

Federal Facilities Council:

Best Practices in Developing Asset Management Plans

Eric Teicholz Graham Thomas Gary Evans
Louise Sabol

www.graphicsystems.biz

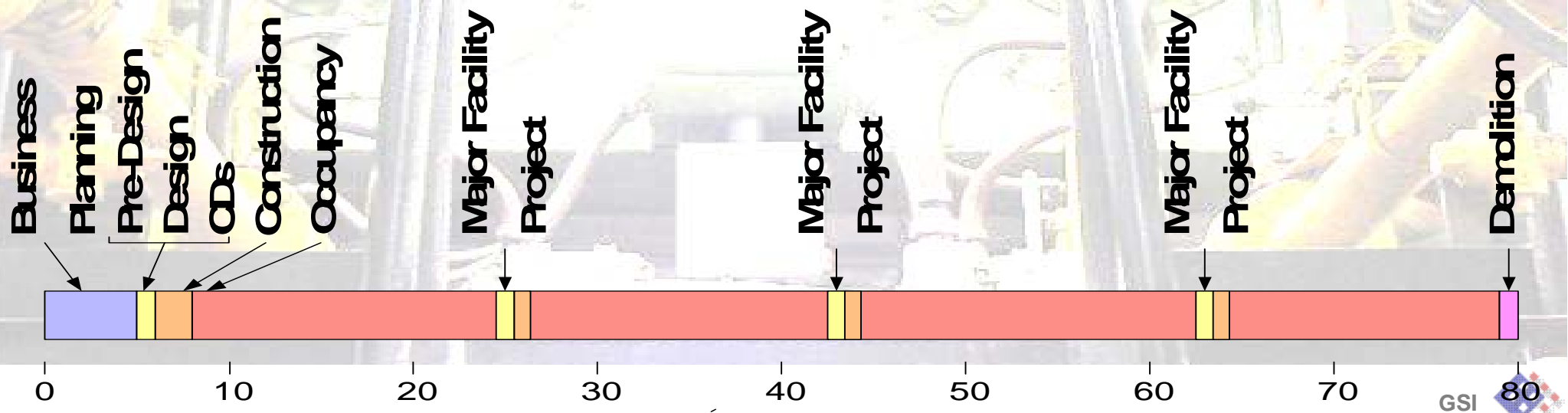


Learning Objectives

- Asset Management Plan (AMP) Requirements-
definition, benefits, evolution and
- AMP Components and Inter-relationships
(process data flow)
- AMP Development for Your Organization
(intelligent design)
- Measuring the AMP's effectiveness
(performance metrics)
- Future Trends

Asset Life Cycle

- Developing a logical framework to manage its real property assets
- Evolution of process and technology drivers that make an Asset Management Plan (AMP)



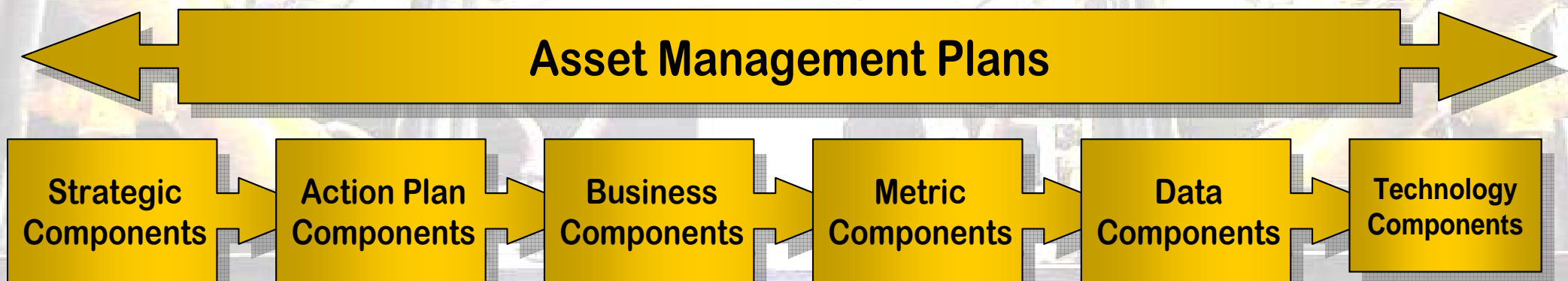
Importance of Planning

- Hurricane Katrina demonstrated the importance of planning or the consequences of not having a plan
- COOP plans from AMP
 - Planning
 - Response
 - Recovery

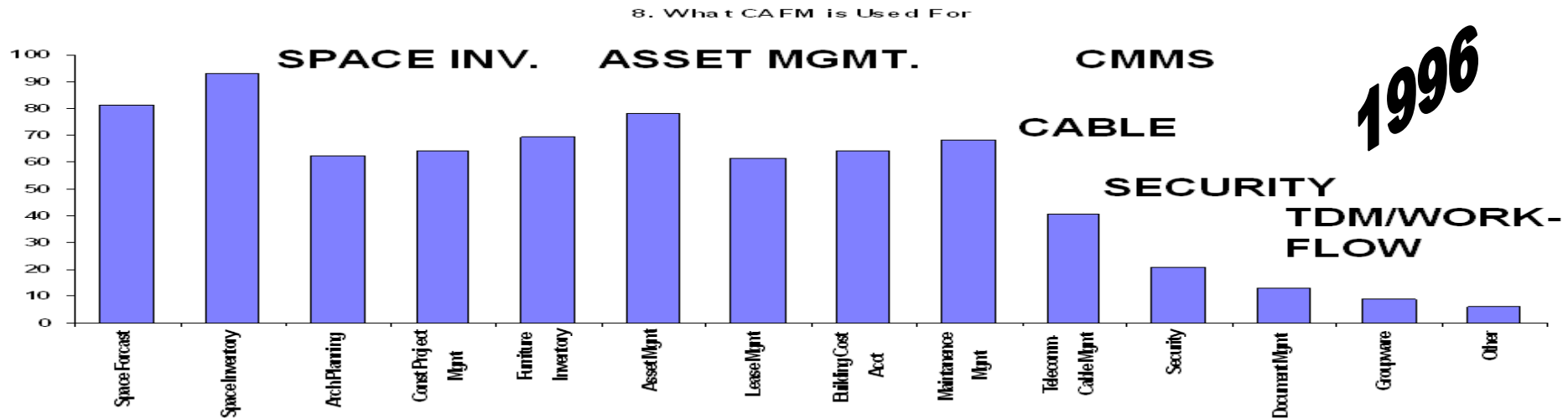


What is the AMP?

