

Implementing a Corporate, Common Framework

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Premium Partners:



Microsoft

ATK's PLM Strategy – Common Framework

- How can a company start to deploy PLM?
- What is a common framework?
- What impact can a “common framework” have?
- What are the biggest challenges in deploying a common framework?
- What are some of the largest benefits of a common framework?

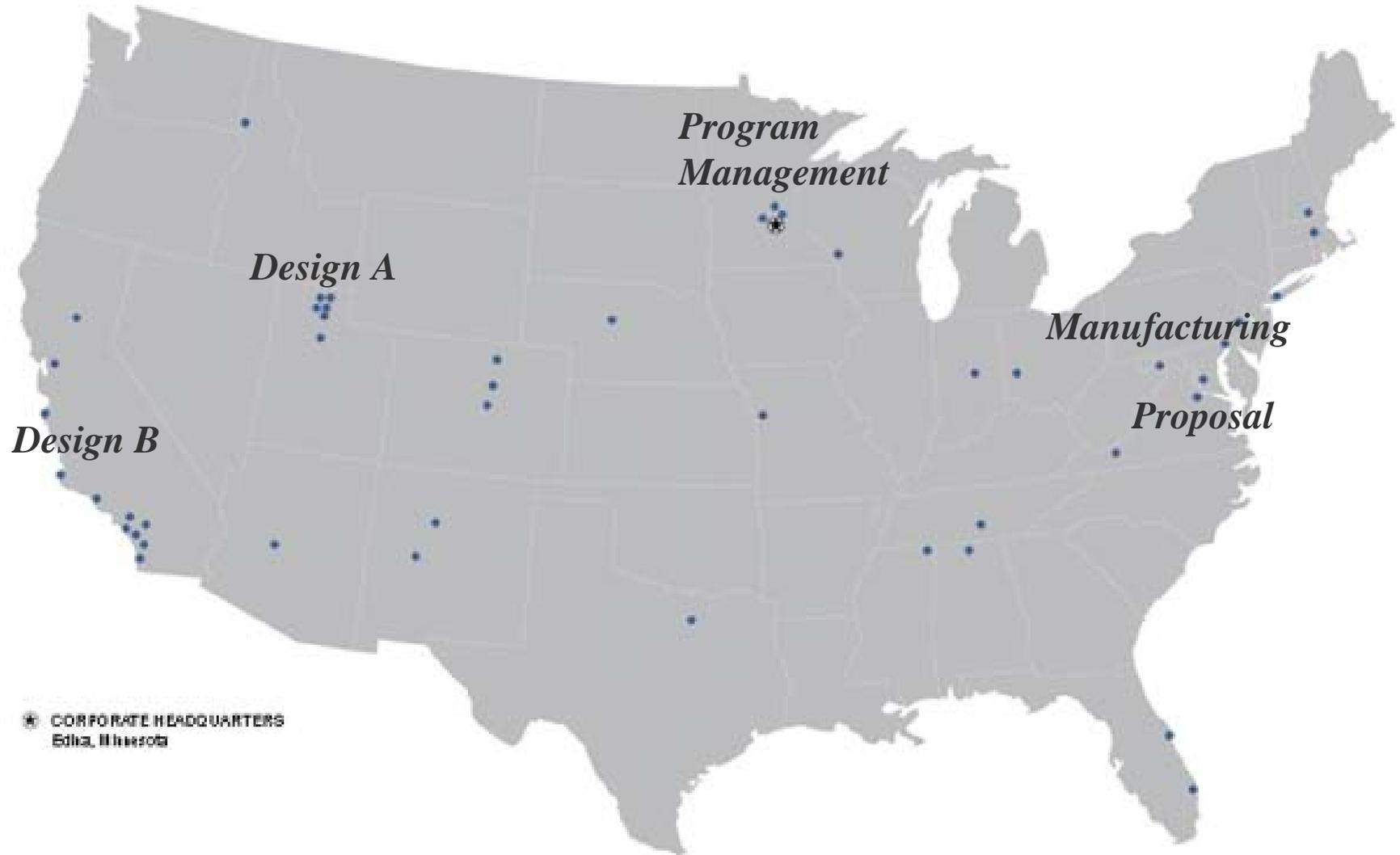
Step 1: Understand Your Business Challenges

