Adobe® LiveCycle Platform & IBM Integrations

Overview
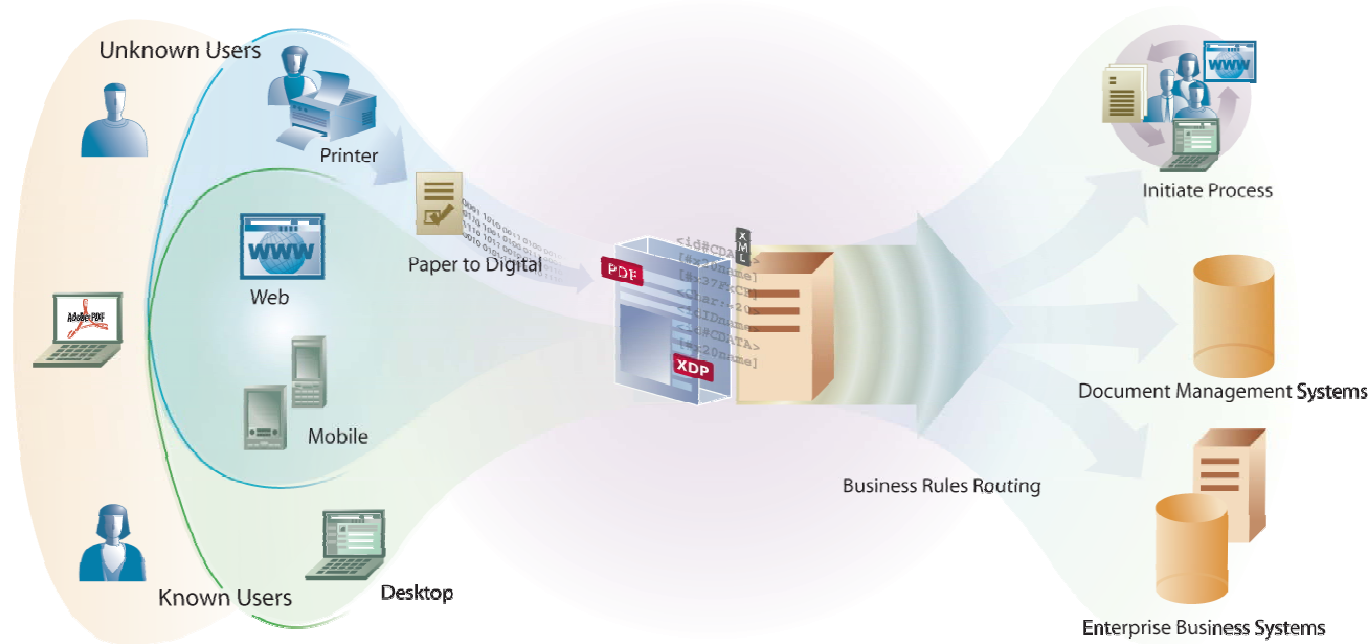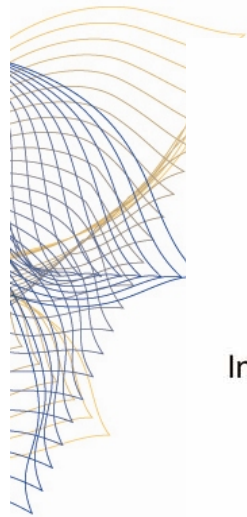
November 10, 2004

Adobe®
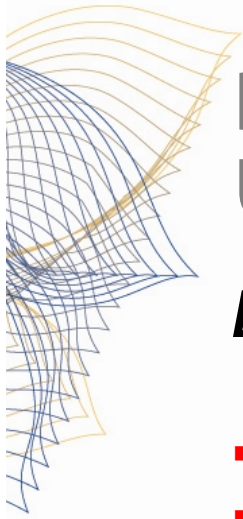
Business challenge:
Use documents to extend core processes

Extended business processes generate business-critical information that:

- Spans individuals, workgroups, and applications
- Moves across—and beyond—the enterprise
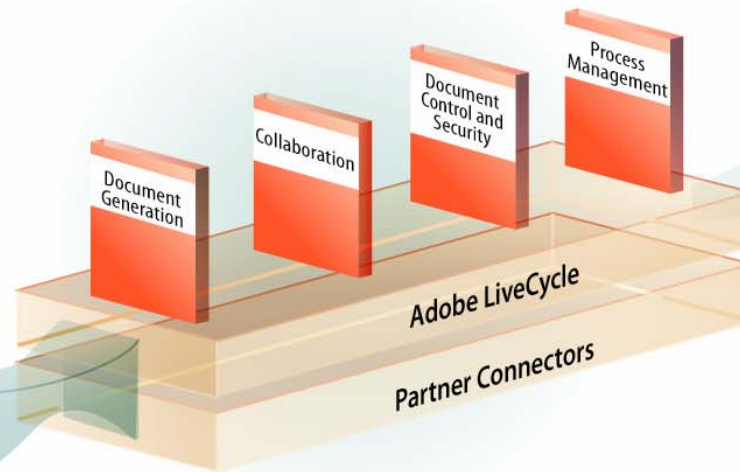- Shares both structured and unstructured data

Adobe Document Services
Extensible and Modular

Intelligent Document

Document Services

Enterprise Business Systems

Document Generation
Collaboration
Document Control and Security
Process Management