- Consists of a series of interlocking procedural components
- Starts with a strategic plan and ends up with a technology plan
 - Takes into account the Asset Lifecycle
 - Impact on the business and organization
 - Performance Metrics
 - Technology Plan



AMP Drivers/Landscape



1996

- Internet: Collaboration (Internet, extranet, Intranet)
- Data Standards (XML)
- Interoperability (IAI, IFC, aecXML)
- Real Property Open Standards (OSCRE)
- Infrastructure Resource Management
- Regulatory/Compliance (GASB, FRPC, EO#13327)

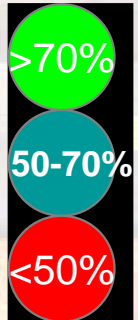
2005

Asset Management Survey – September 2004

- Objective: To obtain a baseline assessment of real property asset management activities conducted in Federal agencies.
- Survey consisted of 13 questions in Excel worksheet format, with request for inventory data elements and performance measures.

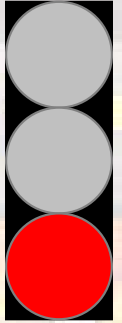
Consolidated Tally of Responses*

Real Property Asset Mgmt Activity	YES %	NO %
(1) Identified Asset Management Organization	94%	6%
(2) Asset Management Plan Integrated with Agency Strategy	47%	53%
(3) Guiding Principles	63%	38%
(4) Owner's Objectives	50%	50%
(5) Agency and Asset Specific Policy and Guidance	88%	13%
(6) Real Property Inventory	88%	13%
(7) Asset Documentation	69%	31%
(8) Periodic Valuation Mechanism	53%	47%
(9) Operations and Maintenance Plan	63%	38%
(10) Capital Budget and Plan	69%	31%
(11) "Building Block" Asset Business Plans	47%	53%
(12) Balanced Performance Measures	44%	56%
(13) Continuous Monitoring Mechanism	47%	53%



Balanced Performance Measures

- 56% of respondents do not have a set of performance measures
- Measures provided by Agencies (*see attachment) grouped by “Balanced Scorecard” methodology:
 - Financial
 - Process Improvement
 - Customer-focused
 - Learning/Professional Development



OMB- The President's Management Agenda: Quarterly Stoplight Scoring System

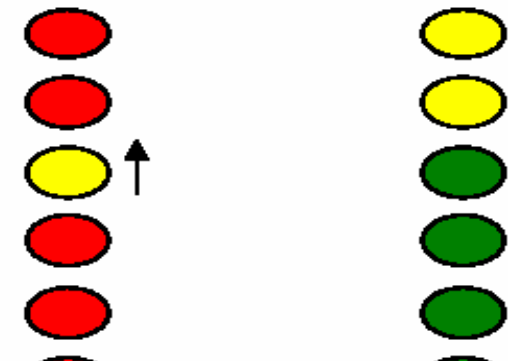
Executive Branch Management Scorecard

	Current Status as of June 30, 2005					Progress in Implementing the President's Management Agenda				
	Human Capital	Competitive Sourcing	Financial Perf.	E-Gov	Budget/Perf. Integration	Human Capital	Competitive Sourcing	Financial Perf.	E-Gov	Budget/Perf. Integration
AGRICULTURE	Yellow	Yellow	Red	Yellow	Yellow	Green	Green	Green	Green	Green
COMMERCE	Green	Yellow	Green	Yellow	Yellow	Green	Green	Green	Yellow	Green
DEFENSE	Yellow	Red ↓	Red	Red	Yellow	Green	Red	Red	Red	Green
EDUCATION	Yellow	Yellow	Green	Yellow	Yellow	Green	Green	Green	Green	Green

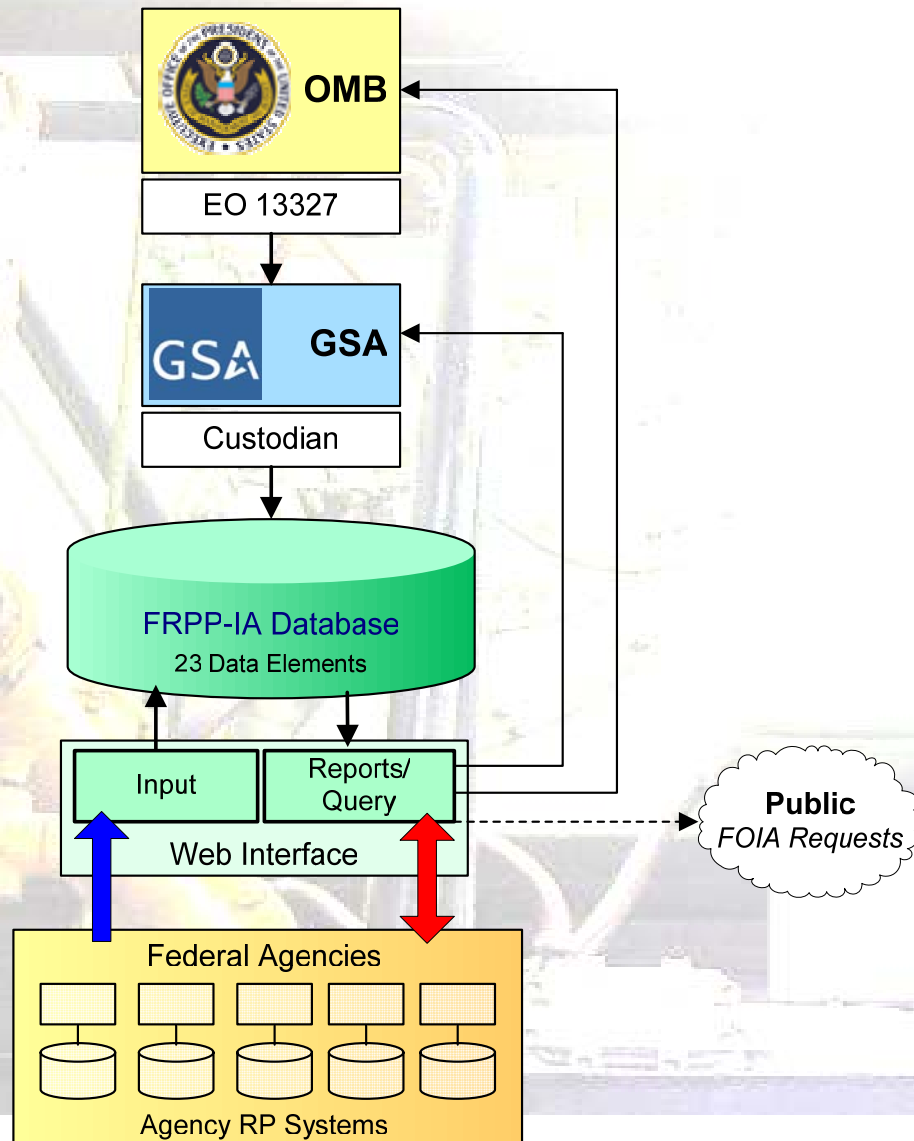
Real Property Asset Management:

