

Tuesday Morning, October 28th

Plenary Session – Dearborn Ballroom, Salons I & II

Operational Innovation for Cross Functional Collaboration.

The need to link isolated silos and provide consistent architecture across the complete product lifecycle is both the industry's greatest opportunity and its most pressing need. The full development and application of technology depends first upon the resolution of cultural and organizational challenges in the face of accelerated technological innovation. Find out what this means for you and your organization when our keynote speakers discuss these high-level challenges and themes.

7:00 **Registration and Continental Breakfast**, Foyer, Dearborn Ballroom.

8:30 **Welcome and Introduction to Product Lifecycle Management Road Map 2003.**

- Bill Abramson, *Manager of Collaboration and Partnership*, DHBA
- Donald H. Brown, *Chairman*, DHBA

8:50 **Business-Processes Kaizen at Toyota.**

- Christopher Couch, *Manager, Operations Strategy*, Toyota Motor Manufacturing, North America

Toyota is increasingly turning to cross-functional business process kaizen as a means of improving its performance. The kaizen mentality of continuous improvement traditionally begins with total buy-in across the organization and builds on “reasonably” stable demand distribution and process characteristics. However, Toyota's traditional toolkit for shop-floor process kaizen, the Toyota Production System, is not always sufficient when attempting to improve business processes. This presentation will explain some of Toyota's recent thinking about business-process kaizen efforts and lessons learned.

9:45 **BREAK**, Foyer, Dearborn Ballroom

10:05 **Design for Supply: Accelerating Bill-of-Material Reuse.**

- John Waraniak, *Director, Automotive & Aerospace Advisory Board*, DHBA

Conventional wisdom in today's automotive industry dictates a back-to-basics, cost-cutting mentality. While necessary, conventional thinking and traditional efforts alone are no longer sufficient. Winning today requires innovative thinking, relentless execution, and cross-functional collaboration. Technology is integral to all three. It accelerates adaptation to the increasing demands of new product creation, flexible manufacturing systems, and superior financial performance.

11:05 **Conference Overview: Operational Innovation for Cross-Functional Collaboration.**

- Donald H. Brown, *Chairman*, DHBA
- Dr. Gahl Berkooz, *Chief Analyst, PLM & Program Director, Product Definition*, DHBA
- Vasco Drecun, *Research Director, Product Value Management*, DHBA
- Pierre Fricke, *Executive Vice President, Web Application & PLM Infrastructure*, DHBA
- Dr. Ken Versprille, *Research Director, Design Creation & Validation*, DHBA

12:00 noon **Lunch, Alexandria Ballroom.**

Tuesday Afternoon, October 28th

Breakout Session – Information Based Frameworks for Horizontal Enterprise Integration Across Multiple Product Representations

Led by: Dr. Gahl Berkooz

Dearborn Ballroom, Salons I & II

1:15 Introduction – Driving the Cost Structure Down with PLM.

➤ Dr. Gahl Berkooz, *Chief Analyst, PLM & Program Director, Product Definition, DHBA*

Four core PLM initiatives directly and dramatically reduce the cost structure of global manufacturers. These are: Generic Physical Architecture, a Global Feature Structure, Systems Engineering, and Digital Manufacturing. This presentation, will discuss these initiatives which complement and build on the pervasive collaboration and document management capabilities that are being widely implemented.

1:45 Assessing the State of the Art for PLM.

➤ Martin P. Conner, *PLM Practice Leader, Cap Gemini Ernst & Young*

➤ William J. Duggan, *Senior Manager, Cap Gemini Ernst & Young*

PLM transformation implementations led by Cap Gemini Ernst & Young will be described. The results will be compared to the original objectives, as well as how they map to the four initiatives in the DHBA framework. The lessons learned reach well beyond collaboration and document management.

2:15 Information-Driven Project Management (IDPM).

➤ Tyson R. Browning, *Assistant Professor of Enterprise Operations, Texas Christian University*

Often, project managers struggle with the first steps of project planning — gaining good process logic. Most planning and scheduling tools depict a sequence of events but do not account explicitly for information flow. IDPM allows managers to visualize, organize, and exploit information flow. The impacts of information flow problems, unlocking the information flow structure, using DSM to visualize flow, and more will be discussed.

3:00 BREAK, Foyer, Dearborn Ballroom.

3:15 Managing System Interface Requirements Reconciliation Using the Design Structure Matrix (DSM) Method.

➤ Qi D. Van Eikema Hommes, Ph.D., *Mechanical Engineer, Powertrain Applications, Ford Motor Company*

This presentation will show how DSM reveals the true workload associated with reconciling major system interface requirements. Findings show how workload associated with system interfaces is underestimated. Three levels of responsibilities were uncovered — local, first order system interfaces, and second order system interfaces. The results provide engineers and managers with a framework and a vocabulary to better understand, manage, and reconcile system interface requirements.

