

### Why Did We Embark on This Journey

### Modernization - Eliminate IT debt.

- The current application was installed in 2013, and will get to a point where it is unsupported next year.
- The current application was highly customized across the board (driving significant IT debt).
- Overall reduction in the number of applications, including older home-grown applications (which represent significant additional, and sometimes hidden, sources of IT debt).
- New technologies (i.e. search functionality & automated workflows) will help productivity.

### **Changing Business Needs**

- Security has become more important; certain features such as ACL control for specific projects are required now more than ever.
  - Confidential, 'Crown Jewel' products and projects
- · More collaboration with non-IBM entities drives need for more efficient sharing of data
  - Business Partners, Design Partners
  - Suppliers and Contract Manufacturers: More of them, more system integration, more complex relationships....

## **Benefits**

#### **Reduced IT Debt**

- Reduction in application touch points
  - Overall reduction in number of applications
  - · Single data model
- Less customizations / more out of the box or configured functionality

#### **Access Control and Security**

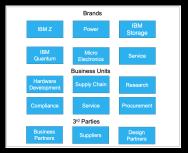
- Broad and granular access control capabilities allows segmentation of crown jewel data
- Better methodology to control supplier/partner access to data

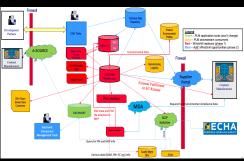
#### User

- High function search capabilities
- Easy-to-use Interface
- · Automation, such as configurable workflows
- Integration of CAD data for Easy Visualization
- Container concept offers significant improvement for "storing" parts

### **Complexity**

- Large number of Hardware Brands, Business Units, and 3<sup>rd</sup> parties that are ultimately users of our PLM data
- Common, but complex set of applications
- Not feasible to migrate 1 by 1 or 2 by 2 due to variety of factors
- Common applications, but different business processes due to diversity of IBM's brands and Business Units
- Not a lot of will or latitude to make significant changes because the business units cannot support





# **Engineering Change Workflow**

- 3 Distinct needs for an EC Workflow
  - Infrastructure products (Mainframe, Storage, Power)
  - · Micro Electronics
  - Electronic Components (ECP)
- Infrastructure
  - · Very complex due to common parts, but independent Brands
  - Utilizes parts from ECP & Micro Electronics
- Micro Electronics
  - · Must support IBM internal needs and OEM Business
- Electronic Components
  - No requirement for a workflow, but had to create a simple workflow in Windchill to make it work

### **Change Management using Redlining**

- IBM has business requirements for concurrent changes and, at times, out-of-planned-sequence release, supporting:
  - · Large Top Product Bills of Material
  - · Bills of Material shared between multiple complex products
  - · Configure-to-order of low-end, mid-range, and high-end technology products
  - · Complex regulatory and legal compliance requirements
- · Windchill Redlining gives us the flexibility to:
  - · Initiate changes on Bill of Material content even with other changes in flight.
  - Fully define changes while accounting for activity defined within other, concurrent changes.
  - Enable thorough change review with deep understanding of deltas.
  - · Provide agility to accommodate changing business priorities.
  - Automatically adjust open changes based on the latest release, with delta tracking and conflict identification, to ensure change quality and accuracy.

