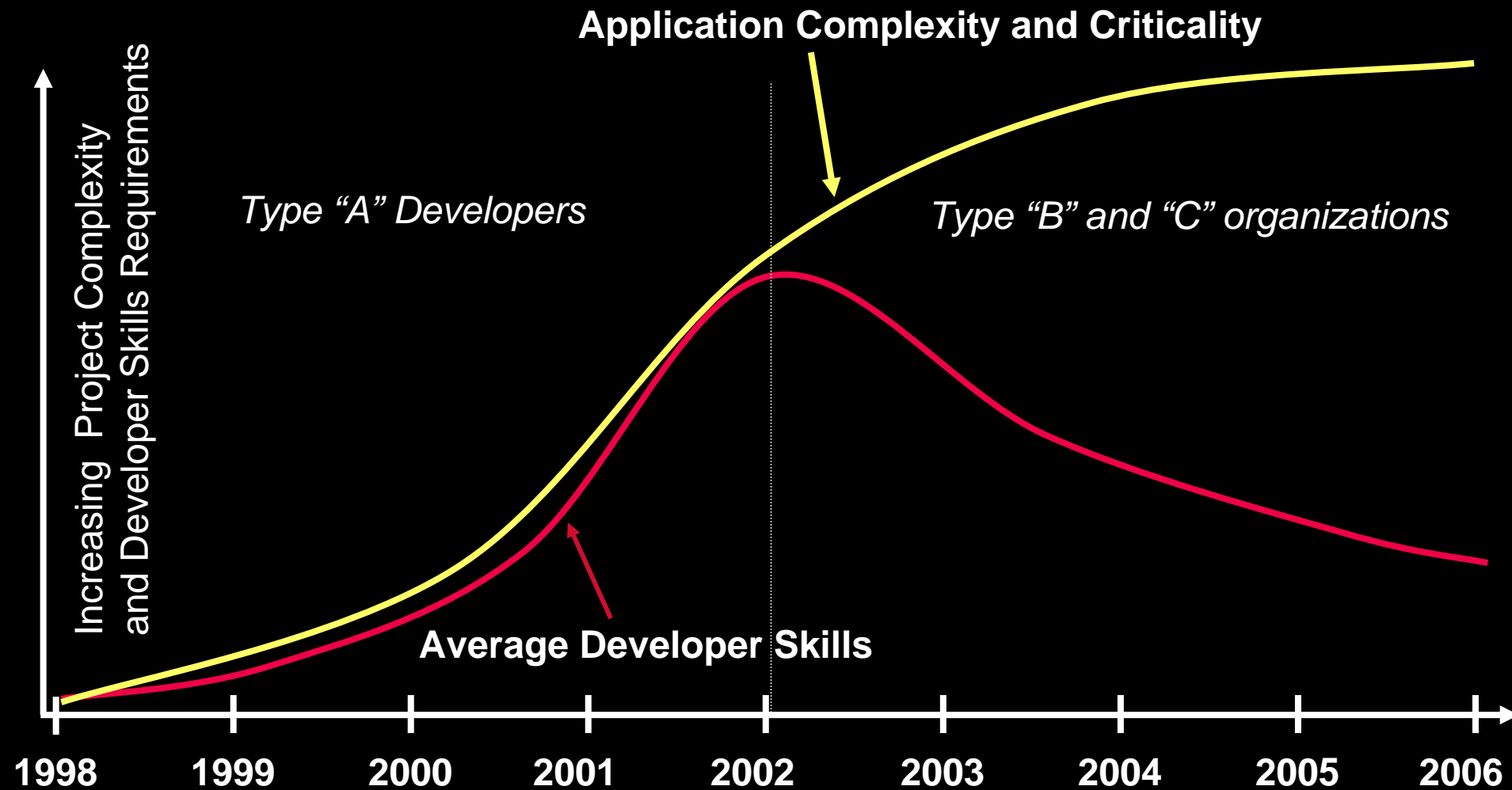
What Do You Need to Start?

- Language skills needed
 - Java is omnipresent
 - But only at a scripting level
 - Still need a Java architect on the project
 - XML is a handy skill
 - If you know “elements” and “attributes”, that’s enough
 - HTML is not really used in ADF Faces
 - Helps to know what an HTML table is
- ADF development method
 - ADF Business Components
 - ASF Faces

How to learn?

- **OTN ADF/SOA tutorials**
- **JHeadstart tutorials**
- **Developer Guides**
 - Oracle ADF Developer's Guide
 - Oracle ADF Developer's Guide For Forms/4GL Developers
 - Oracle SOA Suite Developer's Guide
 - Oracle TopLink Developer's Guide
 - Oracle Jheadstart for ADF Developer's Guide
- **Oracle University Courses**

The J2EE Paradox



ORACLE

Is it Oracle Forms Yet?

NO!

But it's a close second!

(Peter Koletzke
from "Quovera"
on Oracle Opwn World 2006)

Truth!
Coming in 2008
ADF 11g
better than Forms!



**Hvala na pažnji!
I ja imam mnogo pitanja ...**