Adobe LiveCycle

Partner Connectors

Web Services

| Document Generation	Collaboration	Document Control & Security	Process Management
▪ PDF creation from desktop, or server, in batch or real-time ▪ Print formats ▪ Output management ▪ Capture ▪ Archiving	▪ Document sharing ▪ Review and markup ▪ Approvals ▪ Attachments	▪ Enterprise document control ▪ Authenticity, integrity and confidentiality ▪ Client/server signing and verification	▪ Online and offline form processing ▪ Local save of form data ▪ Dynamic form filling ▪ Form management ▪ Workflow ▪ Barcoded paper forms
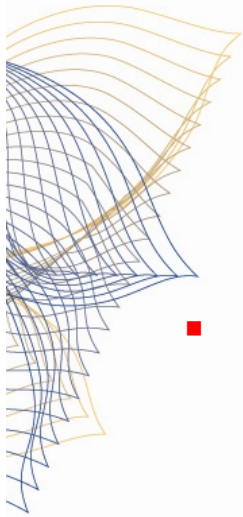
Adobe

Ready for WebSphere
Basic Underpinnings

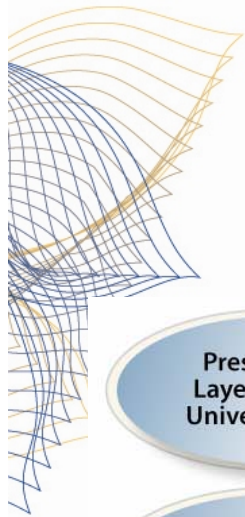- **Portal Server Certification**
  - Forms Access Portlet shipping with Adobe Form Server for IBM, enables users to request and fill out Adobe Forms using Reader within their portal applications – including Lotus Workplace
  - **Adobe Products: Adobe Designer 6, Adobe Form Server for IBM, Adobe Reader Extensions Server, Adobe Reader**
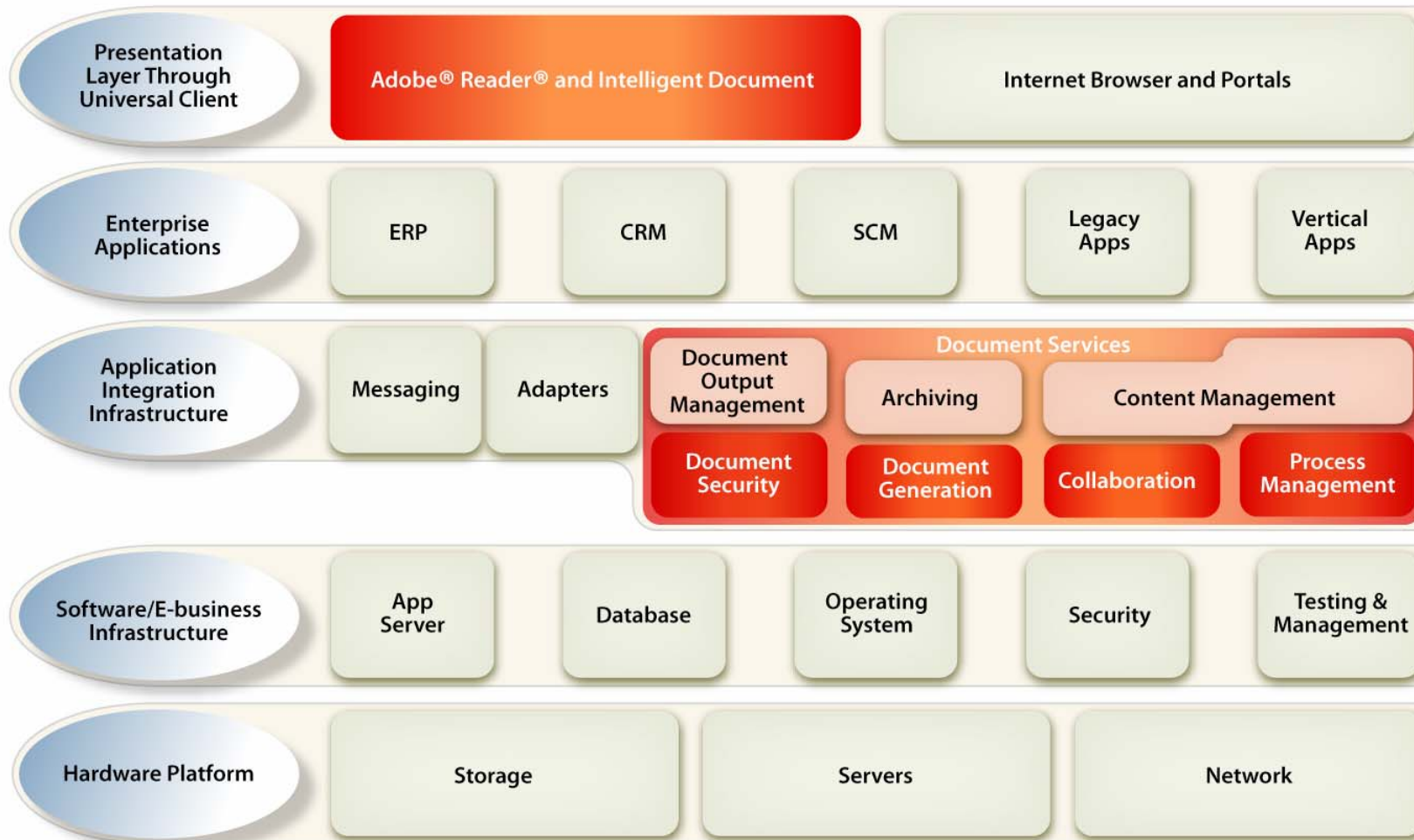
- **WBI Certification**
  - PDF Forms can capture and present data stored in backend systems using WBI web services adaptor and workflow engines such as Process Choreographer and MQ Series
  - **Adobe Products: Adobe Designer 6, Adobe Reader Extensions Server, Adobe Reader**