- Capturing Intellectual Capital – Business Knowledge
 - Aging workforce
 - Accessibility of business knowledge
 - Common challenge noted by college interns
- Meeting Integrated Customer Requirements
 - IDE - Integrated Digital Environment
 - CITIS – Contractor Integrated Technical Information Services
 - Bottom line: Allowing real-time access to all current, accurate, usable product information at the right time to the right people

ATK – Business Challenges Today

- Providing Business Solutions Based on Existing Platforms
 - Invest in existing technology rather than propose first-time solutions
- “One ATK”
- Multi-site Program Execution across the Product Lifecycle

ATK – Business Challenges Today



Step 2: Align to Meet Business Challenges

- Implement **common business systems** where there is a significant value
- **Leverage cost advantage** to deploy & maintain systems from centralized resources
- Improve **secure access** to critical business data
- Enable **collaboration between sites** in support of joint programs
- Rapidly bring new programs onto **common strategic framework**
- Drive industry/corporate standards and best practices through **common business processes**
- Provide **metrics to measure** and continually improve utilization

Step 3: Obtain an Executive Sponsor

To: All ATK

... crucial to our financial success.

From: [Redacted], Vice President Mission Assurance

Subject: **... remove boundaries ...** Product Lifecycle Management (PLM)

Managing product information, the product lifecycle, and using workflow-driven processes that encompass our best practices is crucial to our financial success. Currently, product knowledge and best **... leverage corporate product knowledge ...** technological and organizational boundaries. An increased ability to remove these boundaries and leverage corporate product knowledge will enable us to address key strategic initiatives.

... Enable (ATK) to address key strategic initiatives ...

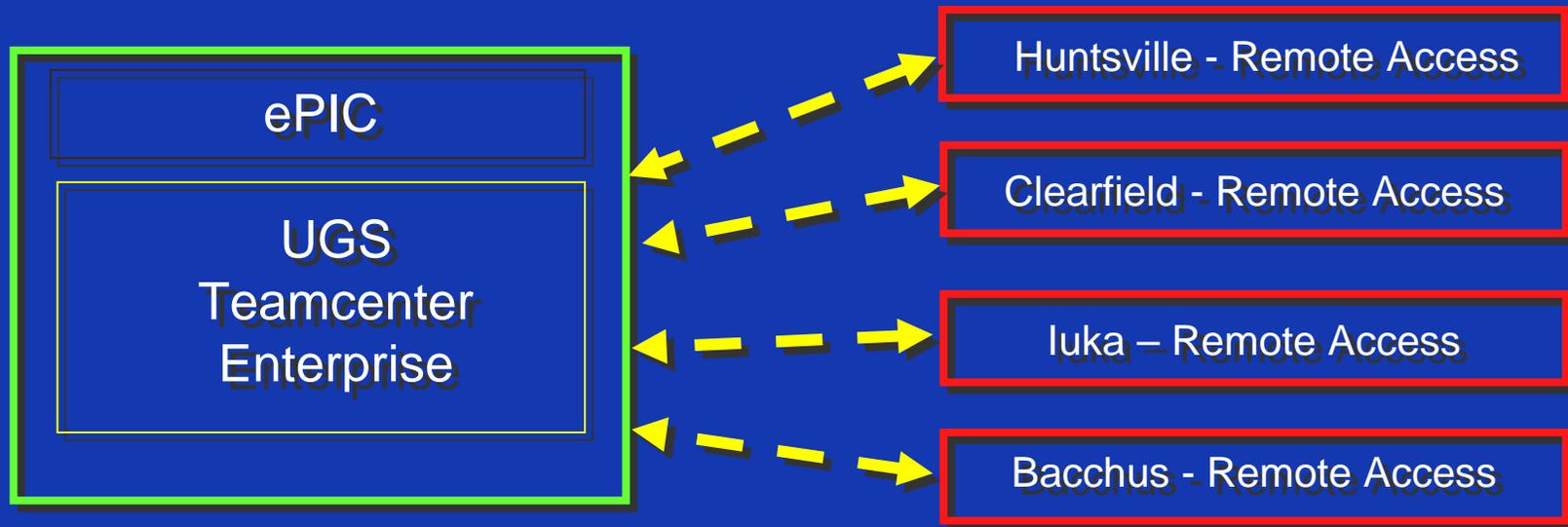
In order to help us achieve our goal, we have selected Teamcenter from PTC Corporation as the corporate standard for PLM and Collaboration across ATK.

