AGILE PRODUCT LIFECYCLE MANAGEMENT INTEGRATION PACK FOR JD EDWARDS ENTERPRISEONE: DESIGN TO RELEASE

Leveraging Oracle’s Application Integration Architecture, the Agile Product Lifecycle Management (PLM) “Design to Release” Process Integration Pack delivers seamless synchronization of product content between distributed engineering and manufacturing organizations, enabling your enterprise to accelerate time to market for new products and reduce costs, while improving product quality and minimizing supply chain disruptions.

The Issue: Introducing New Products to the Manufacturing Floor

Engineering designs a new product or re-designs an existing product. You want to get the product quick to market. How do you release these changes to the shop floor easily in order to meet your customer demands?

The Solution: End-to-End Design to Release Business Process

The Agile Product Lifecycle Management Design to Release Process Integration Pack (PIP) is a pre-built best practice integration process that is also configurable and extensible to meet your unique process needs. Based upon open, standards-based Service Oriented Architecture (SOA), it is designed to enable seamless synchronization of your enterprise product record across your supply chain and extended product network. Out-of-the-box, this integration supports enterprise processes that connect the enterprise PLM product record in Oracle Agile Product Lifecycle Management with JD Edwards EnterpriseOne.

New Product Introduction and Change Management

- New Product Introductions (Items, BOMs)
- Product Design Updates using Standard Change Management Process (ECO)
- ECO Queue Management and Process Monitoring
- Bi-Directional Synchronization of ECO Statuses and Supply Chain Attributes
- Bi-Directional Synchronization of User Defined Attributes
- Visibility to Product Costs and On-Hand Positions in PLM
- Multi-Site and Multi-Org
The core enterprise processes supported by the PIP comprise of the overarching Design to Release processes for New Products and Product Design Updates. These corner-stone processes enable transparency between the engineering and manufacturing functions. The solution aims at improving overall design for manufacturability and accelerating profitable innovation in a global ‘Design Anywhere, Build Anywhere’ business environment.

The PIP delivers an out-of-the-box best practice process, supported by standard configurations and data mappings, as well as support for advanced features such as Multi-Organization Change Propagation, ‘Copying’ and/or ‘Common-ing’ of Bill of Materials across organizations, and bi-directional synchronization of ECO statuses and Supply Chain data.

**Seamless Manufacturing Release**

The Oracle Agile PLM Design to Release Integration Pack supports seamless exchange of product content between Oracle Agile PLM and JD Edwards EnterpriseOne for new product introductions as well as product design updates. These best practice processes orchestrate a near real-time and highly responsive manufacturing release process for new products and design update, from Agile PLM to JD Edwards EnterpriseOne.

The New Product Release and Product Design Update processes supported by the PIP are essentially triggered by a standard ECO Release event in Agile PLM. Upon release, the ECO is logged into a PIP processing queue where its status can be tracked and necessary actions, including sequencing, fast-tracking or error handling, can be taken.

A corresponding Engineering Change Order is created in JD Edwards EnterpriseOne Manufacturing, in the appropriate Branch/Plants, in near real-time.

The ECO in JD Edwards EnterpriseOne can be implemented manually, or via a ‘low-touch’ standard Scheduler process. ECO transfer and implementation statuses are communicated back to Agile in a combination of configurable real-time and batch processes.

**Bi-Directional ‘Design for Supply Chain’ Visibility**

The integration pack functionality also addresses these key concepts of ‘Design for Supply Chain’, with an optional bi-directional synchronization of supply chain data. Item information and Bill of Materials flow from Agile PLM to JDE E1 but data such as Costs and On-Hand Quantities (calculated by Branch/Plant), or any other JDE E1 Item Branch attribute flows from JDE E1 to Agile PLM. Readily accessible supply chain data empowers Engineering to make supply chain friendly decisions when introducing new or improved product designs.
**Predictable and Sustainable Innovation**

Early visibility of quality data leads to a smoother design hand-off between Engineering and Manufacturing, resulting in significant improvements in time to market and time to volume metrics. It also has a positive impact on margin, cost and quality with reduced disruption on the supply chain, when new products are introduced or product revisions are released to other enterprise functions, including Manufacturing, Materials Management, Procurement, etc.