3:45 Bridging Requirements and Design: Information Architecture Overcomes System Engineering Challenges.

➤ Dr. Gahl Berkooz, *Chief Analyst, PLM & Program Director, Product Definition, DHBA*

DHBA's collaboration in aerospace shows that traditional Systems Engineering practices encounter challenges with complex multidisciplinary products and distributed product development. Basing Systems Engineering on certain product representations can overcome these challenges. Collaboration in automotive shows that similar product representations enable commonality and reuse at the system and subsystem level. This presentation highlights “an information architecture for Systems Engineering”, which takes the information systems engineers use daily and shows how to group this information.

4:05 Panel Discussion: Applying Requirements Flowdown for an Enterprise Data Framework.

4:20 Panel Discussion: MPM: Manufacturing Simulation or a Manufacturing View for the Enterprise?

5:20 Session Wrap Up.

➤ Dr. Gahl Berkooz, *Chief Analyst, PLM & Program Director, Product Definition, DHBA*

5:30 Conference Adjourns for the Day.

5:30 – 8:30 COCKTAIL RECEPTION & EYE ON TECHNOLOGY EXHIBITION, Dearborn Ballroom.

Tuesday Afternoon, October 28th

Breakout Session – PLM Integration with a Standards-Based Infrastructure

Led by: Pierre Fricke

Fairlane Room

1:15 Introduction – PLM Integration with a Standards-Based Infrastructure.

- Pierre Fricke, *Executive Vice President, Web Application & PLM Infrastructure*, DHBA

1:30 Guide to PLM Integration & Interoperability.

- Fredrick L. Bsharah, *Technical Specialist – Product Development Systems*, Ford Motor Company

This presentation will describe the interoperability strategy and decision flow used by Ford to determine the optimal method for integrating their PLM applications with the other product creation applications. The talk will begin with an overview of how Ford's Product Development Systems organization is managing the design and deployment of its IT architecture. This will include an overview of the process followed by their Architecture Review Board. The focus will then shift to a comprehensive description of the decision tree followed by the practice architects in determining whether to follow a request reply, messaging-web service, or direct point-to-point paradigm when implementing a PLM integration solution. Included will be an explanation of how an enterprise level, logical object model is used to define reusable schemas for supporting the messaging when loosely coupled interoperability is called for.

2:15 Product Lifecycle Management – Business Partner Process Integration.

- Rich Becks, *Vice President, eBusiness and Supply Chain*, Seagate Technology

This presentation will highlight the transformation of Seagate's supply chain from a manual, paper based, build-to-forecast system into a RosettaNet-based build-to-demand model that has doubled inventory turns and has helped make the company one of the most flexible manufacturers in the high tech electronics industry today. Seagate's VMI system is powered by E2open's Supply Chain Collaboration network. The presentation will cover integration strategies, business process re-engineering, and IT standards used to orchestrate its internal and external sources of supply.

3:00 Break, Foyer, Dearborn Ballroom.

3:15 PLM Integration – User Pain and Deployment Maturity.

- Pierre Fricke, *Executive Vice President, Web Application & PLM Infrastructure*, DHBA

Users tell DHBA that they experience significant pain in using PLM processes due to a lack of integration across applications and disciplines. While the lack of an information architecture plays a key role in this pain in some cases, many users do not understand the PLM vendors' integration strategies and what can be done with new integration technologies. This session will position the maturity of key manufacturing companies' integration implementations and describe users' hot focus areas including PLM-ERP and PLM-legacy integration.

3:45 A Pilot PDM Integration Project using a Services Architecture.

- G. Michael Bayer, *Manager, PDP Systems*, John Deere Power Systems

Within John Deere, product data is housed within multiple Product Data Management (PDM) systems, ERP systems and other business systems. A strategy for sharing product data between applications has been developed that uses an integration services strategy. John Deere Power Systems is in the process of implementing PTC's PDMLink system and SAP's R/3 system. Both of these systems will be used to enable the Product Delivery Process and will need to share data with each other and with other systems within the enterprise. This presentation reports on a pilot project to create an integration services infrastructure and enable a few messages between PDMLink and an Enterprise part data system. The project scope, activities, results, and lessons learned will be discussed.

4:25 PLM Integration Issues – The Vendors Respond

5:20 Session Wrap Up.

- Pierre Fricke, *Executive Vice President, Web Application & PLM Infrastructure*, DHBA

5:30 Conference Adjourns for the Day.

5:30 – 8:30 COCKTAIL RECEPTION & EYE ON TECHNOLOGY EXHIBITION, Dearborn Ballroom.

