



PEO STRI
Project Office for Common Product Components



IMI, Inc.



Data Access Technologies
Where Business Meets Technology

» MDA Best Practices for the Agile Enterprise

PRESENTED BY:

Louis J. Eyermann

MDA Best Practices for the Agile Enterprise

A large flock of birds is seen flying in a V-formation against a sunset sky. The birds are silhouetted against the warm, orange and yellow light of the setting sun. The formation is long and stretches across the width of the image, with the lead bird at the front and the rest following in a precise line. The sky is a gradient of colors, from a pale yellow near the horizon to a deeper orange and red at the top.

Imagine lying on your back in a grassy field looking up at the sky. In the distance you see a flock of hundreds of beautiful birds gliding through space. Suddenly, without notice and without committee meetings, they all take a 90-degree turn to the left as if of one mind and with instantaneous non-stated agreement, the flock then banks, rises 200 feet and heads off in an entirely new direction.

This is the perfect view of operating effectively within the context of change - one mind with instantaneous communication and collective agility.

Hold that thought as the optimum for any well-run Enterprise

CEO/Analyst versus Commander/Warfighter

CEO/Analyst

- Aggregate and focus corporate resources (products, services, capital, people) to compete effectively against the competition
- Allocate resources to “*performers*”
- Plan resources and execute programs to *maximize profitability* and *shareholder wealth*
- Reinvest free cash flow into internal projects to optimize ROI and stock price performance
- Deliver superior decision support by optimizing technology, tools and intellectual capital requirements (OLAP)

Commander / Warfighter

- Provide an overwhelming delivery of force on the battlefield to achieve decisive results
- Optimize and evolve MOUT
- Plan and execute the appropriate programs (hardware and software) to achieve the vision of FCS and UOA
- Demonstrate good stewardship of taxpayer funding
- Plan and optimize the correct mix of costs, schedule and performance for all programs
- Deliver / achieve systems that help the warfighter

Business Case Impact

State A – Current

- Programs A, B & C separately develop software / simulation adapters from similar requirements
- Program economics fund separate programs @ 3X the costs
- End state creates three separate, standalone, non-interoperable solutions that can not be reused



State B – Future State

(Still Business as Usual)

- Programs A, B & C combine a common engineering solution to develop one common open adapter
- Development methodology = business as usual, not leveraging industry standards, best practices, models, tools, and a common repository
- Program deliverables reduce duplication of effort, expenses and produce an open adapter and family of components that are reusable
- The end state creates one interoperable solution and/or family of solutions @ 1.3X the costs

State C – Future State

- Programs A, B & C are now combined under a common MDA engineering solution
- Collaborative and automated solution produces an initial iteration in 30-45 days, reducing development times by 60-80%.
- Program deliverables will produce an “*open*” adapter and family of components that are reusable and composable across PEO STRI, the ARMY and DOD (joint) programs
- Program approach and *economies of scale* create an end state @ .5-.65X the costs, in one-third to half the time

Develop and Communicate the Business Case

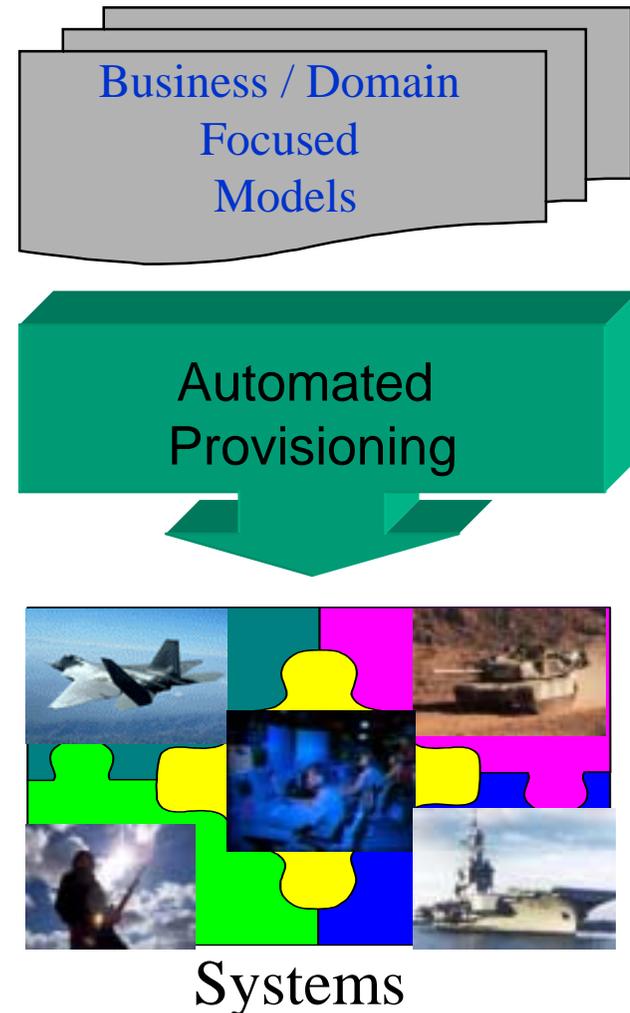
- Communicate the magnitude of the financial results
 - Analyze and present the cost (NPV) and schedule savings as well as performance improvements
- Compare the current *versus* future state benefits
 - Automated architectures (captured in a meta model)
 - Automated code generation
 - Automated testing of the code
 - Automated generation of artifacts and specifications
 - Automated project documentation
- Request funding

