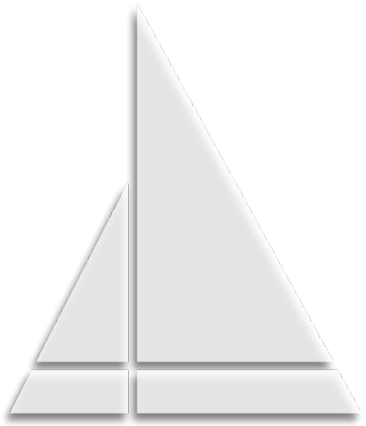
Case Study: Transmissions and Propulsion Systems

Defense, Industrial, Automotive, Off-highway

- $2.7B annual revenue
- 100+ transmission models in 2500+ vehicles
- At work in 100+ countries
- 2900 employees



THE GOAL

- Enterprise Ecosystem Excellence to support scalable growth
- Develop true NPD Capability
- Change Processes: Efficiency Step-Change
- PMO Calibration and Deployment
- Holistic Transformation: People, Processes, Tools, and Data

THE APPROACH

- Partner with IpX for Project & Technical leadership
- Assessment of current processes across all Business Platforms
- Establish Process Roadmap for current and future state
- Define Business Goals and Functional Requirements
- Establish Corporate polices and procedures
- Phased Rollout to Business Units

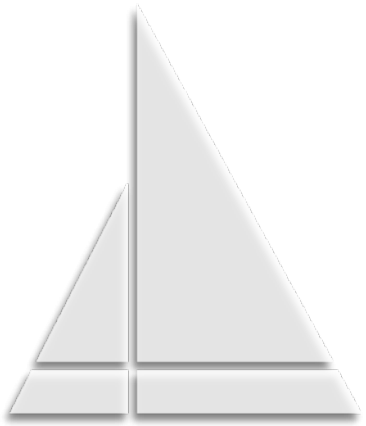
THE RESULT

- Development of Enterprise-wide NPD process
- Sr. Staff Alignment: impacts to Functional processes & ways of working
- Development of Future-State change process
- Transition from siloed Functional processes to a true Business Process

Case Study: Power-Gen

Defense, Industrial, Automotive, Off-highway, Medical

- $24.2B annual revenue
- 22 Years of Partnership
- 120+ mfg sites globally
- 62,000 employees



THE GOAL

- Develop an Enterprise Change & Product Release process
- Support “World Class PLM System” deployment
- Position the business process to support I4.0
- Enterprise CM training

THE APPROACH

- Partner with IpX for Project & Technical leadership
- Assessment of current processes across all Business Platforms
- Establish Process Roadmap for current and future state
- Define Business Goals and Functional Requirements
- Establish Corporate polices and procedures
- Phased Rollout to Business Units

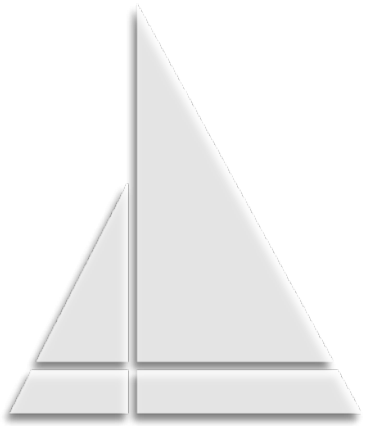
THE RESULT

- Development of Enterprise-wide CM process
- Alignment of 12 divisions into a single PLM tool
- Enterprise-wide Change Impact assessments defining the true scope/cost of changes
- Data structuring to facilitate Enterprise level Impact Analysis and re-use opportunities

Case Study: US Airframer

US Biz Jet OEM

- $3.5B annual revenue
- 6 Years of Partnership
- 3 main sites globally
- 10,000+ employees



THE GOAL

- Leverage promise of 3D MBD on Airframe New Development Programs
- Reduce Development Costs during Certification Testing Phase

THE APPROACH

- Define Formal Config & Change Management team
- Revisit Change Review Board Governance & Execution based on CM2
- Expand Configuration management processes for 3D MBD to better manage Test Articles Retrofit.
- Develop second generation Change Management Systems that support Cross Functional team

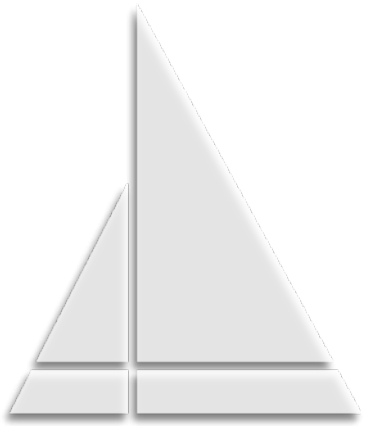
THE RESULT

- Multi-millions savings on Retrofit cost (Material and Labor Hours) due to better impact assessment and Implementation planning.
- CM was established as a function that adds value which allowed for improved career opportunities and competitive salaries.

