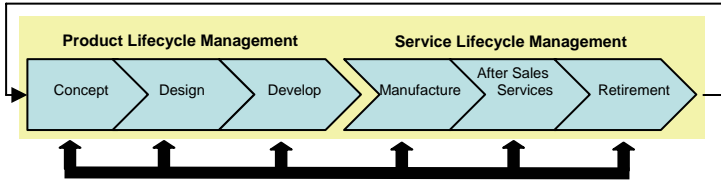




## Purpose

The Advanced Aerospace Solutions Environment is focused on the Product Lifecycle Management (PLM) and Service Lifecycle Management (SLM) markets of the A&D industry.



## Targeted Business Problems

Our solutions follow the lifecycle of a product being designed, built, and maintained in an Aerospace & Defense extended enterprise setting and looks at the various business problems that are facing these companies today.

A consortium of companies has come together to design & build an Aerospace & Defense product. These companies each have their own systems and processes for designing and managing their Product Data information; these systems need to work effectively together to design, and deliver this product.

## Solution: IBM's Product Data Integration Framework (PDIF) and Product Data Management (PDM) Integration

This solution demonstrates how the real-time integration of these various vendors PDM systems can deliver the services needed. Starting with process modeling and utilizing a well defined Services Oriented Architecture (SOA) approach, IBM demonstrates how we can efficiently and effectively integrate these various systems.

## Customer Pain Points

A&D companies have a number of pain points they encounter as they service aircraft.

- o Lack of complete information during conceptual design when 80% costs get committed
- o Incomplete information available in remote locations
- o Lack of Timely Process & Data Integration (Different Processes, Different Protocols,...)

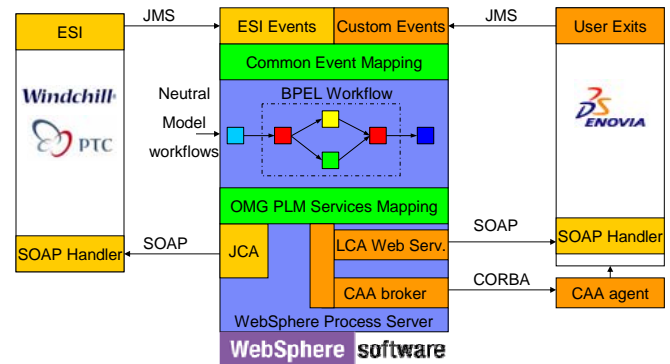
## Products Used & Architecture View

**IBM:** WebSphere Process Server, WebSphere Application Server, WebSphere MQ, and DB2

**Business Partners:** PTC Windchill, Dessault – Enovia and Catia, Pro-Step OpenPDM.



### General Solution Architecture



## Solution Scenario: PDIF / PDM - PDM Integration

1. A local design administrator creates the high level product structure defining Configuration Items (CI), Link Objects (LO) and Design Solutions (DS); in the Windchill system.
2. Once the high level product structure is defined and saved, it is moved to “released” state, triggering an event which launches a synchronization workflow
3. The synchronization workflow will then synchronize the CI, LO, DS structure with the remote ENOVIA environment.
4. A remote design engineer is then able to check-out a Design Solution to work on, loading it into CATIA.
5. The checkout operation triggers another workflow which synchronously also checks-out the master DS in Windchill.
6. The remote engineer updates / changes the BOM on the DS in the CATIA environment.
7. The design engineer will then do a check-in operation, using the ENOVIA LCA plug-in of CATIA; basically loading the CATIA files into LCA and in the vault.
8. The check-in operation triggers a synchronization workflow which moves the DS to “checked-in” state and also attaches a viewable VRML document (corresponds to assembly) & attached to the DS. The conversion of the CATProduct and CATPart documents into the VRML format are also part of the synchronization workflow.
9. The local design engineer is then able to verify that the DS has been checked in and can browse the VRML document to verify the design (Windchill).

## More Information

For more information on this solution **contact your IBM account representative.** Your account rep can then contact the Global Solution Center (GSC) to get more information and/or arrange for a demonstration.



**GSC** **Global Solution Center**  
Advanced Aerospace Solutions Environment

Product Data Integration Framework & PDM Integration