Step 4: Establish a Steering Committee

- ATK Common Framework to provide:
 - Single, common, secure repository for all intellectual knowledge
 - Structured (specifications, drawings . . .)
 - Non-structured data (presentations, trade studies . . .)
 - Structured, common approach to design and management of programs
 - Collaborative environment that enables access and sharing of product knowledge across the global ATK teams, including outside customers and suppliers
 - Ability to search for data across ATK

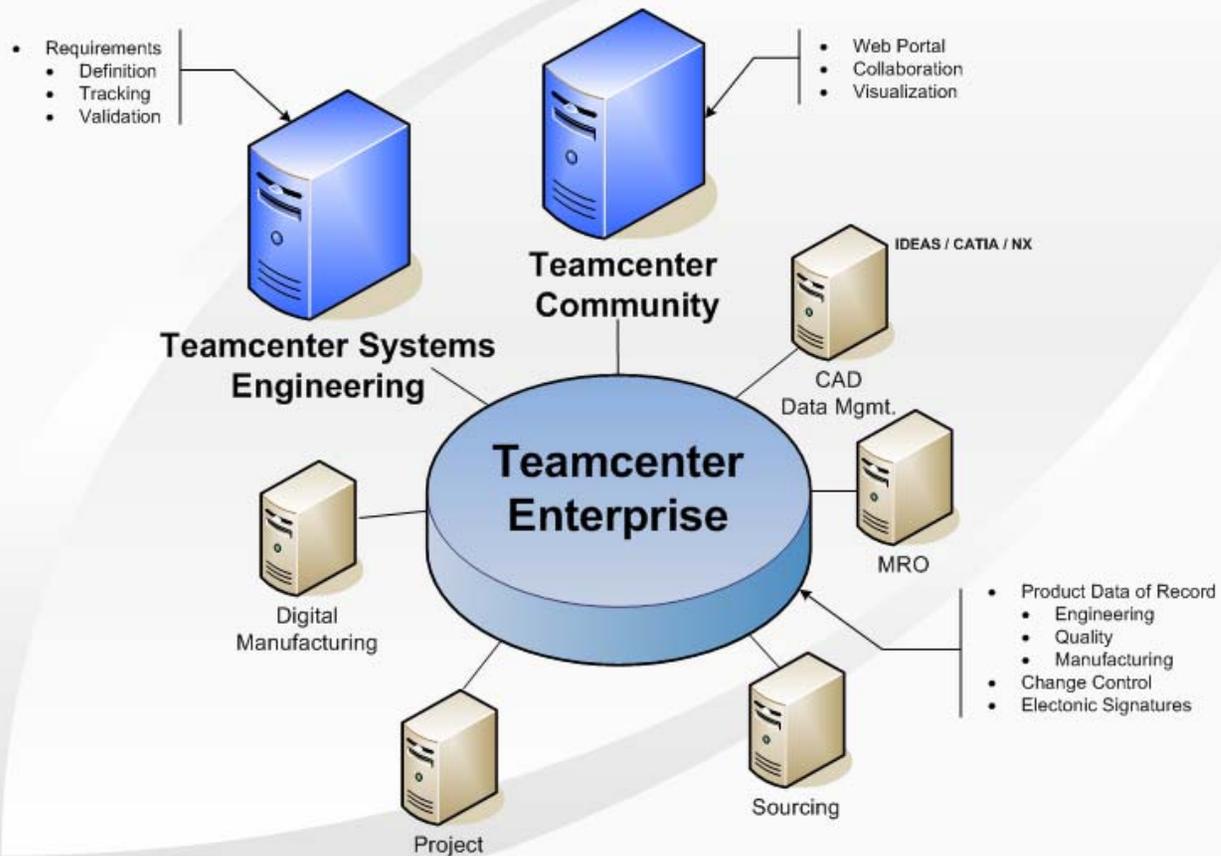
Step 5: Establish a Single, Stable Application