Securing Executive Buy-in

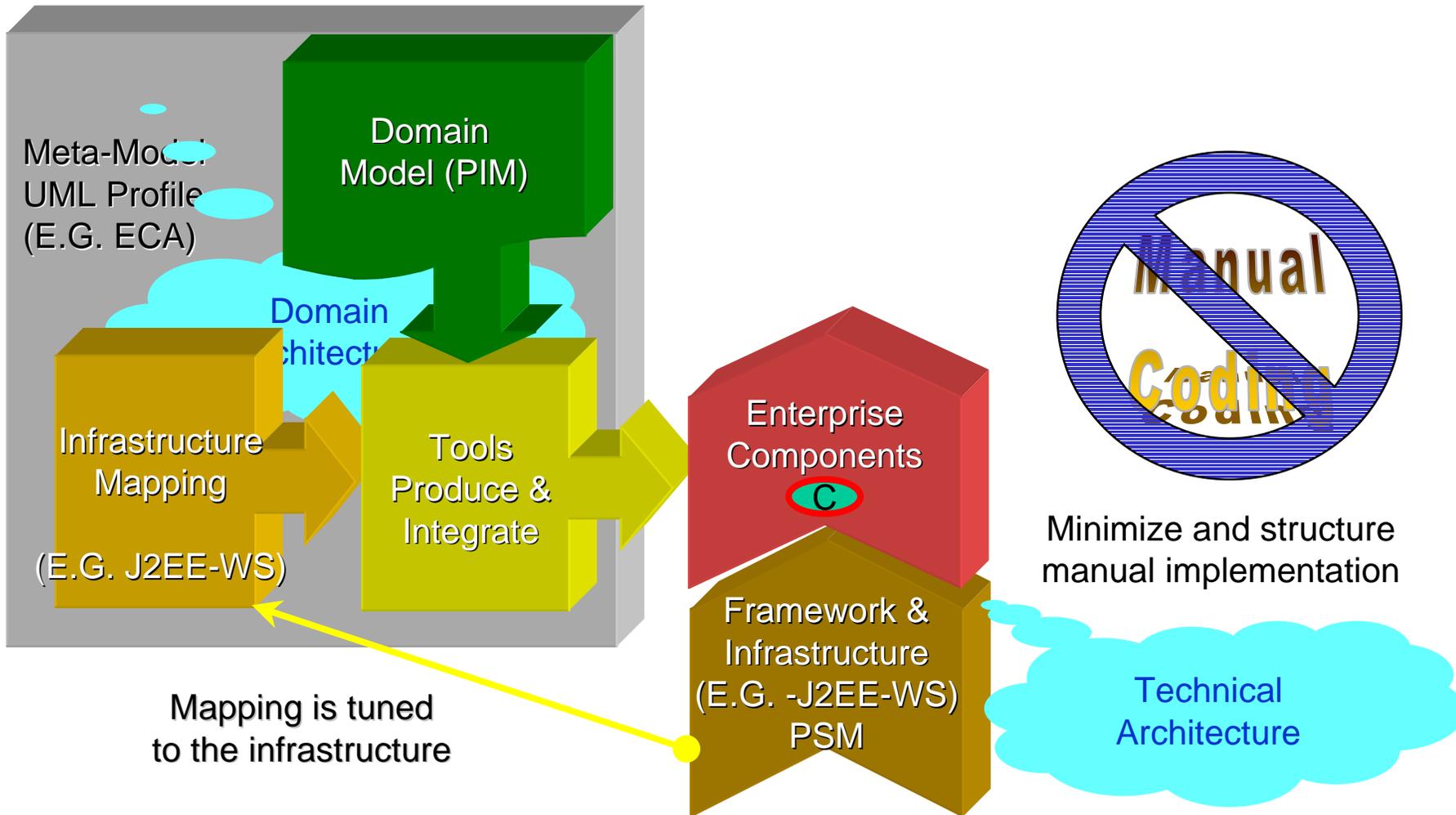
- Conduct One-on-One Executive Sessions
 - Standards
 - Best practices
 - Benefits
- Gather and present research
 - Expert (analyst) research
 - SME evaluations & modeling demos
 - Association facts and figures
 - Publications & best practices
- Discuss the business case, benefits and assumptions
- Discuss the end state for your enterprise

