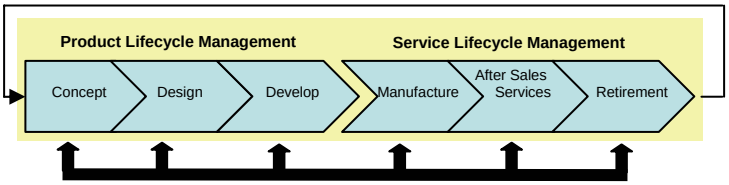
GSC Global Solution Center

Advanced Aerospace Solutions Environment

Service Lifecycle Management / Service after Sales

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

Aerospace & Defense manufactures are being forced to transition from standard "Product" based companies to "Product & Services" companies to provide the after sales, continued services to their products. Additional infrastructure is needed to support this "power by the hour" service delivery capability (i.e. Conditioned based maintenance, Supply chain optimization.)

Solution: IBM's Service Lifecycle Management / Service after Sales solution.

This solution demonstrates the processes required to integrate and automate the systems supporting the repair process of a simple part on an aircraft that is at the gate allowing it to continue on its next leg rather than being pulled out of service to make the repair. This solution results in a two thirds reduction in the time it takes to do the repair. This translates into big cost savings for the airlines industry.

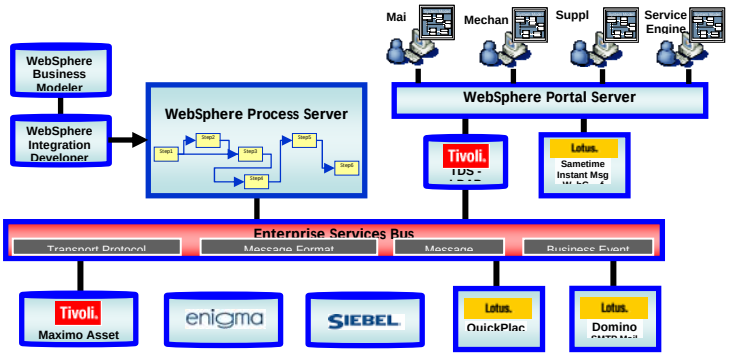
Customer Pain Points

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

- *Notifying ground in timely fashion of repairs that can be accomplished while aircraft is at gate.*
- *Difficulty of notifying all who need to know about a repair*
- *Length of overall time it takes to learn about and do repairs on aircraft*
- *Challenge of assembling all relevant pubs for the mechanic*
- *Keeping aircrafts' as maintained BoM up to date.*
- *Ensuring proper disposal of hazardous materials included in parts.*

Products Used & Architecture View

IBM: WebSphere Process Server; WebSphere Application Server, WebSphere Portal, WebSphere Business Modeler; DB2; Lotus Sametime, Lotus QuickPlace, Lotus Domino, Tivoli Directory Server; Maximo Asset Manager
Business Partners: Enigma, Siebel



Solution Scenario: Service Lifecycle Management

1. Flying aircraft develops fault in hydraulic cylinder of landing gear. Health monitoring system causes message to be transmitted to the ground.
2. Message is fed into diagnostic application which prescribes that a specific part be replaced.
3. The part needing to be replaced is automatically looked up and found to be out of stock so an alternate part is substituted.
4. Links to all digital publications that the mechanic will need to perform the repair are stored in a portlet for his later use.
5. A work order is automatically generated and routed to the maintenance manager who is alerted via text message.
6. He reviews the work order and assigns a qualified mechanic who also is alerted via text message.
7. Supply is notified also via a text message to have the alternate part available for the mechanic for a hot repair.
8. The mechanic views the work order, understands repair to be made (by viewing assembled links to all relevant publications), picks up part and goes to make repair.
9. Mechanic sees a dent in hydraulic line, chats with an engineer, gets him involved in a web conference to make an air worthiness judgment.
10. He completes the repair and closes the work order – this stops clock and updates "As-maintained" configuration of aircraft.
11. Supply clerk receives replaced part from mechanic and attempts to electronically scrap the part.
12. Number of landings on part is retrieved and compared to warranty landings. Part is found to have performed under warranty.
13. Supplier procurement and engineering, and, OEP procurement and engineering are informed of warranty issue via email.
14. Supply is notified to not scrap the part because it performed under its warranty and is given disposal instructions

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.