- Establish a stable Change Control process
- Common framework will grow as other pilots are successful
- Benefits:
 - Standardized processes – Speaking same language
 - Secure access to ATK critical business data
 - Allows multiple sites with limited/no site support staff
 - Sites access a corporate maintained system – hardware and software



Common Framework Architecture

ATK IDE Common Framework Architecture



Step 6: Establish System Standards

- All common systems need standards
- Have Steering Committee approve the standards
- Publish / Communicate the standards
- Help ALL to realize that this is part of a GREATER system
 - Local interests and standards need to change as part of the bigger picture
 - Allow some modification as required (site specific needs)
- Examples:
 - Standard automatic document numbering & revisioning
 - For new items only, legacy items will retain number and revision
 - Duplicate legacy items will be handled on “one by one” basis
 - Exceptions will be dealt with as needed
 - Utilize existing attributes / document types
 - New attributes will be added as needed (CRB approval)

Step 7: Establish an Implementation Approach

- MUST be based on predefined standards
 - Document, then continuously improve implementation approach
 - First implementation using Quick-Start approach - Huntsville, Alabama – 100 users
 - Implementation time – 1 month
 - 1-week on site review of requirements, processes, scope
 - 2-week off site migration effort
 - 1-week on site deployment and training

Implementation Approach

- Scope of quick start Implementation includes core design data:
 - Change Requests
 - Change Notices
 - Drawings – Design (Product), Tooling, and Manufacturing
 - Specifications
 - Parts
 - Migration of existing data

Step 8: Enforce Standards

- Biggest challenge – by far
 - Culture, Culture, Culture
 - Can't change way of doing business
 - Don't want to change way of doing business
- On a working level – create a Change Review Board
 - Include members from largest sites
 - Allow this committee to establish application direction
- Allow Steering Committee to deal with issues

Step 9: Integrate with other Key Business Systems

MRP

- Part Master created in Teamcenter Enterprise then passed to MRP
- Passes Part Structure, Revisions and Changes

Shop Floor (MES)

- Drawings/Documents referenced from Teamcenter Enterprise
- Shop Travelers controlled and released in Teamcenter Enterprise

Engineering Scheduling

- Status is passed to scheduling
- Projections are based on historical averages and need dates

PeopleSoft

- User information
- Inactivate those who have left the company

Teamcenter Community

Advantages Realized with “Common Framework”

- **Communication** improvement – talking same language
- Utilize **central resources** for implementation and maintenance
- **Single source** for product related information, regardless of business location
 - One application, one username/password, same look & feel
- Enables **global** access and data sharing
- Improved data and design **accuracy**
- Enables global ATK teams, customers, and suppliers to **collaborate effectively** as part of the extended enterprise team
- **Improve efficiency** of locating product information and design reuse
- Aligns with the “**One ATK**” vision
- Access to data can still be **controlled** (many variations)

Lessons Learned

- Executive Business Sponsor is a must
- Establish an implementation team of experienced, multi-discipline users, customers and suppliers
- Implement periodic reviews with steering committee
- Use Steering Committee support to overcome barriers
- Recognize and celebrate when important milestones were reached
- Communicate, Communicate, Communicate
- End Users, End Users, End Users

Lessons Learned

- Establish and enforce standards – with any common application there must be standards
- PDM/PLM systems (Teamcenter Enterprise) are labor intensive to set up
- Assign specific roles/responsibilities to Corporate/Site

Summary of ATK's PLM Strategy

- Start with the end goal in mind
- Start with bite-sized chunks
- PLM is a Strategy, a Vision, a Way of Life
 - Sometimes the end goal is too large for executives (extends to all organization and impacts everyone)
 - Start with simple, short-term efforts that will impact the long-term vision
 - Establish a common framework as part of a business solution
 - Require others to use this common framework
 - Integrate with other business systems
 - Implement common business processes
 - Realize that the immediate solution is part of the greater solution
 - Allow flexibility of business process where it makes sense
 - Extend framework to other disciplines (Manufacturing, Quality, Customers, . . .) and to other products