- **WSAD Certification**
  - Adobe Designer 6 integrated with WSAD to enable developers to design Adobe Forms within their web application project
  - **Adobe Products: Adobe Designer 6**
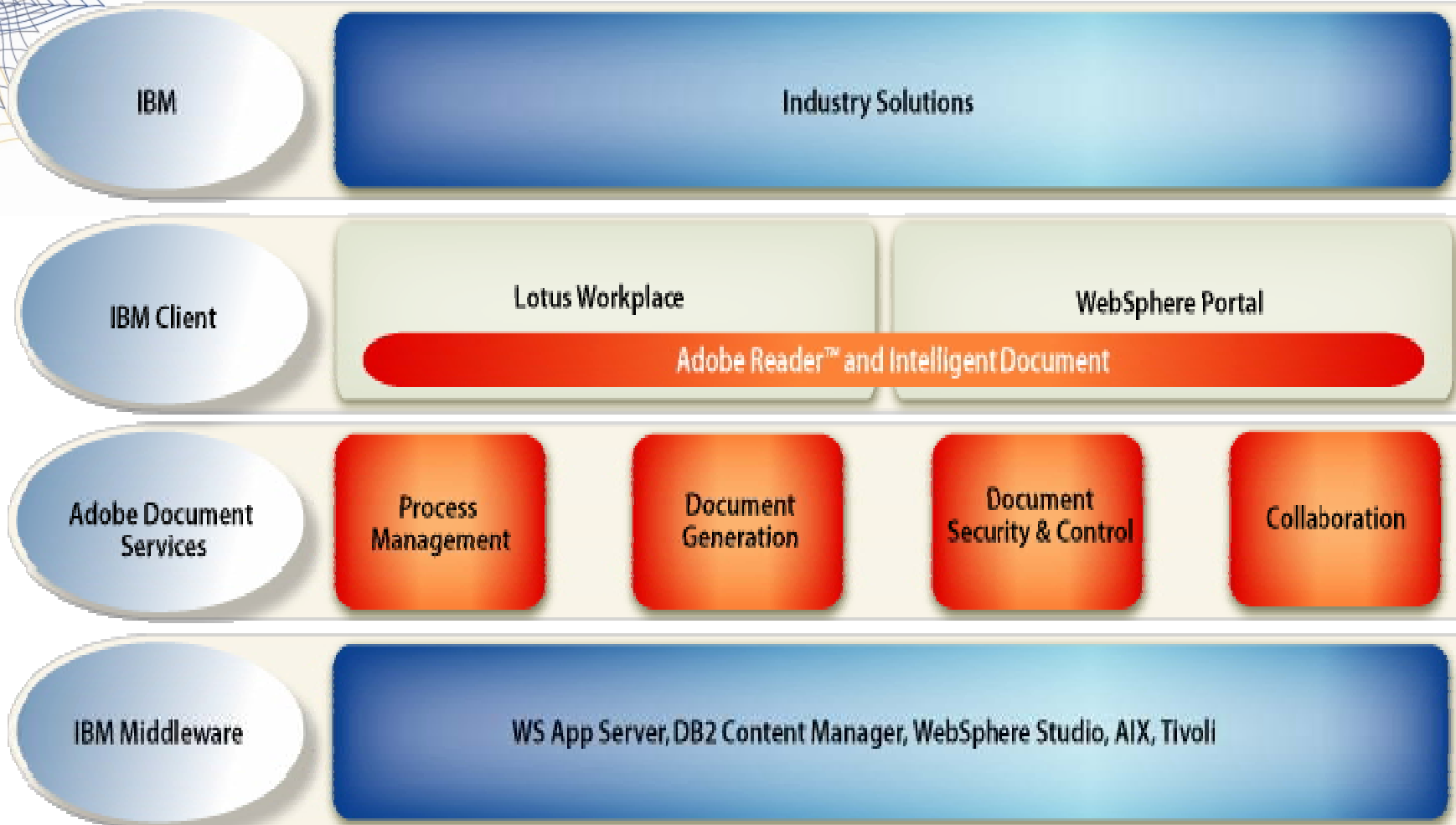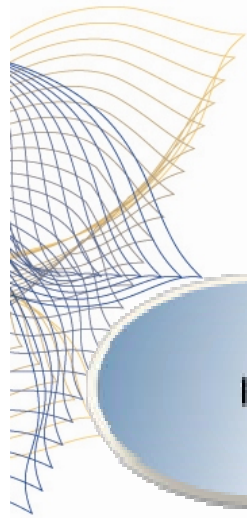
Adobe Document Services in the Enterprise IT Stack

Presentation Layer Through Universal Client	Adobe® Reader® and Intelligent Document			Internet Browser and Portals	

Enterprise Applications	ERP	CRM	SCM	Legacy Apps	Vertical Apps

Application Integration Infrastructure

Messaging	Adapters	**Document Services**		
		Document Output Management	Archiving	Content Management
		Document Security	Document Generation	Collaboration / Process Management

Software/E-business Infrastructure	App Server	Database	Operating System	Security	Testing & Management

Hardware Platform	Storage	Servers	Network

IBM Websphere and Content Manager Integrations

Adobe®

Document Services for IBM in the CIO Stack

IBM — Industry Solutions

IBM Client — Lotus Workplace | WebSphere Portal
Adobe Reader™ and Intelligent Document

Adobe Document Services — Process Management | Document Generation | Document Security & Control | Collaboration

IBM Middleware — WS App Server, DB2 Content Manager, WebSphere Studio, AIX, Tivoli

Adobe & IBM joint offerings in 2004

Available Nov. '03

Adobe Form Server 5.1 for IBM

Adobe forms integrated with IBM DB2 Content Manager

- Supports AFS, AFD, ADS-RE
- Runs on WebSphere Application Server (connector only)
- Windows only

Avail. Summer '04

LiveCycle and WebSphere

LiveCycle products optimized on WebSphere

- WebSphere Application Server preferred J2EE platform for all LiveCycle server products
- Developer options for building Adobe forms into WebSphere applications
- Support for key IBM OS platforms (Windows, AIX, Linux)