MDA - Basic Concepts

- Business/Domain focused models are the core of systems specifications
- These models are technology independent
- Technology specific system components are provisioned based on these models
- Automation reduces labor, time, cost and errors
- Increased reuse, adaptability and quality
- Legacy, COTS and new systems
- *Separation of concerns*



Automated Model Driven Architecture

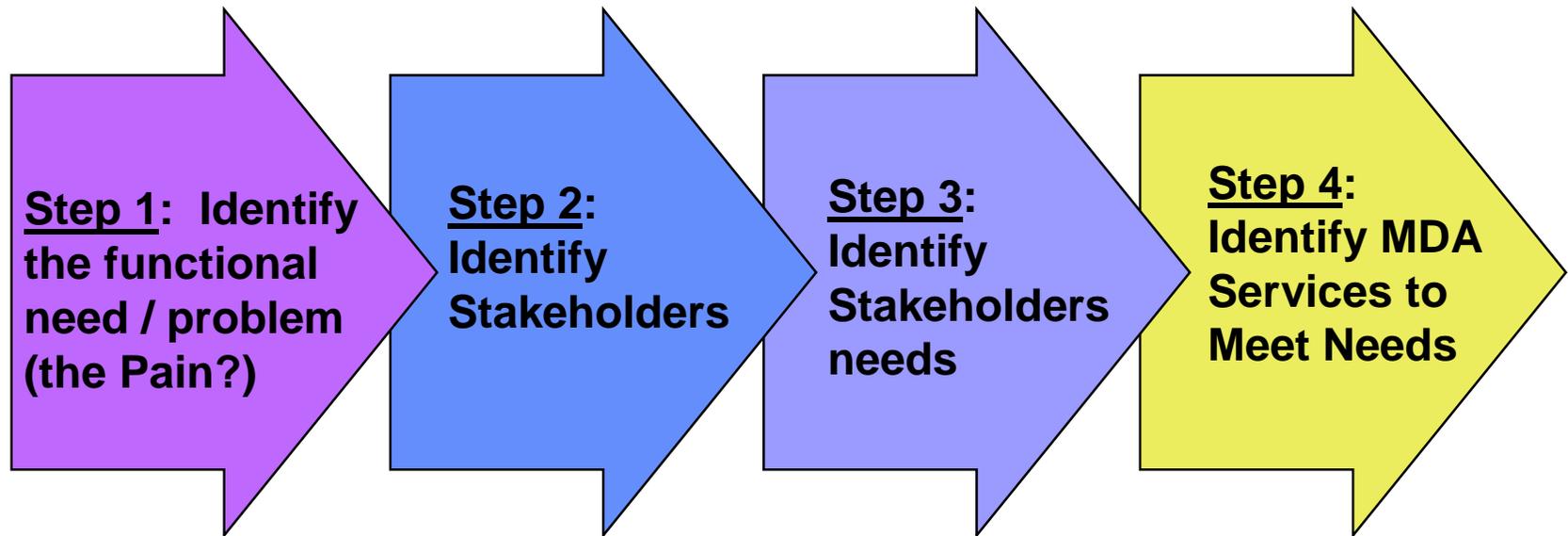


Technology (MDA) Best Practices

- **OMG Standards**
 - MDA (modeling)
 - EDOC (systems of systems)
 - MOF (repository)
- **Best Practice Processes**
- **OMG Compliant Tools**

MDA Strategic Planning

MDA ... the Key Core Competency and IT Best Practice for the Next Decade

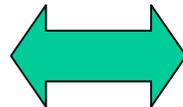


Matching MDA Services to Stakeholder NEEDS to solve joint interoperability and integration problems!