Wednesday Morning, October 29th

Breakout Session – Collaborative CAD – Bridging the Enterprise
Led by: Dr. Ken Versprille
Dearborn Ballroom, Salons I & II

7:00 Continental Breakfast, Dearborn Ballroom. [Eye on Technology Exhibition Open]

8:00 Introduction – Collaborative CAD – Bridging the Enterprise.

➤ Dr. Ken Versprille, *Research Director, Design Creation & Validation*, DHBA

8:20 Development of a Bond Tool Application using VB Automation (Peeling the Knowledge Onion).

➤ Gregory A. Premetz, *Technical Project Manager, Product Design – KBE Applications*, Vought Aircraft

Vought Aircraft Industries, Inc. (Vought) is the world's largest independent supplier of aerostructures. In 2001, Vought began investing in the re-engineering of its processes to leverage new technologies. CATIA V5 and Knowledgeware were selected as the technologies for KBE development. Since then, Vought has advanced to using Visual Basic to automate the design process through the creation of 3D CAD models, parts lists, and NC cutter tool path motion based on company procedures, best practices, and design heuristics. This presentation will illustrate the work done to create a composite bond tool application and discuss both benefits and lessons learned.

9:00 PowerKIT - Powertrain Virtual Design Environment.

➤ Sassan Khoubyari, *Global Powertrain C3PNG & Product Creation Program Manager*, Ford Motor Company

➤ Dr. Kurshid Qureshi, *Powertrain KBE Technical Specialist*, Ford Motor Company

Increasing design decision confidence in the upfront conceptual stage along with enabling CAE to drive the design are critical to ensure high quality design. The result is a savings of millions of dollars by avoiding late design and tooling changes downstream. The PowerKIT System is one of the new enablers in the design/analyses/optimization space. PowerKIT is a fully integrated knowledge-driven design environment that enables engineers to look at the downstream constraints early on in the design process, eliminating or minimizing late design changes. This presentation will explain how this works.

9:40 BREAK, Dearborn Ballroom. [Eye on Technology Exhibition Open]

10:25 The AIAG's Perspective on Engineering Visualization.

➤ Eric Wines, *Collaborative/eEngineering Leader*, SiemensVDO Automotive

The expansion of visualization promises to eliminate many of the time and cost burdens associated with bringing teams together at a central location. This presentation will outline the AIAG's position on best practices and recommendations for using 2-D and 3-D visualization tools. The technology shows promise in merging separate solutions across heterogeneous authoring systems. These new solutions are sophisticated visualizations intended to accelerate design collaboration, replace physical prototypes, and extend user access to engineering data across the enterprise.

Presentation followed by panel discussion.

10:55 Panel Discussion on Design Collaboration.

11:45 Design Collaboration's State of the Industry and Beyond.

➤ Dr. Ken Versprille, *Research Director, Design Creation & Validation*, DHBA

In July 2003, DHBA presented an in-depth investigation of the emerging requirements in product structure access and change management functions for design collaboration. This presentation will overview current state-of-the-industry solutions from a number of leading commercial providers in meeting these emerging requirements. It will also provide an assessment of their future product strategies. The discussion will include cautionary advice on which requirement areas users should give due diligence. Guidelines will be provided to those seeking to expand their use of collaboration and those looking to introduce collaboration technology tools into their organizations for the first time.

12:00 noon Lunch, Alexandria Ballroom. Followed by dessert & coffee in Dearborn Ballroom.
[Eye on Technology Exhibition Open]

Wednesday Morning, October 29th

Breakout Session – Enhancing Product Value Throughout the Supply Chain

Led by: Vasco Drecun

Fairlane Room

7:00 **Continental Breakfast**, Dearborn Ballroom. [Eye on Technology Exhibition Open]

8:00 **Introduction – Enhancing Product Value Throughout the Supply Chain.**

➤ Vasco Drecun, *Research Director, Product Value Management*, DHBA

8:20 **Is Innovation Enough?**

➤ Michael J. Bauer, *Partner*, Computer Sciences Corporation

Improving tools for designing and producing innovative products has been a key focus of engineering and systems teams for some time. No matter how innovative, a product has to be manufactured and supported efficiently and effectively. Integrating and rationalizing processes across multiple constituents and enterprises is the key to success. Processes to integrate and couple constituents inside and outside corporate walls have received little focus in comparison to the complex tool sets that are in regular use. This presentation will focus on lessons learned from key industries. Outlines for process integration, methods and tools to fully integrate both internal and external constituencies will be presented.

