Involve Me, and I will Understand

Presented by
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Eastman Chemical Company

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Eastman Chemical Company

- Founded in 1920 as a unit of Eastman Kodak Company

- Spun off as an independent, publicly-held company in 1994

- Manufacture over 400 products
  - Chemicals
  - Fibers
  - Plastics

- Over 16,000 employees in more than 30 countries

- Manufacturing facilities in 11 countries

Terms and Acronyms

- MIS - Manufacturing Information System
- DCS - Distributed Control System
- MESA - Manufacturing Enterprise Systems Alignment
- PIMS - Process Information Management System
- ERP - Enterprise Resource Planning
- LIMS - Laboratory Information Management System
- SPC - Statistical Process Control
- BPI - Business Process Improvement

Why Consider a New System?

- 10 different systems
- 7 development tools
- 3 database technologies

- Similar in function
- Diverse in details
- Heavy on support
- Hard to leverage
- Data incoherence
- Lack analysis tools
- Aging technology

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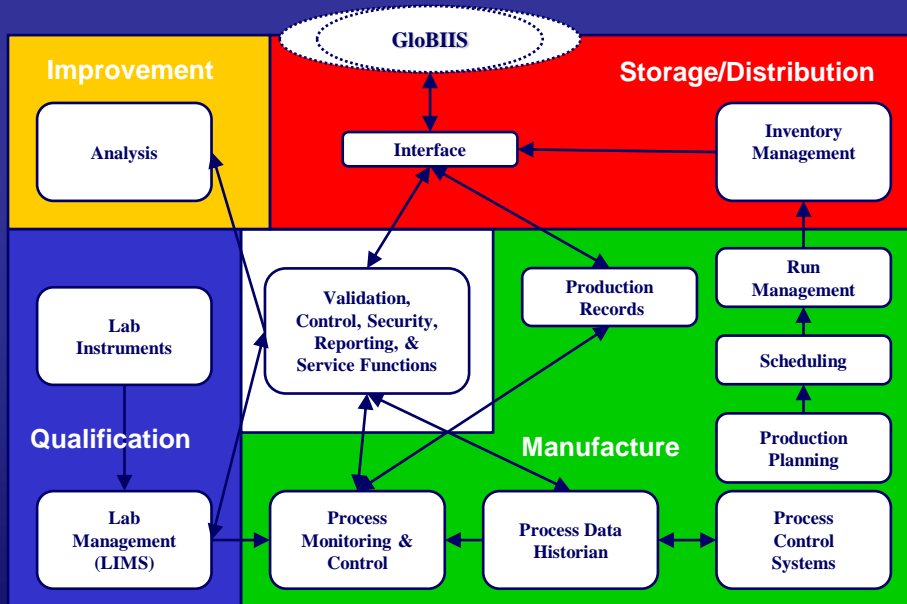
Opportunities

Manufacturing will be able to use IT to improve their competitive position and return to shareholders.

However 75% of manufacturers will fail to take advantage of these improvements by 2002 because their application deployment strategies have not evolved beyond automating basic business processes

Gartner Group
Strategic Analysis Report
13 Feb 97

SAP Implementation
according to Dr. Michael Hammer

3 **8**

Dr. Hammer Surveyed a large number of companies who had implemented SAP R/3

☐ Technology focused

Question: Rate the success of your implementation on a scale of 1 to 10 where

☐ Business process focus *(facilitated by technology)*

1 is a huge disaster and

☐ Minimal gains 10 is a huge success Large gains

☐ "Didn't get it"

☐ They "Got it"

Degree of Success

Project Scope

- Implement an enterprise-wide integrated manufacturing information system

- Standardize on "best practices" and drive system requirements through business process improvement efforts

- Deploy in 23 manufacturing sites worldwide

Argentina	The Netherlands
Canada	Singapore
England	Spain
Hong Kong	United States
Malaysia	Wales
Mexico	