Avail. November '04

Adobe Form Server 6.0 for IBM

Extends CM integration to fully embrace WebSphere

- Supports AFS, AFD, ARES
- Runs on WebSphere Application Server (full product)
- Adds WebSphere Portal Server integration
- Includes WebSphere Business Integration certification

Adobe®

Adobe and IBM WebSphere Joint offering stack

Corporate level

Adobe IDP on IBM middleware
*Adobe Document Services with
IBM On Demand*

Platform & solutions level

Adobe Document Services
& WebSphere

*Combined Adobe forms and
IBM WebSphere technology platform*
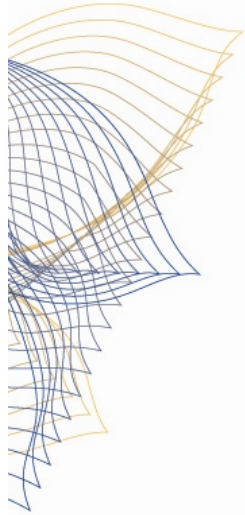
Industry solutions

Individual offering level

WebSphere
Application Server
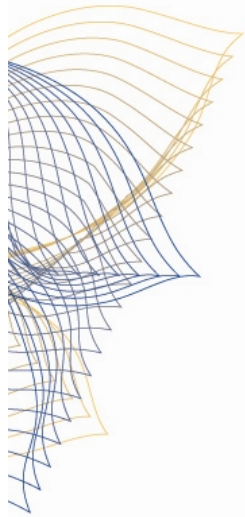
WebSphere
Developer Studio

WebSphere
Portal

WebSphere
Business Integration

Adobe and WebSphere joint offerings Summary

- **Adobe LiveCycle products optimized on WebSphere App Server**
 - Adobe products provide best performance and features when run on WebSphere Application Server
  - Only commercial app server supported by LiveCycle (today)
- **Adobe Designer integration with WSAD**
  - A plug-in for WebSphere Studio Application Developer
  - Enables developers to include Adobe forms with their Java development projects
- **Adobe form portlet for WebSphere Portal**
  - Allows organizations to easily deploy specialized user portals that include form filling and processing alongside other applications
- **Adobe forms integration with WBI**
  - Enables data sharing between Adobe forms and back-end business systems via WebSphere Business Integrator

Offering Overview
Optimization on WebSphere App Server
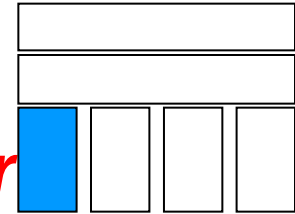
- **Adobe products provide best performance and features when run on WebSphere Application Server**
  - Only commercial app server supported by LiveCycle (today)
- *For IT managers:*
  - Leverage investment in WebSphere best-of-breed web infrastructure and tools to automate paper processes and deploy secure web-based forms for use in mission critical environments that are fully integrated with existing business systems
  - Enable high transaction volume form processing for mission critical applications
- *For LOB managers:*
  - Communicate and interact more effectively with customers and business partners and deliver compelling new services over the web to improve loyalty and satisfaction
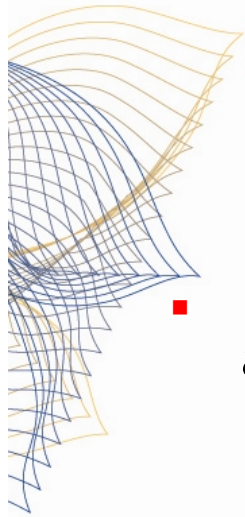
Adobe

# Offering Overview
Adobe Designer integration WSAD
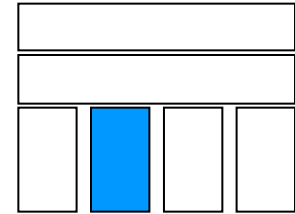
- **Provides a unified tools environment for developers building web applications using IBM's standard WebSphere Studio Application Developer, who also want to:**
  - Include Adobe forms with their Java development projects
  - Build Adobe intelligent forms and forms processing directly into their web sites
- **An Adobe Designer plugin for WebSphere Studio Application Developer provides the integration between the two tools**
  - The plugin is certified for Adobe Designer 6.0
- **The plugin will be available soon for download from Adobe**
  - A link to the download location will be posted on Adobe's landing page on WebSphere DeveloperWorks (http://www-106.ibm.com/developerworks/websphere/partners/adobe/)
- **Additional information on using the tools together and building Adobe forms into WebSphere based java applications is available from the WebSphere DeveloperWorks site, including developer tutorials, technical white papers, and more**
  - The Adobe Designer 6 integration with WSAD is certified "Ready for WebSphere Studio"
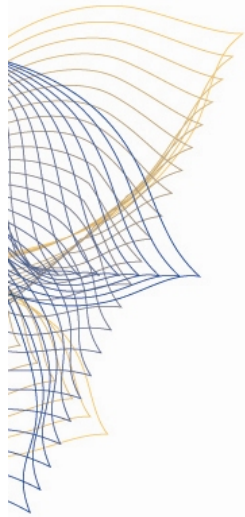
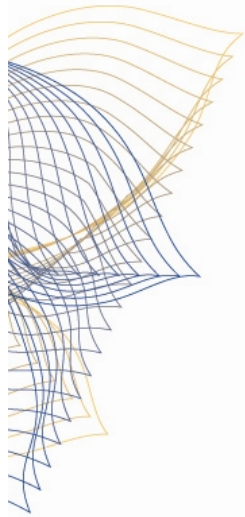# Offering Overview
Adobe Forms and WebSphere Portal
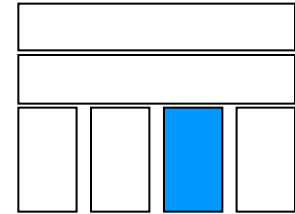
- **Purpose & Description**
  - Allows organizations to easily deploy specialized user portals that include form filling and processing alongside other applications
  - Supports multiple modes of use:
    - **With DB2 Content Manager**: Integrated with standard or custom portal client in conjunction with the Adobe forms integration with DB2 Content Manager
    - **Standalone with WebSphere Portal Server**: Adobe forms integrated with a WebSphere Portal based application using the built-in WPS repository or some other integrated repository
- **Product deliverables**
  - An Adobe forms portlet for WebSphere Portal Server will ship as part of Adobe Form Server 6.0 for IBM in late Q4 '04
    - Contact IDBU Business Development for information on providing the portlet to customers who are not using Content Manager
  - The Adobe Forms portlet is certified "Ready for WebSphere Portal"