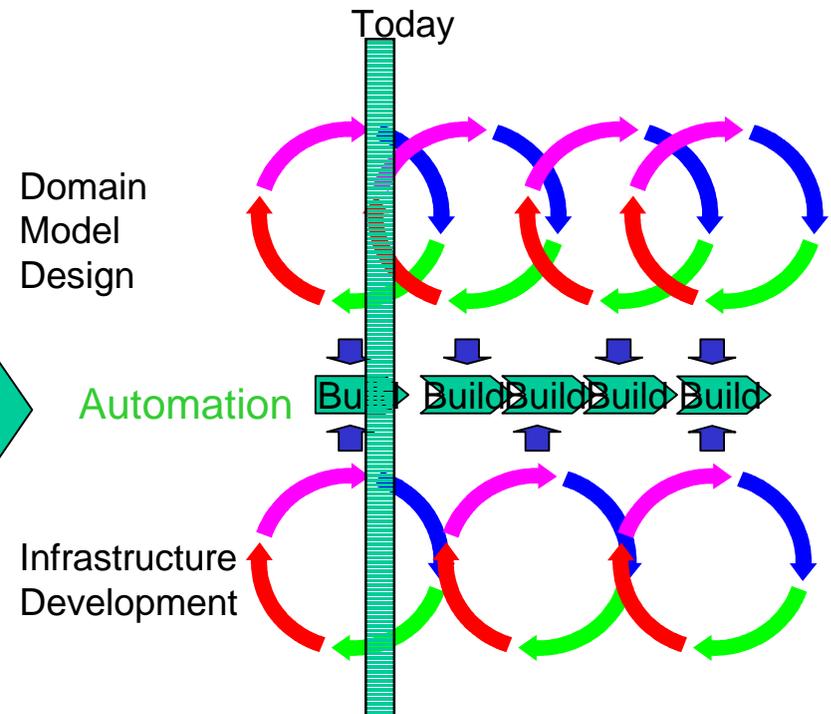
MDA Diagnostics and Assessments Pair with *Fast Iterative Development*

Programmatics (Business Process)

- Formulate strategy
- Plan the project
- Leverage collaboration
- Generate first build
- Assess results
- Collaborate and develop subsequent builds
- Deliver project results