- Agriculture
- Defense
- Energy
- HHS
- DHS

- **Green** for success,
- **Yellow** for mixed results, and
- **Red** for unsatisfactory.



FRPC & EO 13327



Federal Government Real Property Portfolio Profile:

- Portfolio valued at \$326 Billion (2003)
- 3.3 billion square feet of building space
- 655 million acres of land
- ~90% owned assets, ~10% leased assets;
- \$6 billion annually spent on leasing costs

EO#13327 Components

- Created to promote efficient and economical use of the Federal government's real property assets
- Established the position of Senior Real Property Officer (SRPO)
 - Directed the SRPO's to develop and implement asset management plans (AMPs)
- Created the Federal Real Property Council (FRPC)
 1. Asset Management
 2. Inventory
 3. Performance Measures
 4. Systems
- Directed the development of agency asset management plans and performance measures
- Directed the establishment of a governmentwide real property inventory database

Guidance for Improved Asset Management

- Guiding Principles: The Guiding Principles serve as the FRPC's strategic objectives for real property management improvement. Agencies must ensure that all real property initiatives are carried out consistent with these principles.
- Asset Management Plan: Each agency will draft an Asset Management Plan (AMP) that addresses, at a minimum, the FRPC Guiding Principles and the AMP required components. AMPs are subject to Office of Management and Budget (OMB) review and approval. The FRPC guidance includes a "shelf document" that agencies are encouraged to use as a template for drafting the AMP.
- Property Inventory Data Elements and Performance Measures: The FRPC has identified and defined 23 mandatory data elements that will be captured and reported by all agencies. These data elements support the goals of the executive order, as well as the requirements of the Performance Measures Committee.

AMP Topics

- *Council's template for agency asset management plans, which includes:*
 1. Integrated Guiding Principles
 2. Agency-Specific Owner's Objectives
 3. Periodic Evaluation of All Assets
 4. Prioritized Operations and Maintenance & Capital Plans
 5. Identified Resource Requirements to Support Plans
 6. "Building Block" Asset Business Plans in Agency Portfolio Context
 7. Continuous Monitoring and Feedback Mechanism
 8. Consideration of Socio-Economic-Environmental Responsibilities
 9. Adequate Human Capital Support of Asset Management Organization
 10. Common Governmentwide Terminology

Agency Specific Document

Table of Contents

- 1 Introduction**
- 2 Support of Agency Missions and Strategic Goals**
 - 2.1 Agency's Mission
 - 2.1.1 *Real Property Organization's Mission*
 - 2.2 Human Capital and Organization Infrastructure
 - 2.3 Real Property Asset Management Decision-Making
- 3 Owner's Objectives**
- 4 Acquisition of Real Property Assets**
 - 4.1 Capital Plan for Major Projects
 - 4.1.1 *New Construction Major Projects*
 - 4.1.2 *Repair and Alterations Major Projects*
 - 4.1.3 *Acquisition of Major Leases*
 - 4.2 Acquisition of Leases Below a Critical Threshold
 - 4.3 Acquisition Performance Measures and Continuous Monitoring
 - 4.4 Acquisition Initiatives
- 5 Operations of Real Property Assets**
 - 5.1 Inventory and Describe Assets
 - 5.1.1 *Historic Preservation Requirements*
 - 5.2 Asset Documentation
 - 5.3 Asset Business Plans
 - 5.4 Periodic Evaluation of Assets
 - 5.5 Operations & Maintenance Plan
 - 5.6 Plan for Basic Repair & Alteration Needs
 - 5.7 Capital and Operating Resource Requirements
 - 5.8 Operations Performance Measures and Continuous Monitoring
 - 5.9 Operations Initiatives
- 6 Disposal of Unneeded Assets**
 - 6.1 Tools to Support Decision-Making
 - 6.2 Disposal Process
 - 6.3 Disposal Performance Measures and Continuous Monitoring

Asset Management Plan



AMP – “Shelf Document” template

Section 1: Introduction

Section 2: Support of Agency Missions and Strategic Goals

- 2.1 Agency’s Mission
- 2.2 Human Capital and Organization Infrastructure
- 2.3 Real Property Asset Management Decision-Making
- 2.4 Owner’s Objectives

Section 3: Acquisition of Real Property Assets

- 3.1 Capital Plan for Major Projects
- 3.2 Acquisition of Leases Below a Critical Threshold
- 3.3 Acquisition Performance Measures and Continuous Monitoring
- 3.4 Acquisition Initiatives