Offering Overview
Adobe Forms and WBI
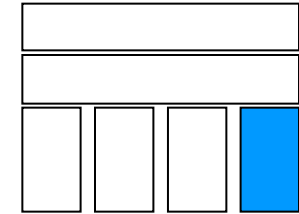
- **Enables data sharing between Adobe forms and back-end business systems that are integrated and managed via WebSphere Business Integration, through the use of web services. Data from one or more modern enterprise applications and/or legacy mainframe systems can be populated into a form as the user is filling it out, for example to populate contact and address information based on the user's account number. When the form is submitted, data can be then flowed back into those systems and workflow processes can be initiated in response.**

- **Product deliverable**
  - There is no additional product deliverable. The standard Adobe Form Server 6.0, Adobe Form Designer 6.0, and Reader Extensions Server 6.0 have been certified to work with WebSphere Business Integrator.
    - All 3 of these products are certified "Ready for WebSphere Business Integration"

Initiating and submitting forms on-line, Back-end Processing and Data Integration
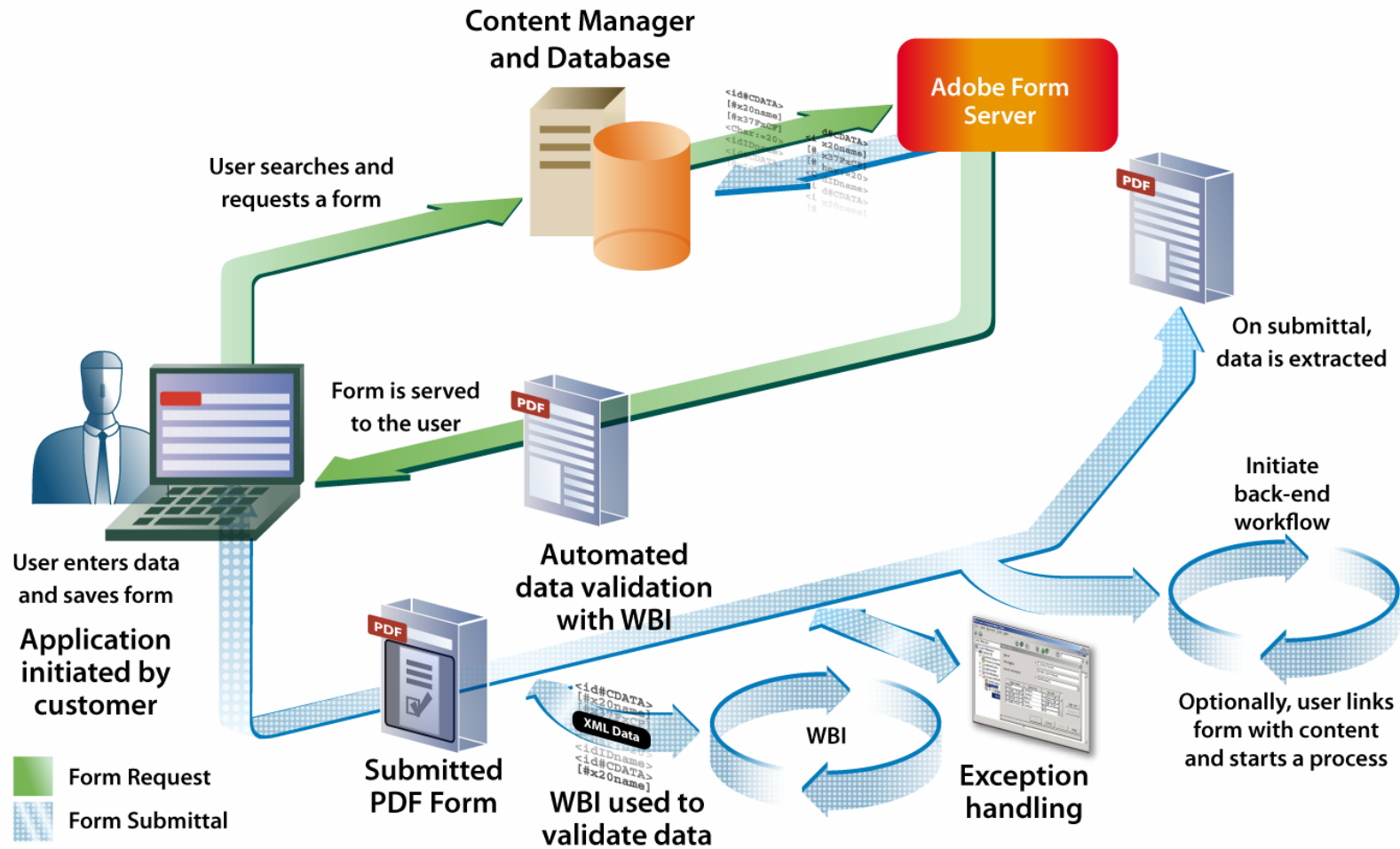
Content Manager and Database