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Impact on Programs

"As-Is"

"To-Be"
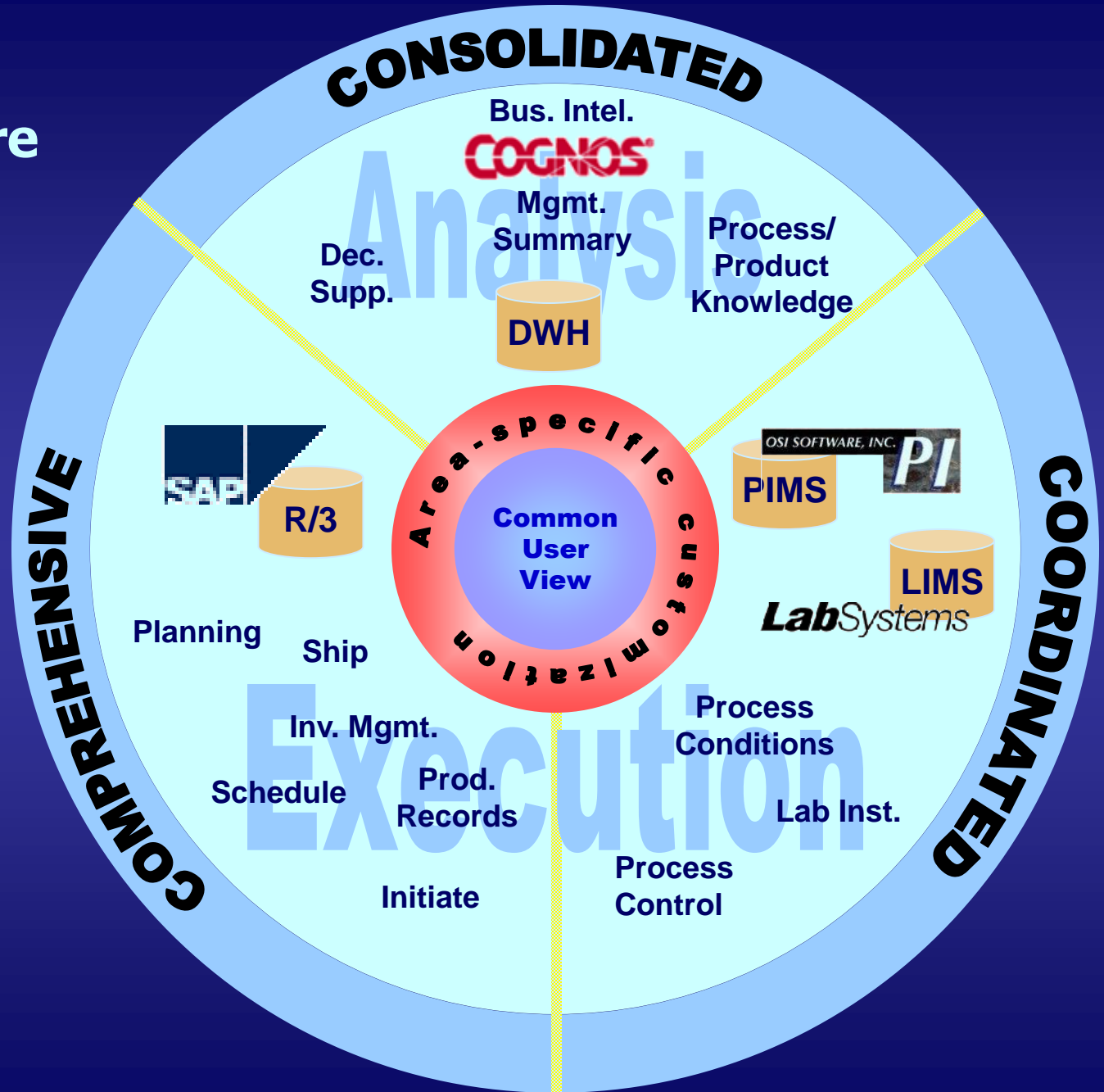