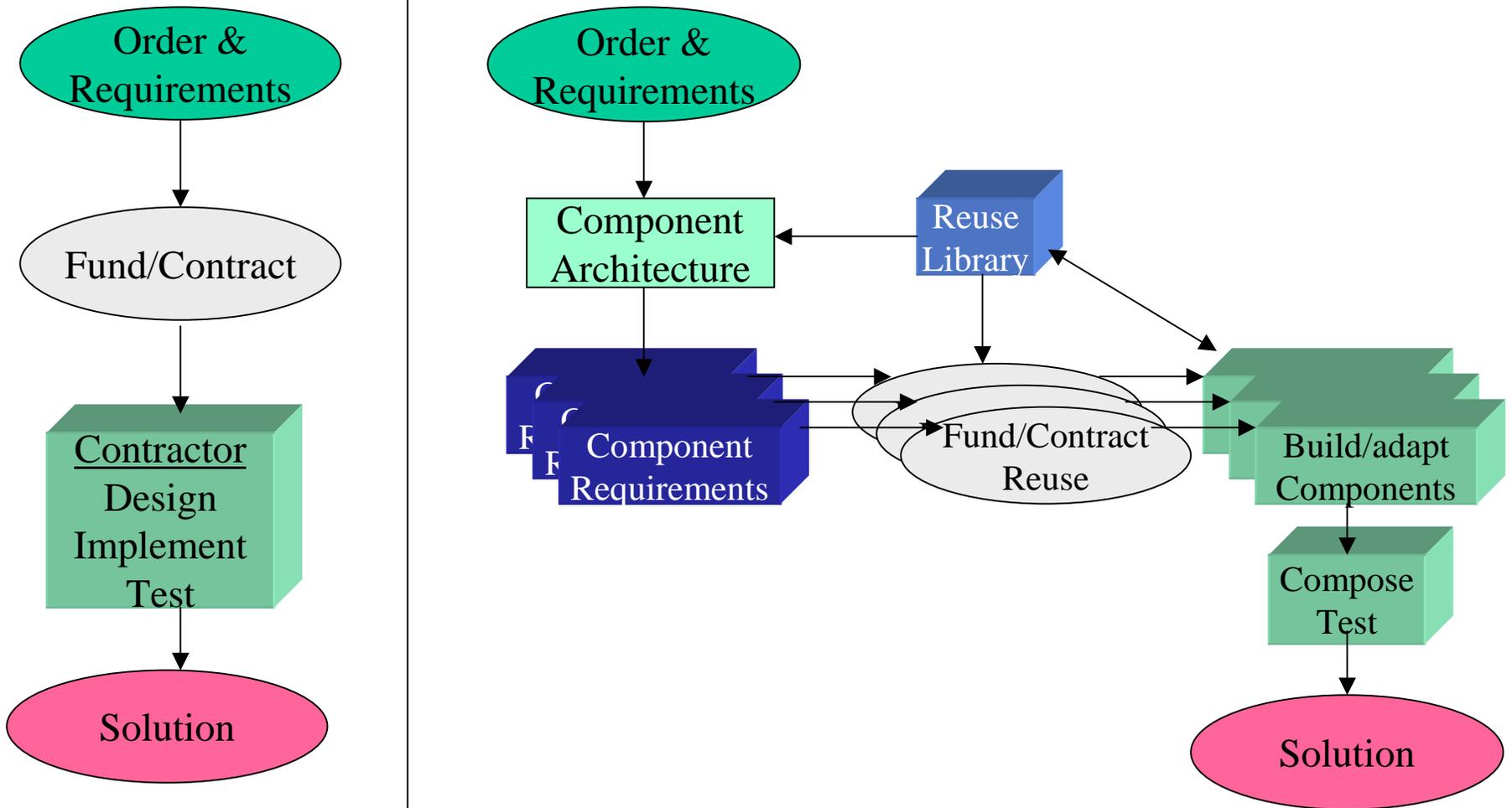


Technology Process

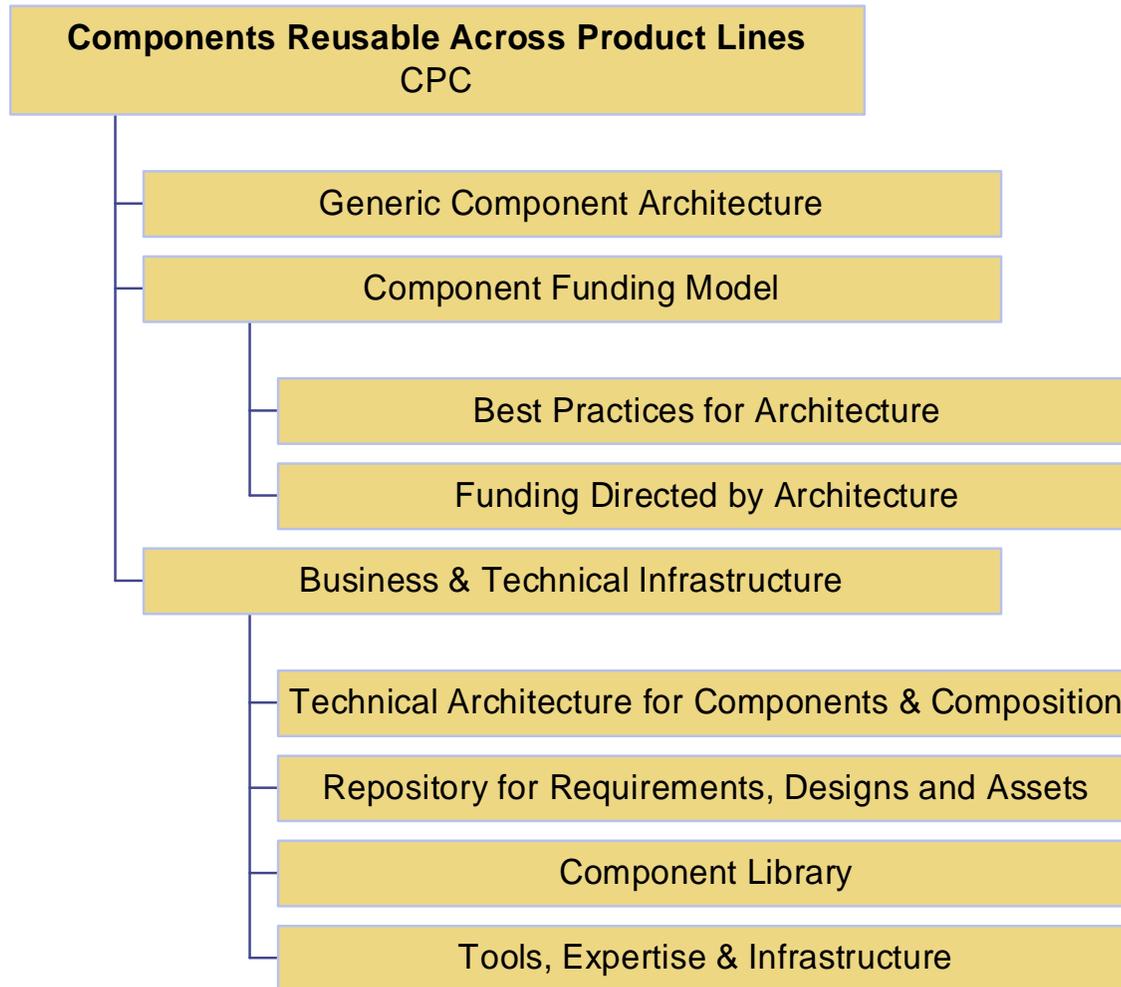