Adobe Form Server

User searches and requests a form

On submittal, data is extracted

Form is served to the user

Initiate back-end workflow

User enters data and saves form

Application initiated by customer

Automated data validation with WBI

Optionally, user links form with content and starts a process

Form Request

Form Submittal

Submitted PDF Form

WBI used to validate data

WBI

Exception handling

XML Data

Adobe

Adobe Form Server 6.0 for IBM
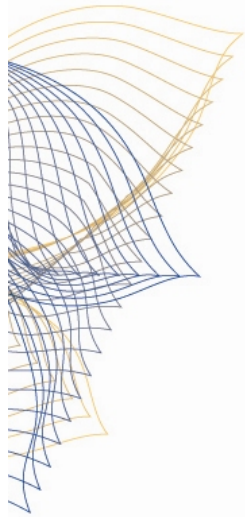
Adobe

Adobe Form Server 6.0 for IBM Major Components

- **ECM Integration "Framework"**
  - Form Designer Container
  - IntegrationServlet
    - Core Framework to integrate AFS and ARES with an ECM system
    - FileSystem repository
- **IBM CM Integration**
  - Adobe® Designer 6.0 Plug-in for IBM
  - Adobe® Form Server 6.0 for IBM
    - Data Model Utilities
    - Customized eClient
    - Adobe Sample Client Application
    - CM Portlets Customization?
- **Adobe® Forms for IBM WebSphere Portal**
  - Adobe Form Listing - Sample List Portlet
  - Adobe Form Access Portlet – Form Render Portlet

Adobe Form Integration in Action
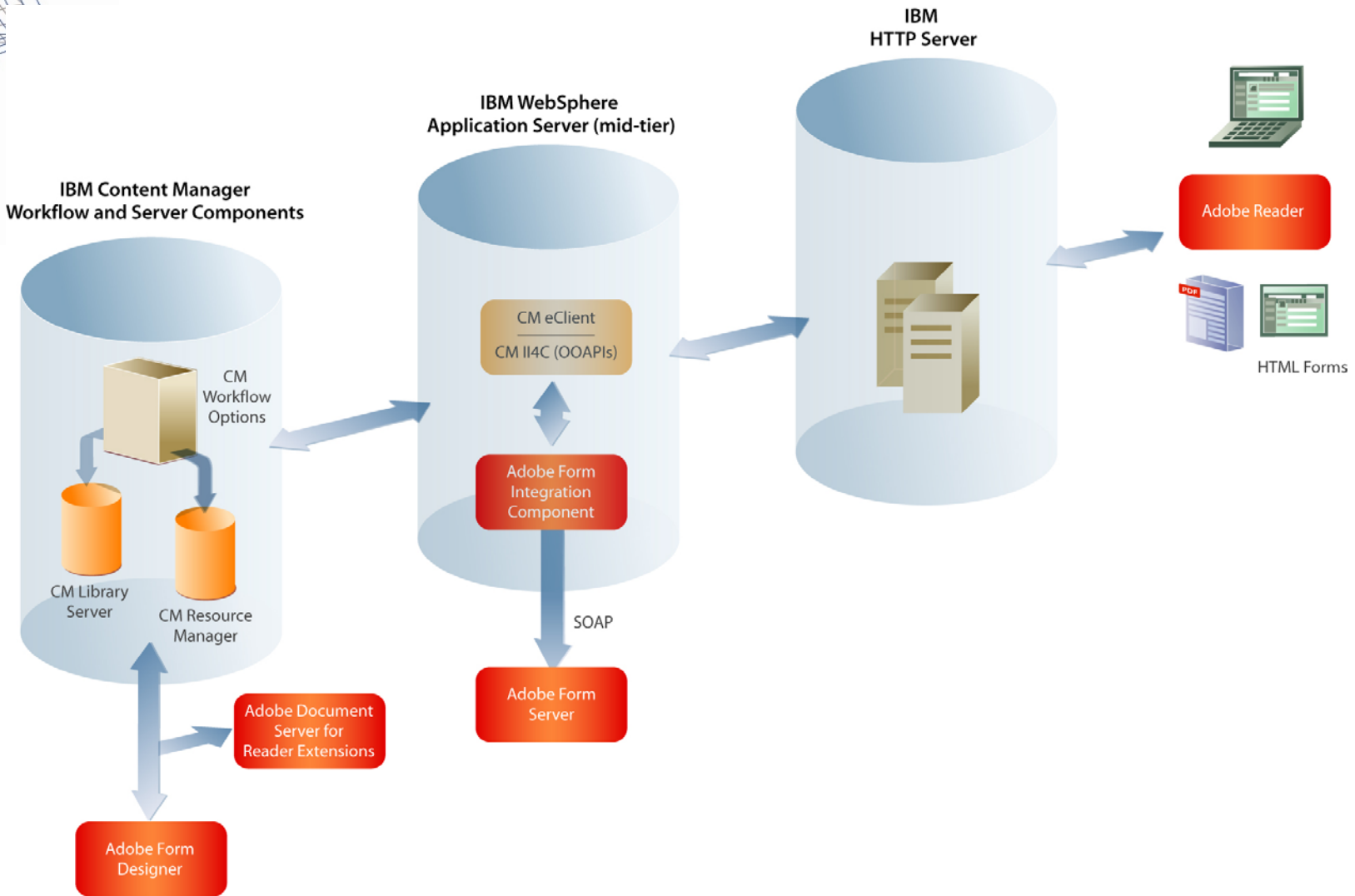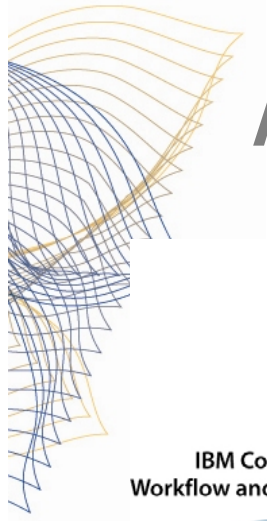
Adobe Form Server 6.0 for IBM Portlets