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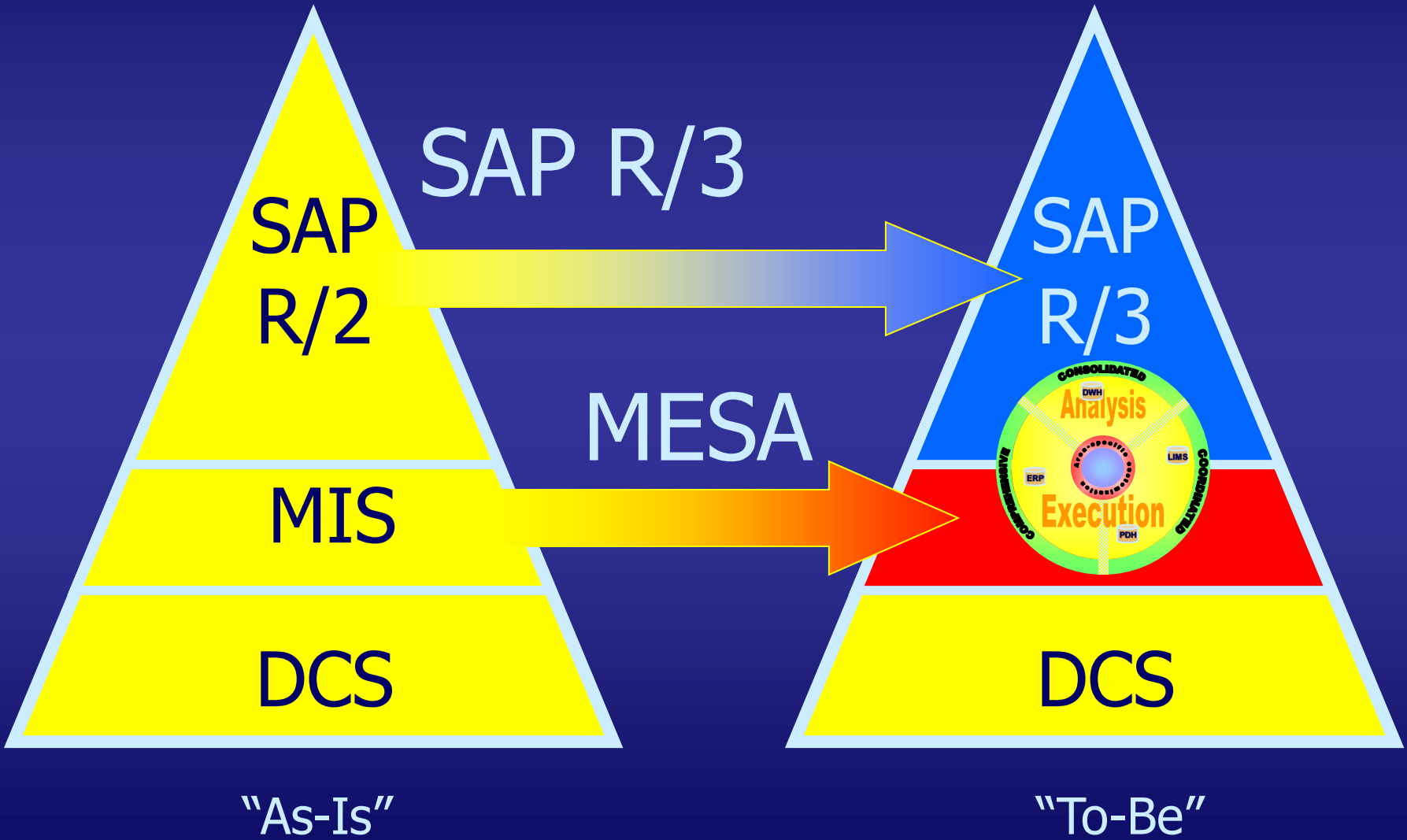
Architecture