Section 4: Operations of Real Property Assets

- 4.1 Inventory and Describe Assets
- 4.2 Asset Documentation
- 4.3 Asset Business Plans
- 4.4 Periodic Evaluation of Assets
- 4.5 Operations & Maintenance Plan
- 4.6 Plan for Basic Repair & Alteration Needs
- 4.7 Capital and Operating Resource Requirements
- 4.8 Operations Performance Measures and Continuous Monitoring
- 4.9 Operations Initiatives

Section 5: Disposal of Unneeded Assets

- Tools to Support Decision-Making
- Disposal Process
- Disposal Performance Measures and Continuous Monitoring
- Disposal Initiatives

23 Primary Data Elements/Measures

- Asset ID
- Location/Address
- Real Property Type
- Real Property Use
- FCI
- Legal Interest
- Status
- Historical Status
- Using Organization
- Size
- Value
- Operating costs

Data Elements & Performance Measures:

- Utilization
- Condition Index
- Mission Dependency
- Annual Operating Costs

2006

•Data Quality/Utility

•New Data

➤AMP

➤BIM

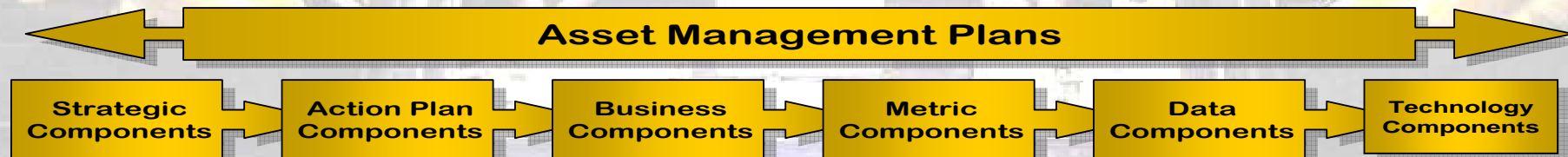
➤Energy

➤Sustainment

➤OSCRE

AMP- Summary Status

- Moving away from an FM centric strategic asset plan
- AMP planning embraces multiple aspects of the business/agency; dynamic in nature- updated regularly
- Strategic AMP for real property has to support the corporate strategy or agency mission
- Overall goal associated with the development of the model is to reflect the organization as a single system
- The FM must understand the corporate / agency's business
- AMP model components include: time frame - tactical versus strategic; frequency; coverage; participants; benefits; contents



Case Study - HHS



Goal: "One-HHS" - Consistent Assessment System & Condition Index Values

Case Study - HHS

Step 1 - Review Existing Processes and Data:

Evaluate each landholding unit on the following dimensions:

- Appropriate Methodology
- Deficiency Survey Techniques
- Identification of Repair and Replacement Projects
- Facility Inventory Details
- Facility Renewal Identification (i.e. Future Needs)
- Metrics and Benchmarks
- Information Technology

Case Study - HHS

Approaches to Obtain Condition Index (CI) Values

Two Recognized Methods (FASAB)

1. Condition Assessment Surveys

Visual On-Site Assessment

$$CI = \frac{\text{Repair Needs}}{\text{Capital Replacement Value}}$$

2. Total Life-Cycle Cost Methods

Desktop Exercise

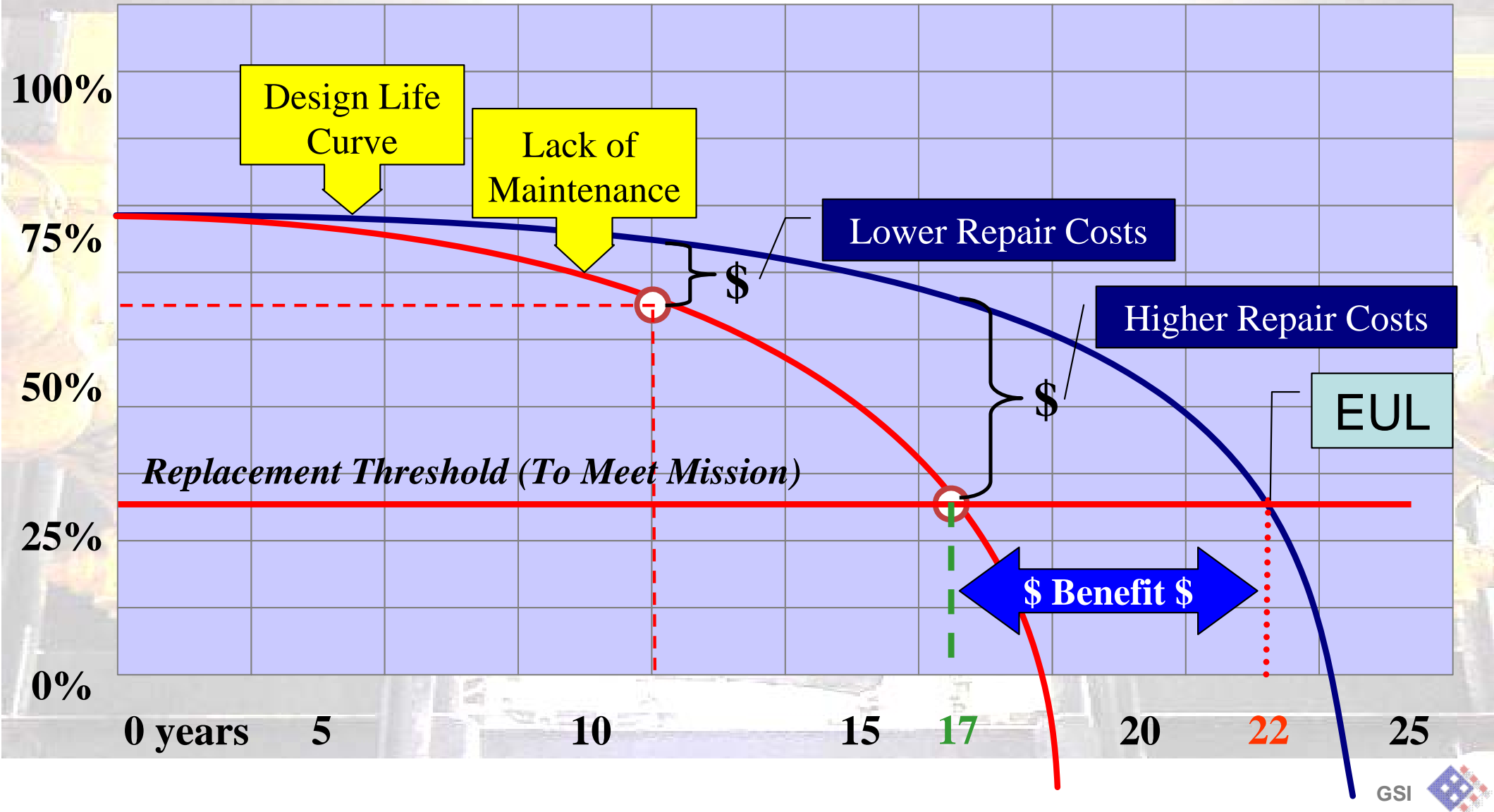
$$CI = \frac{\text{Renewal Requirements}}{\text{Capital Replacement Value}}$$