- **Forms Access Portlet**
  - Out-of-box portlet for WebSphere Portal Server
  - Renders Adobe forms in PDF and HTML
  - Struts-based, leverage click-to-action and credential vaults

- **List Forms Sample Portlet**
  - Provide sample implementation of listing Adobe Forms for form filling requests by users

- **Integrated with WebSphere Portal Server**
  - Optimized for CM as back-end repository
  - Sample implementation with file system
  - Ability for third-party to implement for an arbitrary content management/repository system

Sample List Forms Portlet
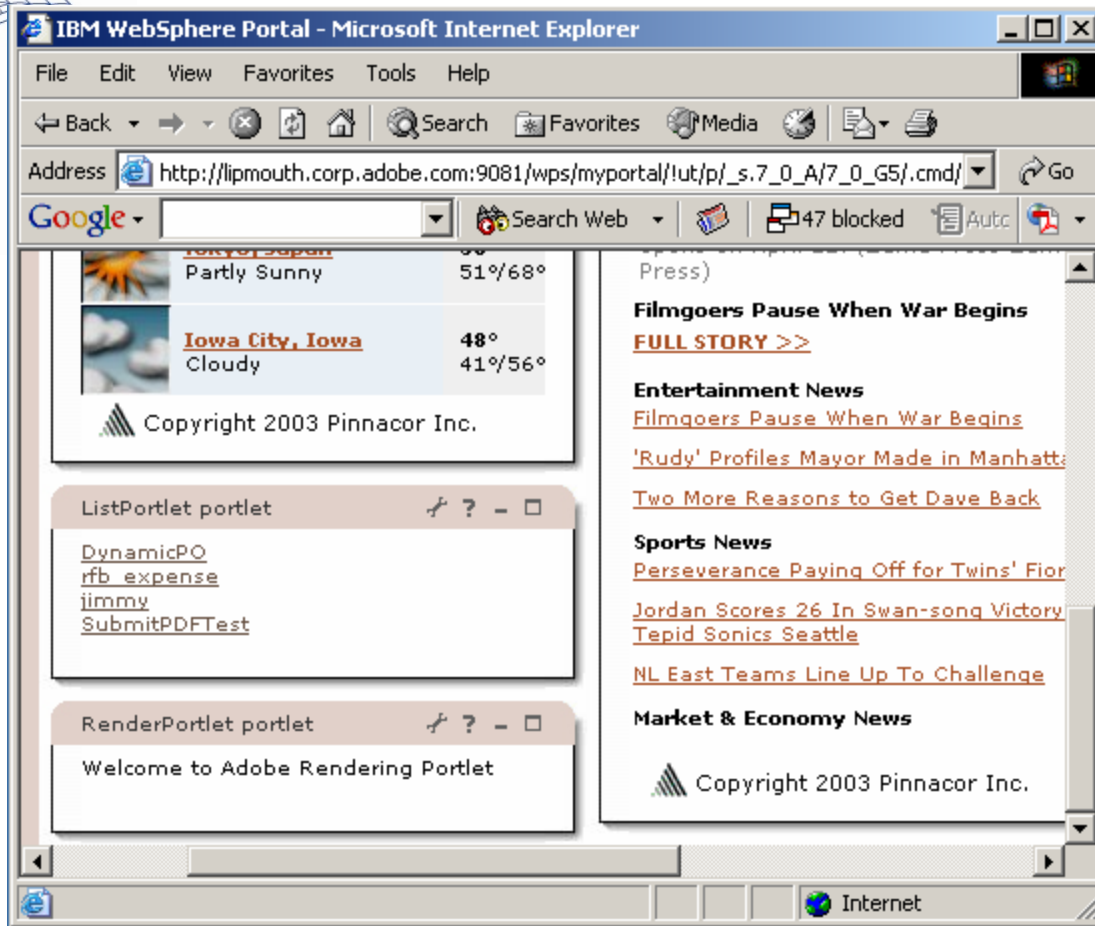
After logging into the sample list forms portlet, Adobe forms are displayed.

Sample implementation can be used as guide for integrating with custom portal applications

20

Forms Access Portlet:
Displays form for offline/online completion

Form is rendered in new window or in Forms Access portlet location.

Platform Support
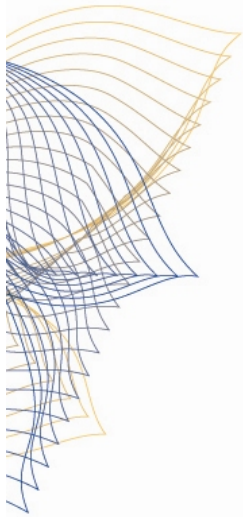
Platform Support

- **Deployment in J2EE environment**
  - Ensures platform consistency
  - Eases development
  - Modularity facilitates OEM adoption

- **Supported platforms**
    - WebSphere 5.1 on Windows Server 2003
    - WebSphere 5.1 on AIX 5L
    - WebSphere 5.1 on Red Hat Advanced Server 2.1
    - WebSphere 5.1 on SuSE 8
    - WebSphere 5.1 on Solaris 8 and 9
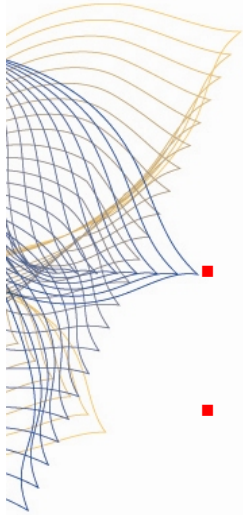
Key IBM and Adobe Solution Components

- **Adobe LiveCycle™ Designer**

  Design forms connected to data with XML schemas, Web Services Description Language (WSDL), and other tools

- **Adobe LiveCycle Forms for IBM**

  Offer online or offline form completion with XML data linked to applications

- **Adobe LiveCycle Reader Extensions**

  Enable form completion and digital signatures with Adobe Reader

- **IBM WebSphere® Application Server**

  Deploy a reliable, scalable foundation for Adobe Document Services, Web applications, and Web services