Software Evaluations

- Enterprise Resource Planning
  - SAP R/3

- Laboratory Information Management System
  - Hewlett-Packard - ChemLMS
  - LabSystems - SampleManager
  - Perkin Elmer - SQL*LIMS

- Process Information Management System
  - AspenTech - InfoPlus.21
  - Honeywell - Uniformance
  - OSI Software - PI
  - Simulation Sciences - AIM

- Business Intelligence/Data Analysis
  - Business Objects - Business Objects
  - COGNOS - Inpromptu, PowerPlay
  - Seagate Software - Crystal Reports

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PIMS Software Selection

- Selection team formed with manufacturing representatives
- Solicit requirements from representatives and issued a Request for Proposal
- Developed evaluation feedback form
- Conduct vendor workshops
- Score evaluations (reduced field to 2)
- Representatives contact references
- Formal negotiations with top two finalists
- Publish results of evaluations, contacts, and results

MESA/PIMS Functional Evaluation
Categories

- Interfaces and Tag Definition
- Data Displays and Trending
- SPC and Alarming
- Batch Displays and Trending
- Production Reporting and SAP Interfaces

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Business Process Improvement

The fundamental rethinking and redesign of how we work day to day

... with the goal of bringing about dramatic improvements in performance

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New Technology = Unique Opportunity

- Providing new capability
- Removing barriers
- Creating a "change event"
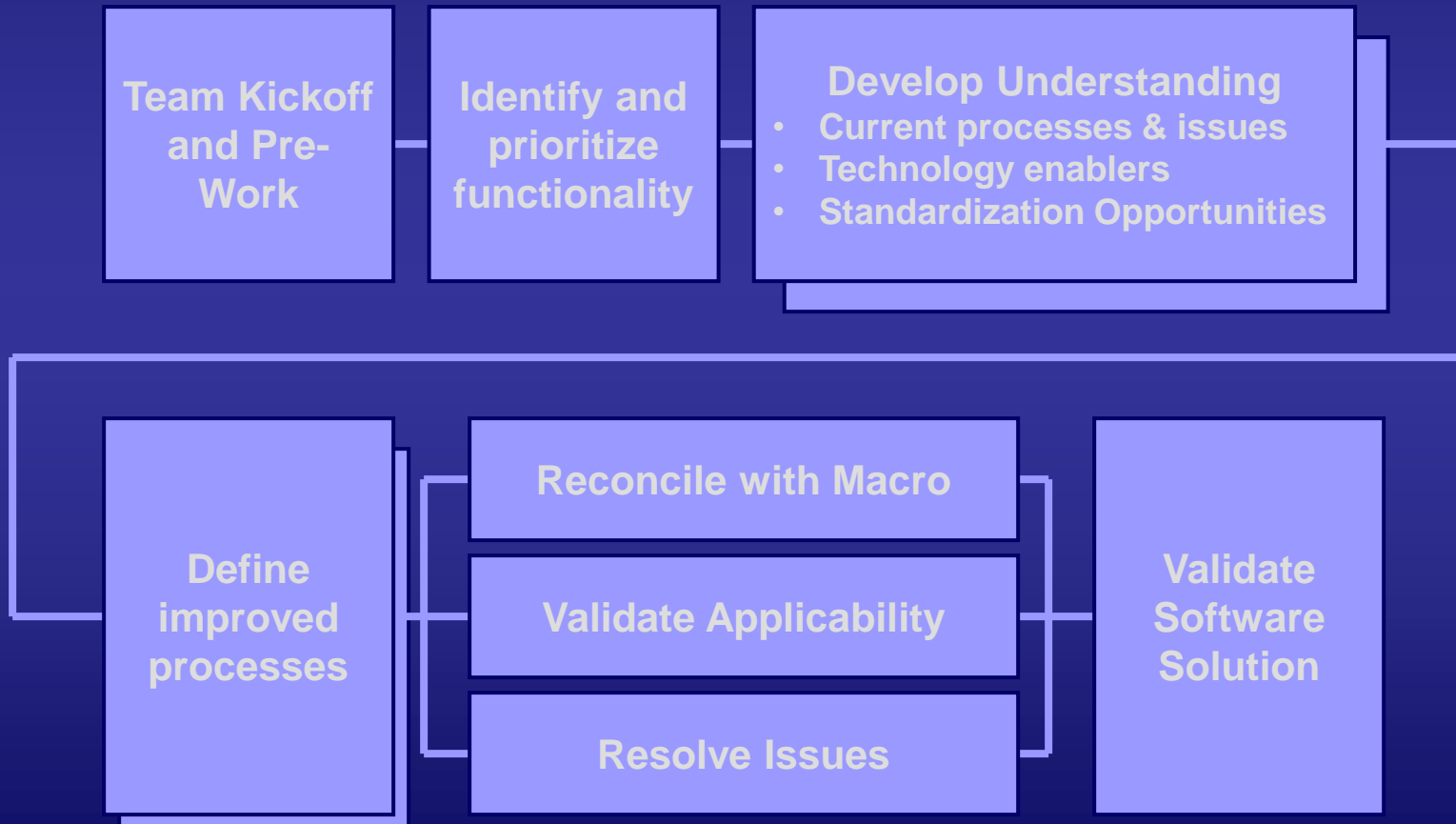- Ability to leverage corporate knowledge