Measures Performance
Future Planning
Specific Defects
Low Cost



Case Study - HHS

Method 1: Condition Assessment Surveys: Early Identification of Repair Needs

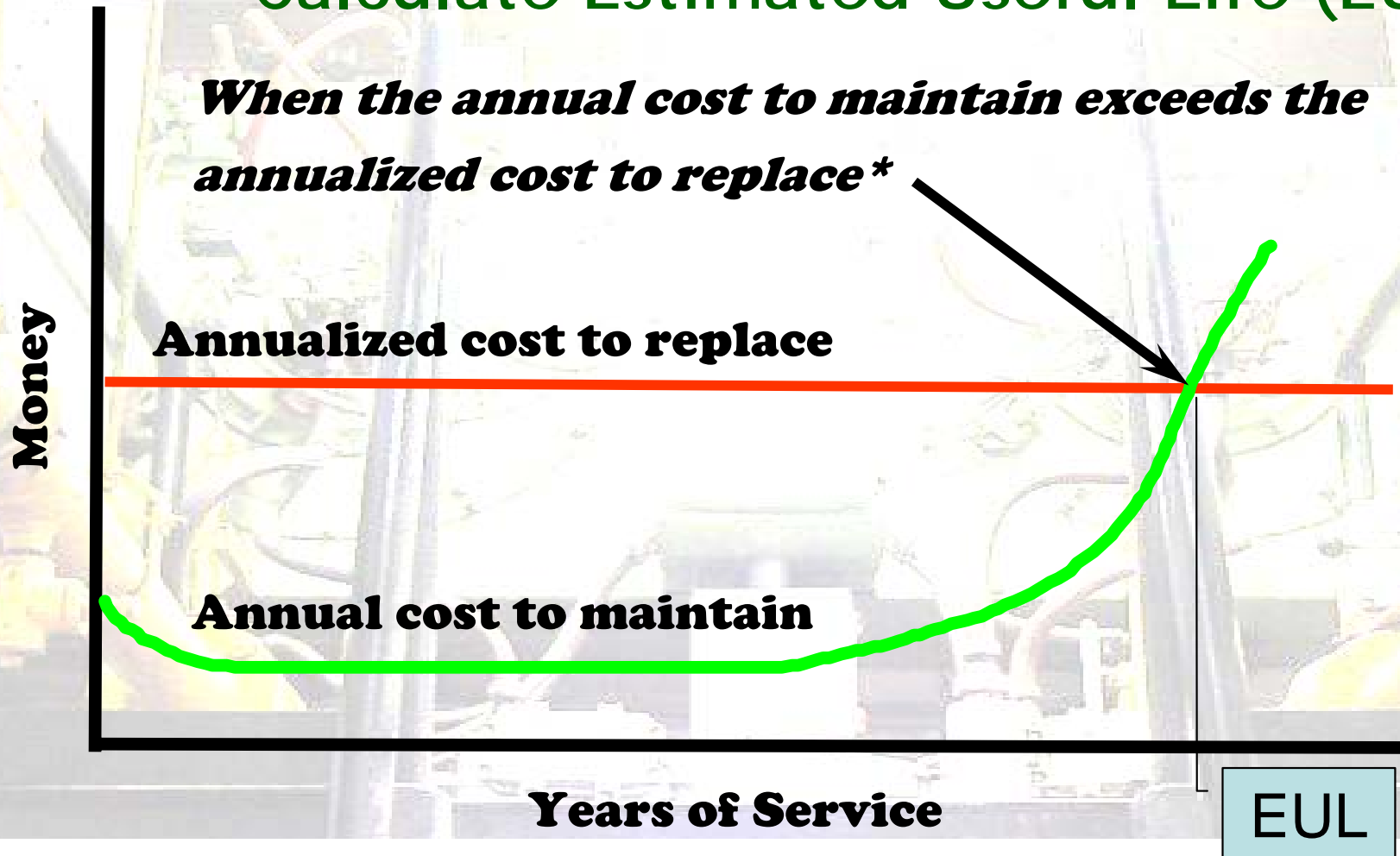


Case Study - HHS

Method 2: Total Life Cycle Cost Method: Statistical Analysis of Predicted Repair Needs

Calculate Estimated Useful Life (EUL)