Essential Change

Current  Strategic



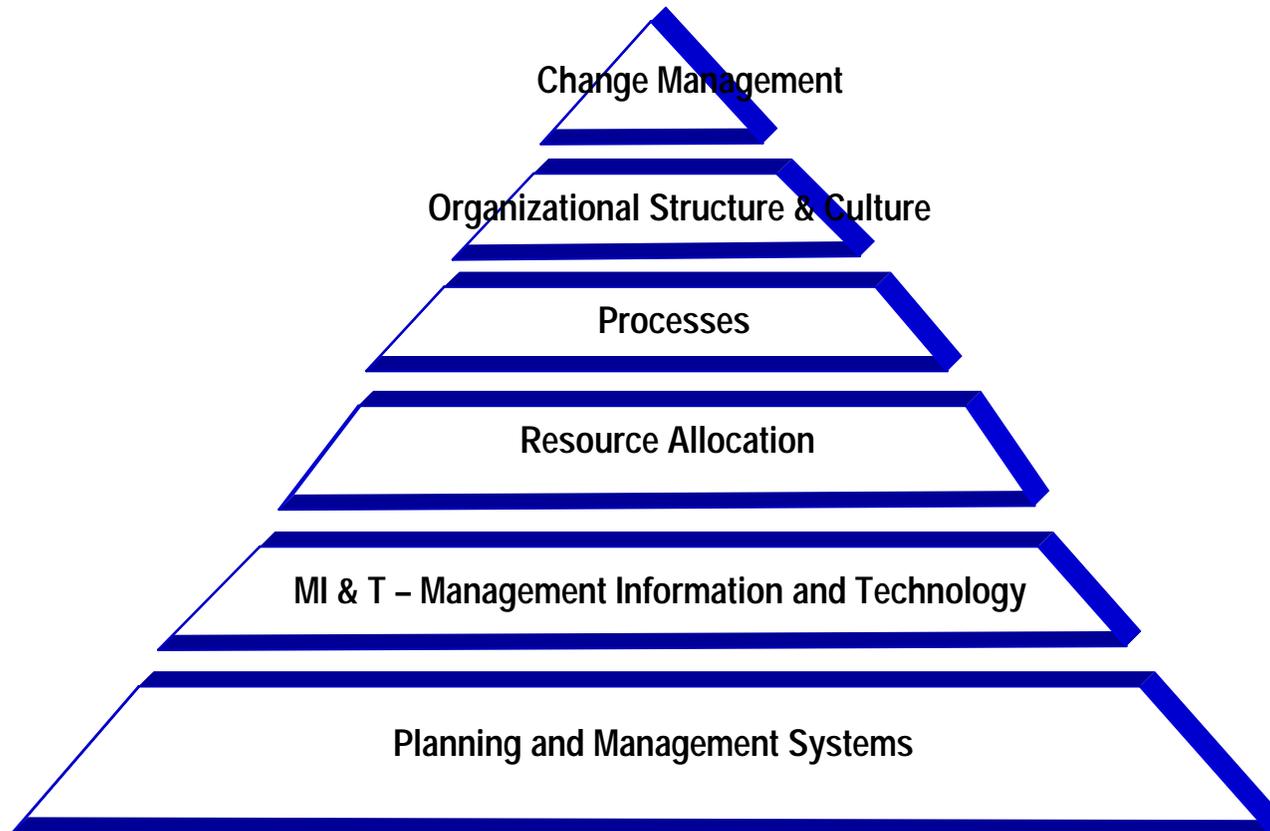
Component Drivers (CSF's)