Similarly, providing visibility of supply chain data early in the design phases of the product, e.g. long lead time components or on hand positions, can lead to informed engineering decisions and seamless absorption by the supply chain at release.

At the core of the integration is an architecture that allows for the adaptability and reusability of core business processes. The Oracle Application Integration Architecture provides the flexibility to easily modify existing processes to enable:

- Re-configuring business processes using reusable objects and services
- Extending the process to additional applications without recoding the entire integration
- Protect your changes across upgrades. When upgrades are performed on the integration or connected Oracle applications, your changes within the AIA PIP will be carried forward.

**Configurable and Extensible**

The integration process and architecture supports a robust configuration, process monitoring and error handling framework, enabling business and IT users alike, to actively manage the process and reduce latencies typical to a cross-application process. This utility leverages the Oracle Fusion Middleware Business Process Execution Language (BPEL) Process Manager.

Also included in the solution, is user friendly configuration capability for defining domain value mappings that allows business and IT users to define and manage value maps for key elements (attributes, organizations, etc.) supporting the business objects being synchronized.

Domain Value Maps (DVM) leverage Fusion Middleware Service Oriented Architecture (SOA) Suite, and is highly configurable and extensible to customer-specific mappings.

The integration architecture is also supported by a robust process monitoring, error handling and configurable notification management framework, to ensure potential error conditions are identified early in the ECO release or transfer process and resulting impact on product quality, cost and time to market is effectively mitigated.
Initial Data Load for New Installations

Included in the integration is the optional ability to load Item and BOM information from JD Edwards EnterpriseOne to Agile PLM. This one time initial load process will speed up installation by sending Item and BOM information from the manufacturing system to the product lifecycle system. After the data has been loaded from manufacturing, the Agile PLM system is the system of record for Item and BOM information. Updates to the JD Edwards EnterpriseOne system will flow from Agile PLM through the standard Engineering Change Order process.

The Oracle Advantage

Oracle Application Integration Architecture (AIA) provides everything you need to rapidly enable service-oriented applications, from business processes to common objects and services, to SOA Governance, at greatly reduced cost. Oracle AIA Process Integration Packs (PIPs) are designed to be easily extended to evolve as your business changes, allowing you to respond to customer and market needs with greater agility and flexibility. The result is a complete end-to-end solution designed to give you faster time to benefit and lower cost of ownership.

Built on Fusion Middleware’s Service-Oriented Architecture (SOA) and BPM framework, Oracle AIA transforms rigid IT systems into flexible, integrated environments that can adapt and scale to business needs. Customers can gain comfort in knowing that all Oracle provides a complete integration solution that is fully supported, enhanced and maintained by Oracle thus minimizing any risk associated with integration projects.

For more details on AIA or the Design to Release PIP visit:
Bottom Line: Lower TCO for your Enterprise PLM Platform

Unlike traditional point-to-point integrations, typically based on proprietary third-party technologies, the Oracle Agile PLM PIP for Oracle JD Edwards EnterpriseOne represents a SOA-based integration built on open standards. Since the PLM PIP is designed, developed, owned, sold, and maintained by Oracle, customers will not have to incur the risk or additional costs working with third parties to integrate Agile PLM to JD Edwards EnterpriseOne.

The Design to Release Process Integration Pack is also the first step towards building a highly configurable, extensible and sustainable platform to support Oracle’s next generation integrated Enterprise Product Lifecycle Management solutions, connecting your enterprise PLM platform to your Oracle (and 3rd party) Enterprise CRM, SCM and ERP systems, to accelerate innovation and increase profitability.

For more information on how the Agile PLM Design-to-Release Integration Pack can simplify your business, contact your Oracle Application Sales Representative.