*When the annual cost to maintain exceeds the annualized cost to replace**



Case Study - HHS

Conclusion: Use Best Aspects of Both Systems

1. Strategic View (Total Life Cycle Analysis)

- Perform Annually at ALL Buildings
- Need Inventory, EUL & Replacement Cost



Use
Results

Feedback
Projects

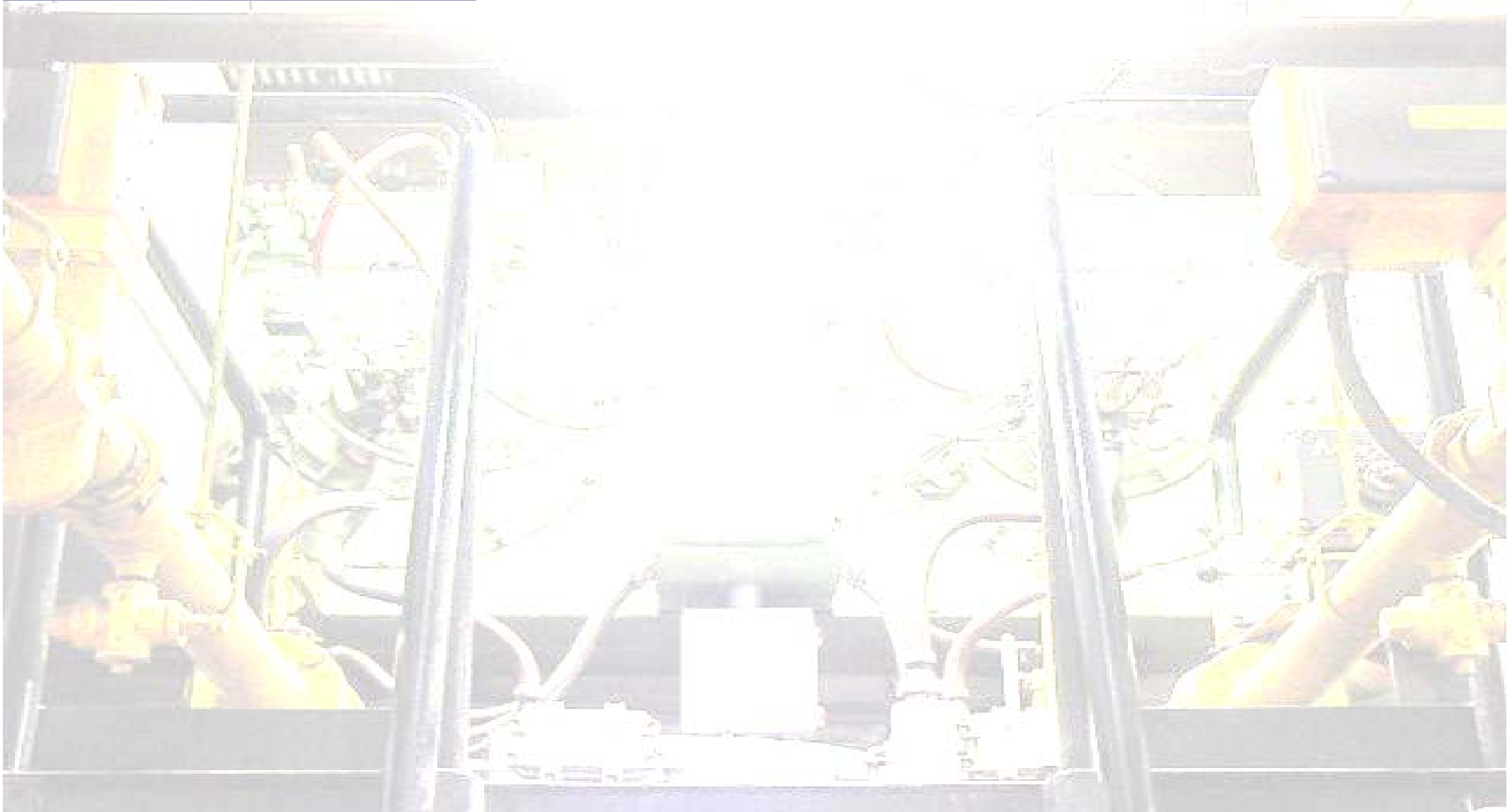
WHY?

2. Tactical View (Facility Condition Assessment)

- Perform Annually at **Selected** Buildings
(With Maximum Assessment Interval)
- Need Access to Facility

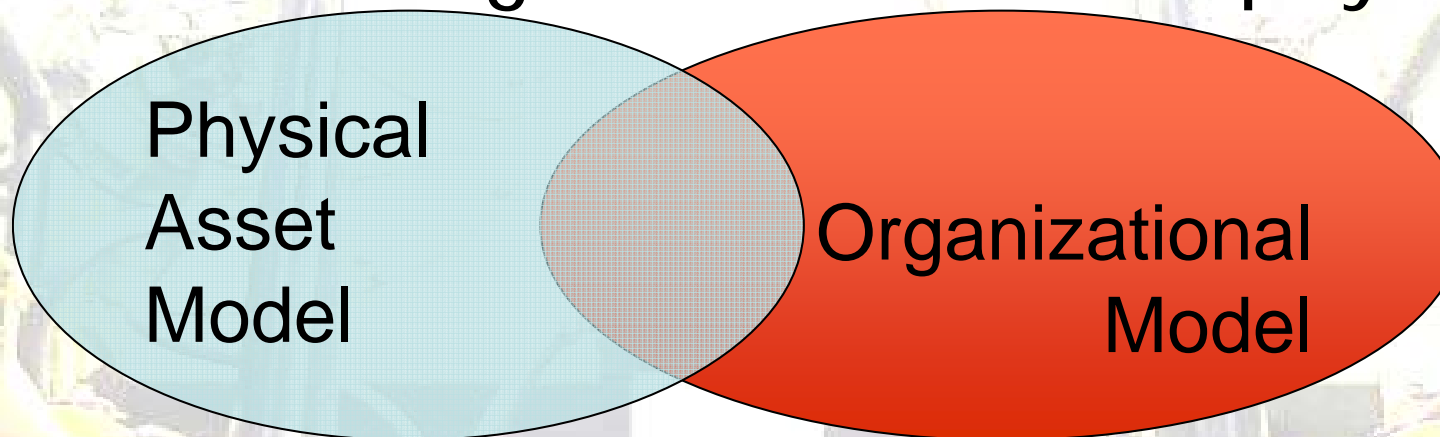


Transition



Asset Model

- Gordian knot - unraveling the asset puzzle
- First issue - organization versus physical