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Business Process Improvement

Process Teams

Plan & Schedule Production	Prepare for Production	Produce Product	Analytical Testing	Product Qualification	Product Disposition

Cross Process Teams

Quality Systems (Quality General, Registration ISO cGMP, Kosher, etc)

Inventory Management (Materials, Product, Supplies, WIP, etc)

New Product/Materials Issues

Material Identification (PM/GMN/Sales Codes, Labeling, Bar Coding)

Equipment Reliability / Maintenance Issues

HSES Issues

People Issues (Labor Mgt., Training, Certification, etc.)

Utilities & Services Issues

Transportation & Logistics Issues

Accounting & Production Records

Management & Reporting

Process Improvement

Design Process

Team Kickoff and Pre-Work

Identify and prioritize functionality

Develop Understanding
- **Current processes & issues**
- **Technology enablers**
- **Standardization Opportunities**

Define improved processes

Reconcile with Macro

Validate Applicability

Resolve Issues

Validate Software Solution

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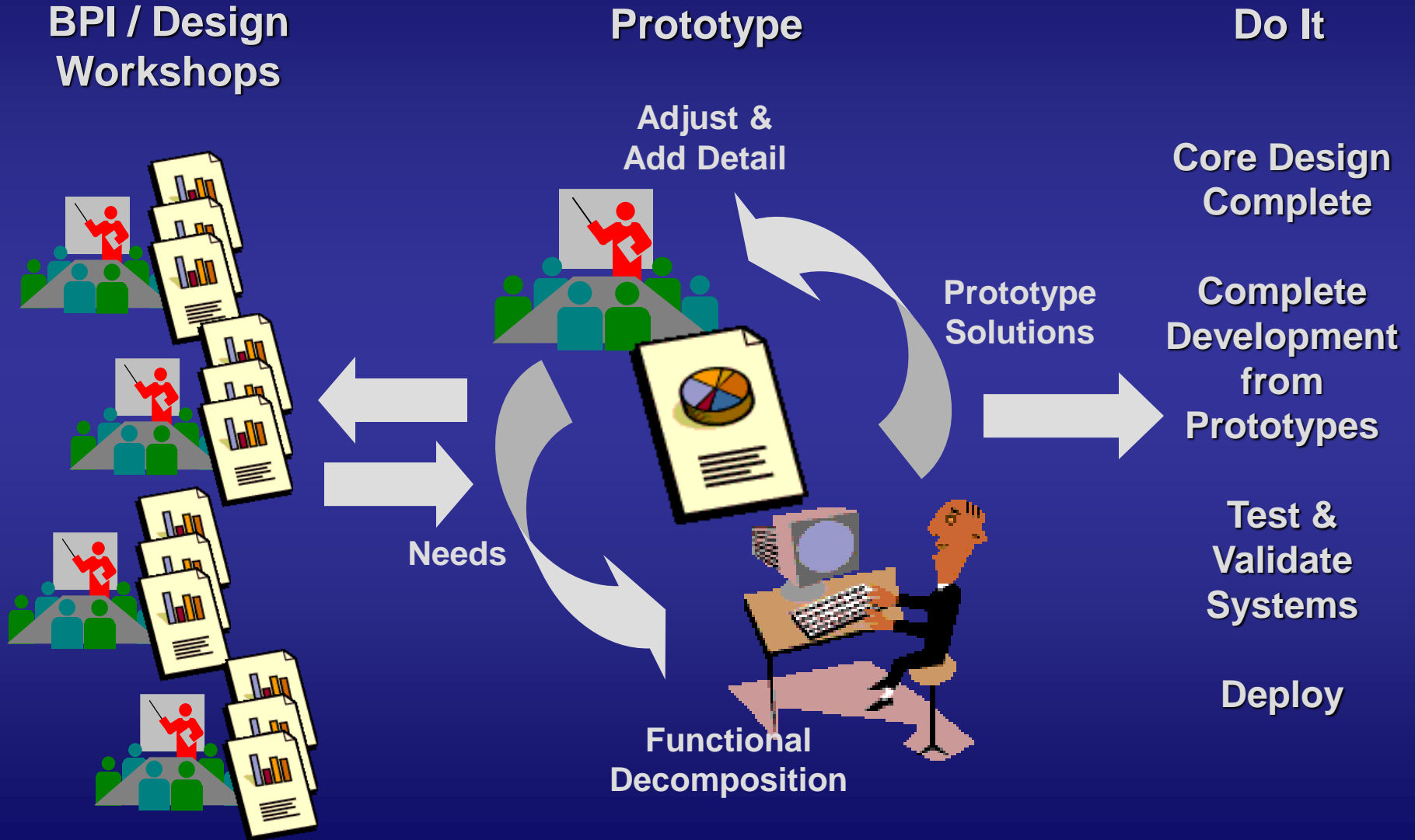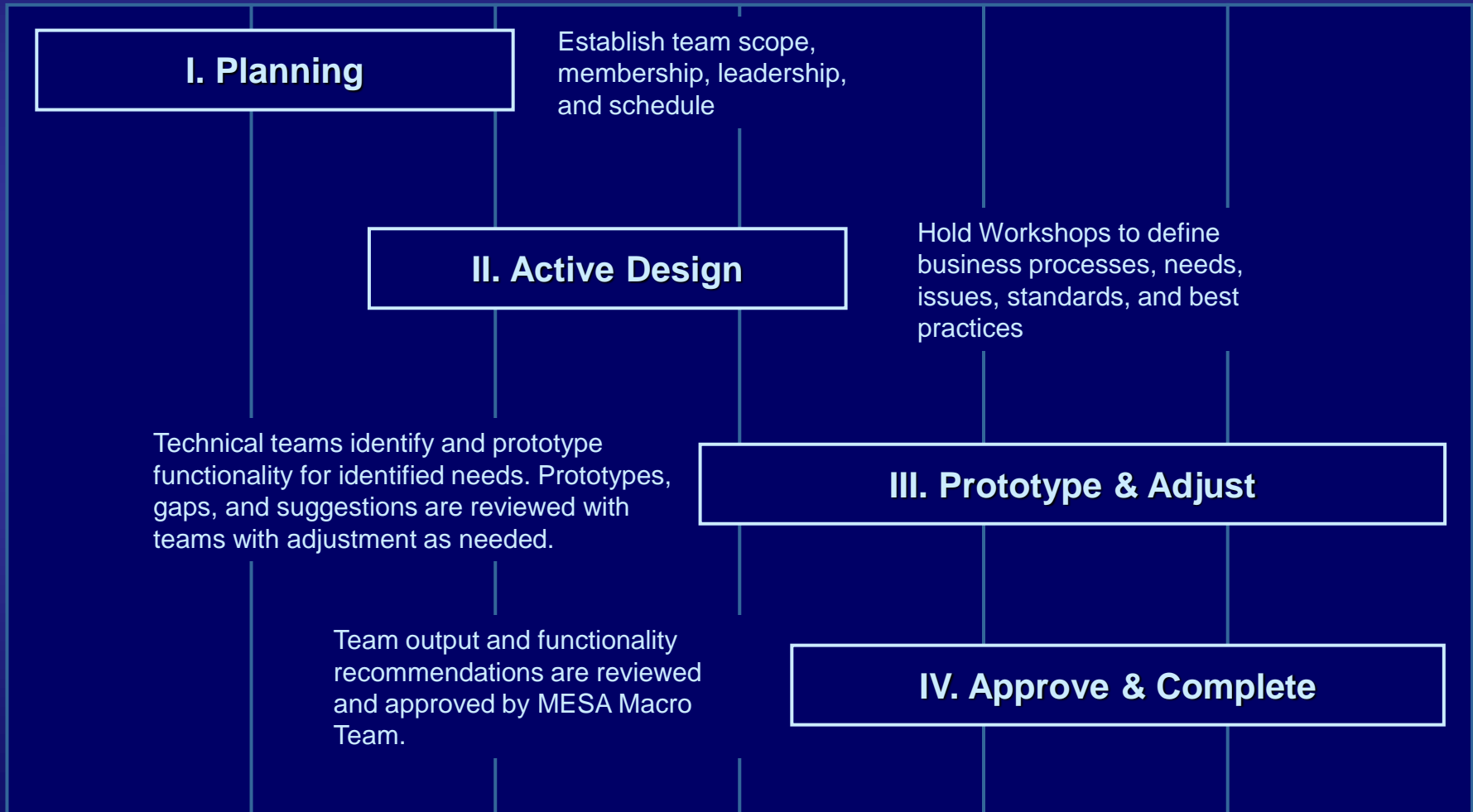
MESA BPI Issues