Case Study: Hardware

Technology Hardware OEM

- ~$1B annual revenue
- 3 sites globally
- 3,000 employees



THE GOAL

- Improve Data Integrity (Quality & Accuracy) measured to be only 30%
- Reduce 120-Day backlog of post-change process design data to be updated
- Eliminate $6m per month scrap and rework costs
- Stop market share loses, stop slipping product release schedules, regain NPD momentum

THE APPROACH

- Partner with IpX
- Train engineering, program management, and CM resources
- Collaborate with PLM vendor on implementation, reporting and data capture
- Build cross-functional team supported by C-level
- Develop new hierarchy of the organization and move resources to new roles

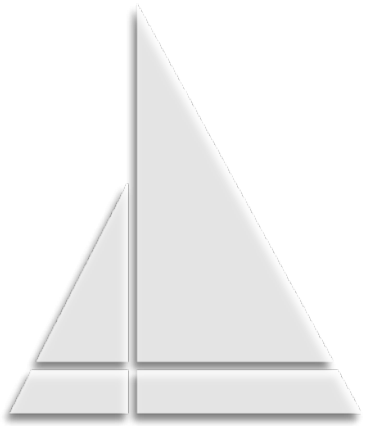
THE RESULT

- Successful PLM rollout inside 14 months
- Baselined all new CM2 processes
- ~$34m in first year savings
- Eliminated design backlog
- Improved post-change process design update to 3 days turn around (down from 120)
- Implemented single source of truth & eliminated manual processes
- Reduced 5 tools down to 2, PLM & ERP

Case Study: Undersea Cable

Defense, Marine, Commercial

- $321M annual revenue
- 5 Years of Partnership
- 11 sites globally
- 1,300 employees



THE GOAL

- Solve repeated schedule delays caused by design change inefficiencies
- Change Review Board did not have a structured upstream process to implement approved changes
- Incomplete impact of change process

THE APPROACH

- Update processes and supporting tools through application of the CM2-500 requirements and the CM2-600 standards
- Train middle and upper management
- Phased approach for implementing continual improvement initiatives
- Replace paper-based design change notice with a tool-based system

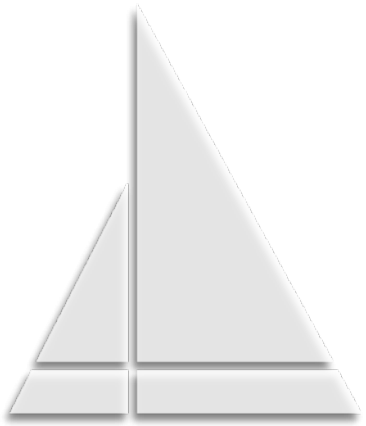
THE RESULT

- Gained a deep understanding of root cause of inefficiencies + process gaps & weaknesses
- Implemented process improvements and some inter-department/business unit forms and workflows
- Improved communications resulting in synchronization of engineering, supply chain, operations and inventory to impact of change
- IpX estimates a savings of $12 - $20m annually

Case Study: Technology Supplier

Defense, Safety, Automotive, Off-highway

- $2.5M annual revenue
- 2 Years of Partnership
- 6 sites globally
- ~1,200 employees



THE GOAL

- Model Industry Standard Change Management Process
- Dramatically improve change implementation cycle-time to meet customer expectations
- Global consistency in Change Management
- Provide visibility to the enterprise

THE APPROACH

- Partner with IpX for roadmap and Organizational Change Management
- Establish a CM2 Competency within the Organization & Clean Up the backlog
- Define Roles & Responsibilities within the New CM2 team
- Establish a robust change assessment, structured decision-making process, and enterprise prioritization method per CM2 core principles
- Rollout training globally, pilot in a single market, and full enterprise rollout

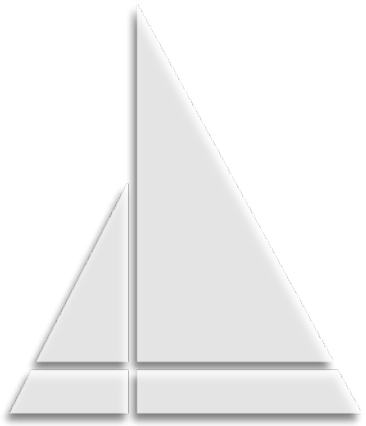
THE RESULT

- Assessment Phase: mapped and quantified impacts of process bottlenecks and quality escapes
- Transitioned to CM2 processes and roles globally within 6 months
- On Time: 24% up to 86% changes on time
- Cycle Time: ~50 days on avg down to 22 days
- Back Log: 250 active changes down to 92
- Throughput: 24 CNs/week up to 48 CNs/week
- Customers satisfied! Revenue to bottom line faster.

Case Study: Automotive Tier 1 Supplier

Defense, Safety, Automotive, Off-highway

- 4 mfg sites globally
- Engineering by SOW
- Engineering data managed by supplier



THE GOAL

- Develop an Enterprise Change & Product Release process
- In house Engineering Capability
- In house engineering and manufacturing data
- Out of the box PLM solution, no customization

THE APPROACH

- Leverage IpX for Technical leadership
- Define Business Goals and Functional Requirements
- Establish data migration strategy
- Developed internal training
- Phased Rollout to Engineering and Manufacturing sites

THE RESULT

- Definition of Enterprise-wide CM process
- PLM successfully deployed with no customization
- Engineering and Manufacturing data successfully migrated
- In house engineering established