Establishing an MDA Team

- Cross fertilize SME teams
- Incorporate industry experts into leading the *Programmatics*
 - OMG Standards
 - Technology Tools
 - Processes
 - Strategy
 - Project Planning

Six Enablers of Change in MDA Projects



Examples of Best Practice MDA Pilot Projects

- **Modeling Current State Processes** (documenting where you are)
 - Identifying automation opportunities, interfaces and legacies systems that can be retooled quickly to conform with OMG standards and a viable approach to componentization
 - Positioning the organization for value chain analysis and process redesign
- **Financial Modeling** of cost, schedule and performance metrics to identify the predictive non-financial metrics that drive costs, the schedule and other performance parameters
- **Meta Modeling** of Systems to examine the GAP (Meta model between the tactical network and simulation; DoDAF versus OMG standards and HLA;
- **Modeling the Approach to Program Management** (the workplan) to determine how to manage change such as integrating MDA within Software Blocking, SIMCI and joint programs
- **Modeling the acquisition and/or procurement processes**
- **Modeling the implementation of OLAP technology** transitioning the enterprise from a qualitative world to one that blends qualitative and quantitative information.

Concluding Remarks

- Invest the time to understand and leverage MDA and the standards of the OMG
- Leverage MDA best practices
- Integrate MDA thinking, analysis and practices into future projects

Bio - Louis (Lou) Eyermann, Management Consultant

Mr. Eyermann has more than twenty years experience in Fortune 500 companies, emerging and start-up businesses as a senior executive or consultant emphasizing strategic, operational and financial planning and best practices for technology solutions. As a seasoned consultant, Mr. Eyermann helps companies fully leverage Enterprise Resource Planning, (ERP), decision support technologies, performance measurement, processes, information and people to enhance their competitiveness by making better decisions faster. For the last five years, he has concentrated on promoting technological change utilizing Object Management Group (OMG) standards, tools, and best practices for the government and the military. He believes that the speed and effectiveness of decision-making, a shorter mean time to make a good decision, is a competitive requirement in business and the government and absolutely critical in the military.

As a Project Manager, Mr. Eyermann has led multiple, complex consulting projects/solutions that plan, architect, design, and build digital customized and/or package decision support. These solutions demand integration with client infrastructure to allow effective and seamless performance improvements.

Working as a consultant to the Program Manager of Common Product Components at PEO STRI, Mr. Eyermann has facilitated the development of the first strategic plan for the development of reusable components. This future state vision identified MDA and the OMG standards, tools and accompanying infrastructure such as the repository (Meta Object Facility/MOF) as the key core technical competency. Effective implementation requires an acute understanding the how to create an effective change management plan and introduce the six key enablers of effective transformation.

Through his business and consulting career, Mr. Eyermann has worked in line management and staff positions. He has formed companies and Boards of Directors, conducted private placements and raised investment seed money and investment capital. He has planned and developed value-added processes as a product planner, corporate business and strategic planner, and managed change in the role of Chief Operating Officer and President within highly diverse organizations competing in highly competitive markets.

Mr. Eyermann's career spans other industries including consulting for banking, insurance, high technology enterprises, real estate, healthcare, retail, pharmaceutical, publishing, and personal finance clients that allow him to bring winning strategies and best practices to the development of consulting practices, targeted solutions at each client engagement/project.

Mr. Eyermann graduated from the United States Military Academy at West Point, New York with a Bachelor of Science in Engineering. He then earned a graduate degree from the University of Oklahoma in Public Administration with major studies in Organizational Management.

CONTACT INFORMATION: 407-492-3717 cell; email: leyermann@earthlink.net