- Knowledgeable Resources
- Standardization & Consensus
- Bias for Change
- Rapid Development
- Needs Focused
- Change Management - Documentation & Training

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Status of MESA BPI/Design

| I. Planning | Establish team scope, membership, leadership, and schedule |

| II. Active Design | Hold Workshops to define business processes, needs, issues, standards, and best practices |

Technical teams identify and prototype functionality for identified needs. Prototypes, gaps, and suggestions are reviewed with teams with adjustment as needed.

| III. Prototype & Adjust |

Team output and functionality recommendations are reviewed and approved by MESA Macro Team.

| IV. Approve & Complete |

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Prototypes

- Business processes (not technology)
- Demonstration of capability
- Review of usability
- Defines requirements (development or configuration)
- Training Development

Deployment Teams

- Team Leader (Manufacturing)
- Stream Oriented
- Technology Team Members
- Site/Division Team Members

Deployment Steps

- Needs Analysis
- Installation (Hardware/Software)
- Training (Site Support)
- Configuration
- Testing
- Training (Client)
- Implementation
- Post-Implementation Support

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Status

- Architecture - Complete
- Design - Complete
- Staffing (Deployment) - Complete
- Latin America (Oct, 1999)
- Europe (April, 2000)
- Asia (July, 2000)
- North America (Jan, 2001)

"Tell me, and I will forget.
Show me, and I may remember.
Involve me, and I will understand."

- Chinese Proverb