- **IBM WebSphere Business Integration Server**

  Update core systems and drive processes

- **IBM WebSphere Portal Server**

  Serve Adobe forms in portals and Web applications

- **IBM DB2® Content Manager**

  Store all relevant content

- **IBM Records Manager**

  Use PDF for classified records and to comply with regulations

Adobe on developerWorks

For More Information

- **Adobe and IBM partnership and joint Adobe/IBM offerings for WebSphere**

  www.adobe.com/enterprise/partners/ibm.html

- **Adobe Intelligent Document Platform with WebSphere – on IBM developerWorks site**

  www-106.ibm.com/developerworks/websphere/partners/adobe/

Adobe

Adobe®

Tools for the New Work®

Adobe®

Industry Solutions

IBM Middleware Solution for Government

- ➢ Access
- On Demand Workplace
- Collaboration
- ➢ e-Forms & Records Management
- Emergency Response

IBM Middleware Solution for Life Sciences

- Clinical Trials & Management
- Annotation & Knowledge Sharing
- Clinical Genomics
- Investigator Recruitment & Trials Mgmt
- Corporate Information Asset Management

IBM Middleware Solution for Healthcare

- Patient-centric Portal
- Collaborative Network
- Clinical Decision Intelligence
- Payer Services Portal
- Health Plan Administration

IBM Middleware Solution for Financial Markets

- Front Office Insight
- Trade & Order Management
- Financial Information Interchange
- Post Execution Integration
- ➢ Risk and Compliance

IBM Middleware Solution for Banking

- ➢ Branch Transformation
- Channel Empowerment
- Core Systems Transformation
- Risk and Compliance Foundation
- Wholesale Payments Processing

IBM Middleware Solution for Insurance

- Claims Management
- ➢ Underwriting
- ➢ Policy Management
- Channel Distribution Integration
- Customer Insight

█████ = Adobe integrated solutions

Adobe®

Industry Solutions

IBM Middleware Solution for Automotive

- Product Lifecycle Management
- ➢ Factory to Enterprise Integration
- Dealer Collaboration
- Early Warning for Warranty
- Systems & Software Engineering
- Telematics

IBM Middleware Solution for Electronics

- Product Innovation Mgmt
- Software Lifecycle Mgmt
- Supply Chain Collaboration
- Business Performance Mgmt
- Risk & Compliance

IBM Middleware Solution for CPG

- Item Management
- Customer Management
- Brand Management
- Consumer Information Management
- Risk & Compliance Management

IBM Middleware Solution for Retail

- Merchandising
- Item Management
- Inventory Management
- Store Operations
- Multi-Channel Management
- Advertising, Marketing & Promotions
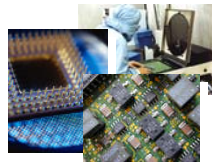
IBM Middleware Solution for Telecom

- OSS / BSS Optimization
- Contact Center Optimization
- Mobile Services Delivery
- Partner Content Enabler
- Next Gen Network Services

IBM Middleware Solution for Energy & Utilities

- Trading and Settlement
- Mobile Workforce Management
- Contact Center
- Asset Operations
- Regulatory Compliance

▬ = Adobe integrated solutions

Adobe®

Customer example: CNA

Company overview
- Large insurance company with many product lines
- 2500 claims agents in the field, 3000 claim forms

Customer problem
- Existing document generation solution proprietary
  - Limited capabilities for dynamic form generation
  - Difficult to extend or customize
- Inefficiencies related to paper form processing and management, inc. manual review and rekeying
- Insufficient security with existing form processes

Application
- Dynamic generation of forms and letters as part of insurance claims application & approval processes
- Centralized access and storage of claims documents

Key requirements
- Scalable solution for high volume transaction processing for 1000's of field agents and forms
- Support for open standards (java, XML)
- Support for J2EE and WebSphere AS

Solution

Adobe
- Adobe Form Server & Designer for creation and output of forms and letters

IBM
- WebSphere Application Server on AIX for J2EE foundation
- WebSphere Studio Application Developer for custom java application development
- WebSphere MQ Workflow for back-end transaction processing

Value of IBM and Adobe to CNA
- Adobe support for J2EE and WebSphere as CNA's corporate app server standard
- Ability to integrate core MQ-based data processes with content-centric exception processes using FileNet
- Joint technology platform support for open standards, flexible architecture, and high performance & scalability
- Future support for SOA-based enterprise IT infrastructure
- Large, established organizations, can be strategic partners to CNA

Adobe

Customer example: Zurich Universal Underwriters

Customer problem

- Inefficiencies related to paper form processing and management, inc. manual review and rekeying
- Lack of centralized management of claims and underwriting processes
- Challenges in achieving Sarbanes-Oxley compliance

Application

- Provide an "Agency Manager" portal as a universal hub for applications and documents related to forms and underwriting business processes

Key requirements

- Ability for users to access all claims related content through an WPS-based portal hub
- Support for J2EE and WebSphere AS
- Acord compliant forms, usable offline
- Archiving of forms in FileNet

Opportunity

Adobe

- Form Server and/or Reader Extension Server with Designer for form design and delivery

IBM

- WebSphere Portal for Agency Manager portal
- WebSphere App Server
- WSAD

Key value feedback from Zurich

- Adobe support for J2EE and WebSphere is key Zurich is standardized on both
- Form posting and processing through WPS based portal environment would directly play into their portal hub strategy
- WSAD/Designer integration would let them offload form development to the content mgmt team (FileNet)
- Ability to engage rules engine (poss. MQ Workflow) as a result of form data submission would support initiative to automate current manual paper processes
- Generally enthusiastic about opportunities to leverage Adobe & WS offerings as part of an eForms initiative they're about to kick off

Adobe