9:00 **After Sales and Warranty Support - Increasing Customer Satisfaction and Building New Revenue Streams.**

➤ Dr. Stavros Stefanis, *Partner, Supply Chain Transformation*, IBM Corporation

The integration of product diagnostics and testing into a company's PLM environment yields significant cost and product development time reductions. In such an environment, content development and process verification can be performed concurrently with product engineering, thus creating a new paradigm for a unified enterprise approach to close the loop between engineering and end-users. Products with life spans over the course of a few years can benefit from aftermarket data. This data can be used later in the product lifecycle. Find out how after market solutions can lead to; productivity improvements, gaining share in the \$30 billion aftermarket industry, closing the loop between engineering and end-users to make higher quality products, working with suppliers more closely and efficiently, and predicting failure before it happens.

9:40 **BREAK**, Dearborn Ballroom. [Eye on Technology Exhibition Open]

10:25 **E-procurement and the Product Lifecycle: Tools for Strategic Sourcing and Collaboration.**

➤ David Pieper, *Senior Advisor, Global Operations Supply Chain*, Hewlett-Packard.

HP is reinventing its procurement processes with solutions; tools and services can be used throughout a product's lifecycle and across a range of business models. Strategies include online collaboration for forecast and order management, Internet-enabled inventory and supply chain collaboration, buying through online auctions, and strategic sourcing through multi-tier supply chain intelligence and analytics. This adds up to savings of millions of dollars while driving efficiency gains of up to 40%.

11:05 **Product Development for Supply Chain.**

➤ George W. Brown, *Staff Architect/Program Manager, IT Industry Business Research*, Intel Corporation

This presentation focuses on a project funded through the Supply Chain Council's Research Strategies Committee on Product Design for Supply-Chain. The project's goal was "to establish reusable process templates and a methodology to define essential collaborations between product design and supply chain." The work has focused on process scenarios representing the design chain integrated with the supply chain. Work products supporting the methodology include a Decision Framework and a Relationship Matrix. Learn more about this project and the next steps.

11:45 **Session Wrap Up.**

➤ Vasco Drecun, *Research Director, Product Value Management*, DHBA

12:00 noon **Lunch, Alexandria Ballroom. Followed by dessert & coffee in Dearborn Ballroom. [Eye on Technology Exhibition Open]**

Wednesday Afternoon, October 29th

Plenary Session – Operational Innovation for Cross-Functional Collaboration – Delivering on the Results
Dearborn Ballroom, Salons I & II

Operational Innovation for Cross Functional Collaboration – Delivering on the Results.

The full development and application of technology depends first upon the resolution of cultural and organizational challenges in the face of accelerated technological innovation. Our opening keynote speakers considered the higher-level challenges and themes. In our closing session our speakers will concentrate on delivering winning results.

1:30 Introduction – Operational Innovation for Cross Functional Collaboration – Delivering on the Results.

- Donald H. Brown, *Chairman*, DHBA

1:35 Aligning IT and Engineering for Transformational Change.

- Lorie J. Buckingham, *Vice President & Chief Information Officer*, Visteon Corporation

The alignment of IT and engineering provides significant opportunity for business value-add. The global economy necessitates interaction with customers worldwide to design and build according to specification. It drives collaboration in sharing and reuse of product design and manufacturing processes. IT enables many processes from customer service through payment. IT infrastructure supports better global communication and performance. Engineering's focus has evolved to one of virtual design before final product realization. It is possible to leverage global, state-of-the-art infrastructure and IT best practices with enterprise wide PLM processes and solutions to redefine design and manufacture. Tomorrow's business leaders will be those who realize the associated benefits.

2:20 The Master Model for Achieving Cross-Functional Design.

- Richard D. Cedar, *Manager Master Model, Tools Technology, Acoustics & Installation Aerodynamics*, GE Aircraft Engines

GE Aircraft Engines (GEAE) views implementing the Intelligent Master Model design process (IMM) as key to achieving the goals of Six Sigma product quality and reduced cycle time for new product introduction. The ability to define products using engineering-based design rules allows rapid optimization, process standardization, and reuse of design. Find out how GEAE implemented IMM in its design processes and how it is used to ensure that customer requirements are met with a product that withstands variations in design, execution, and the environment. Learn how GEAE plans to reap the benefits of IMM in a global, heterogeneous environment.

3:05 Break, Foyer, Dearborn Ballroom.

3:20 Driving Innovation with Structured Design Methodologies.

- Dr. Andrew Brown, Jr., *Executive Director of Engineering Competency, DTI/Research Labs, and Product Government Affairs & Partnerships*, Delphi Corporation

Global competition forces Delphi to constantly develop new competencies, method, and processes that help continue the creation of superior products. Like other manufacturers, Delphi realizes significant business benefits from formal, structured methodologies, such as Lean Manufacturing and Six Sigma. Delphi has achieved benefits by developing and implementing structured methodologies for product and process design. Learn more about how Delphi's CAD-CAM methodologies are helping increase productivity and innovation from the drafting room to the shop floor.

4:05 Conference Wrap Up.

- Donald H. Brown, *Chairman*, DHBA

4:15 Conference Adjourns.