Strategic Business Plan

Early FM/IT Action Methodology

Strategic Facilities Plan

Define Measurable Goals

Define the Supporting Processes

Define the Information Requirements

Define the Information Tools

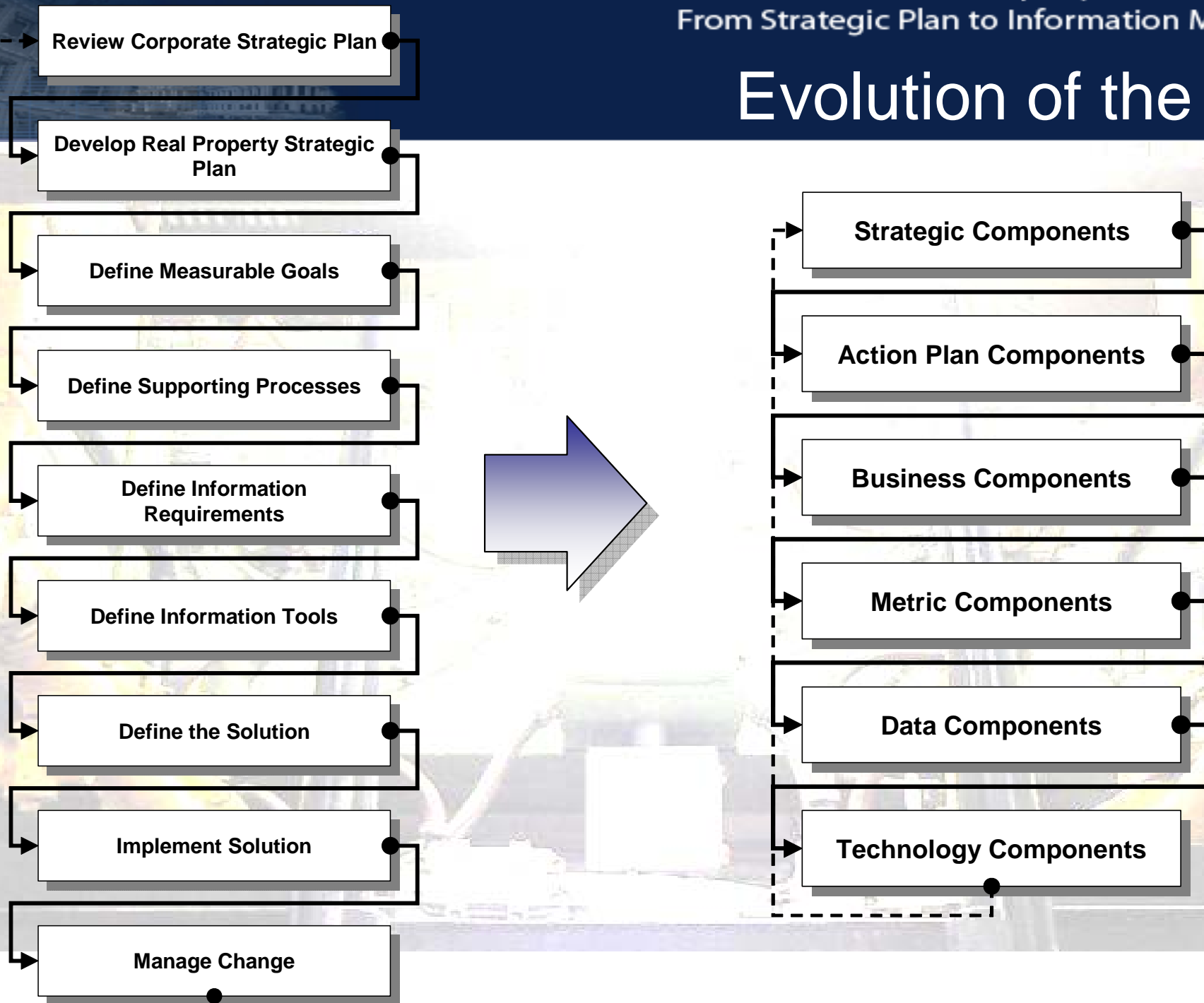
Define the Solution

Implement Solutions

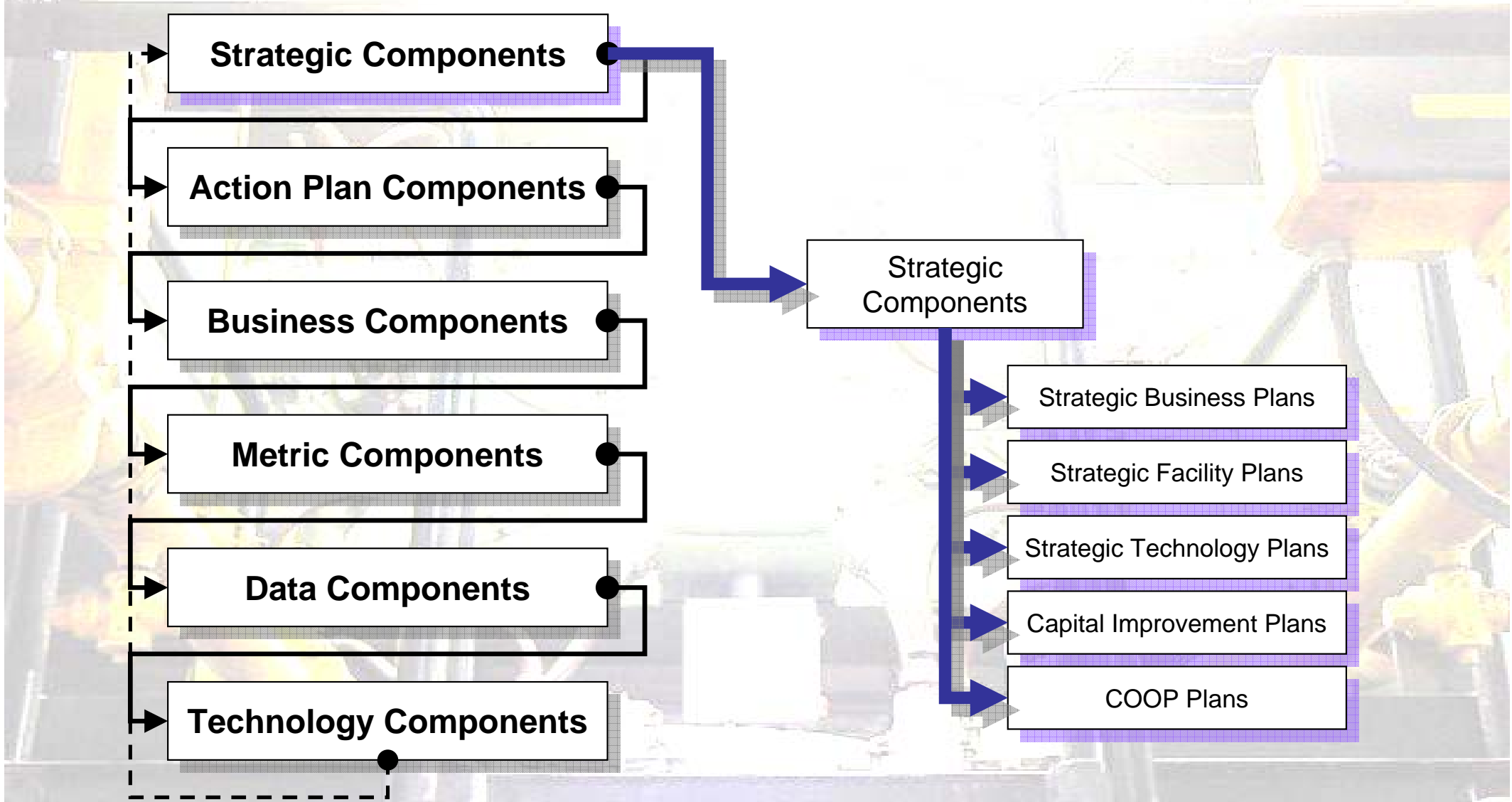
Manage Change

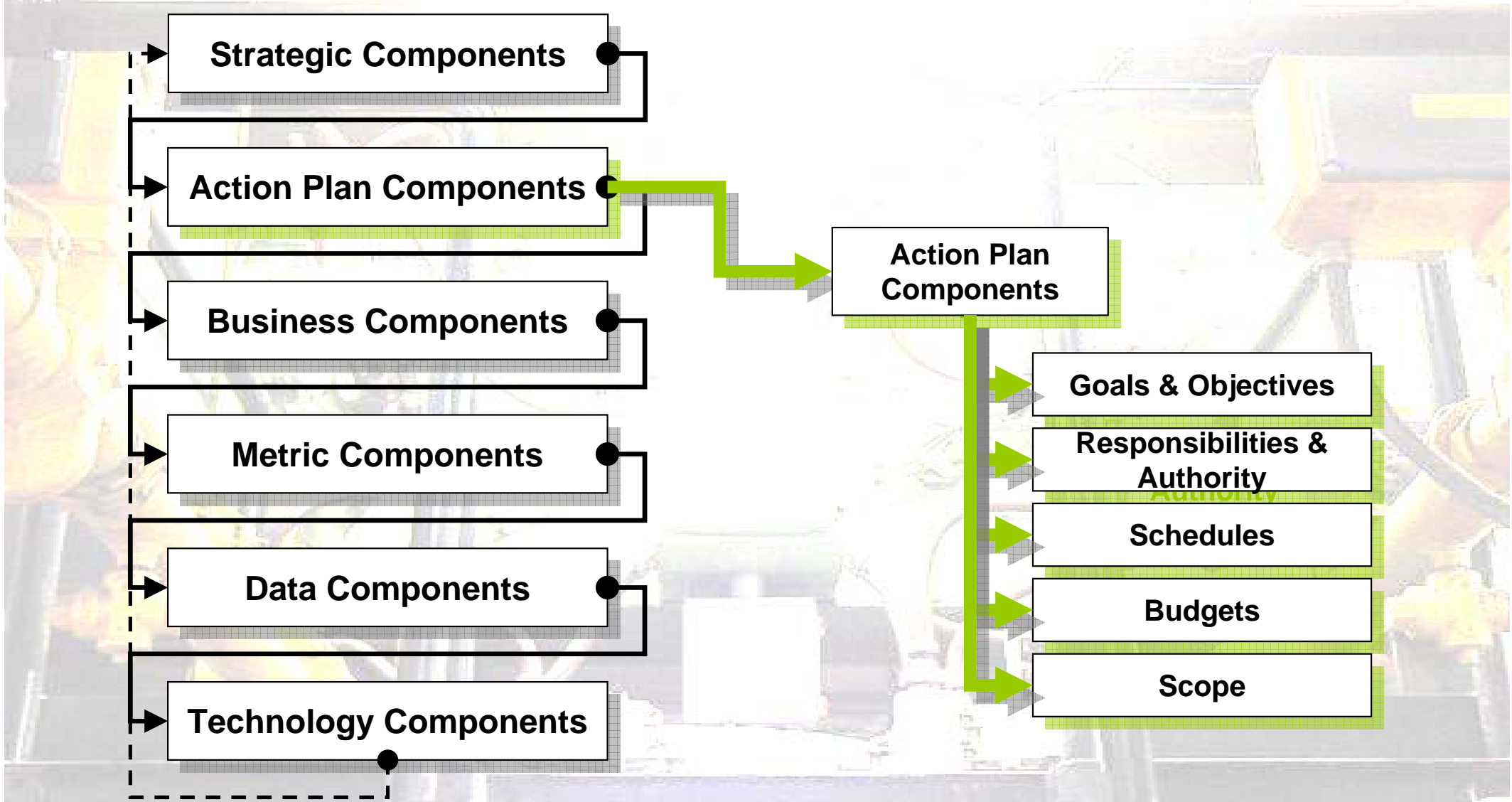


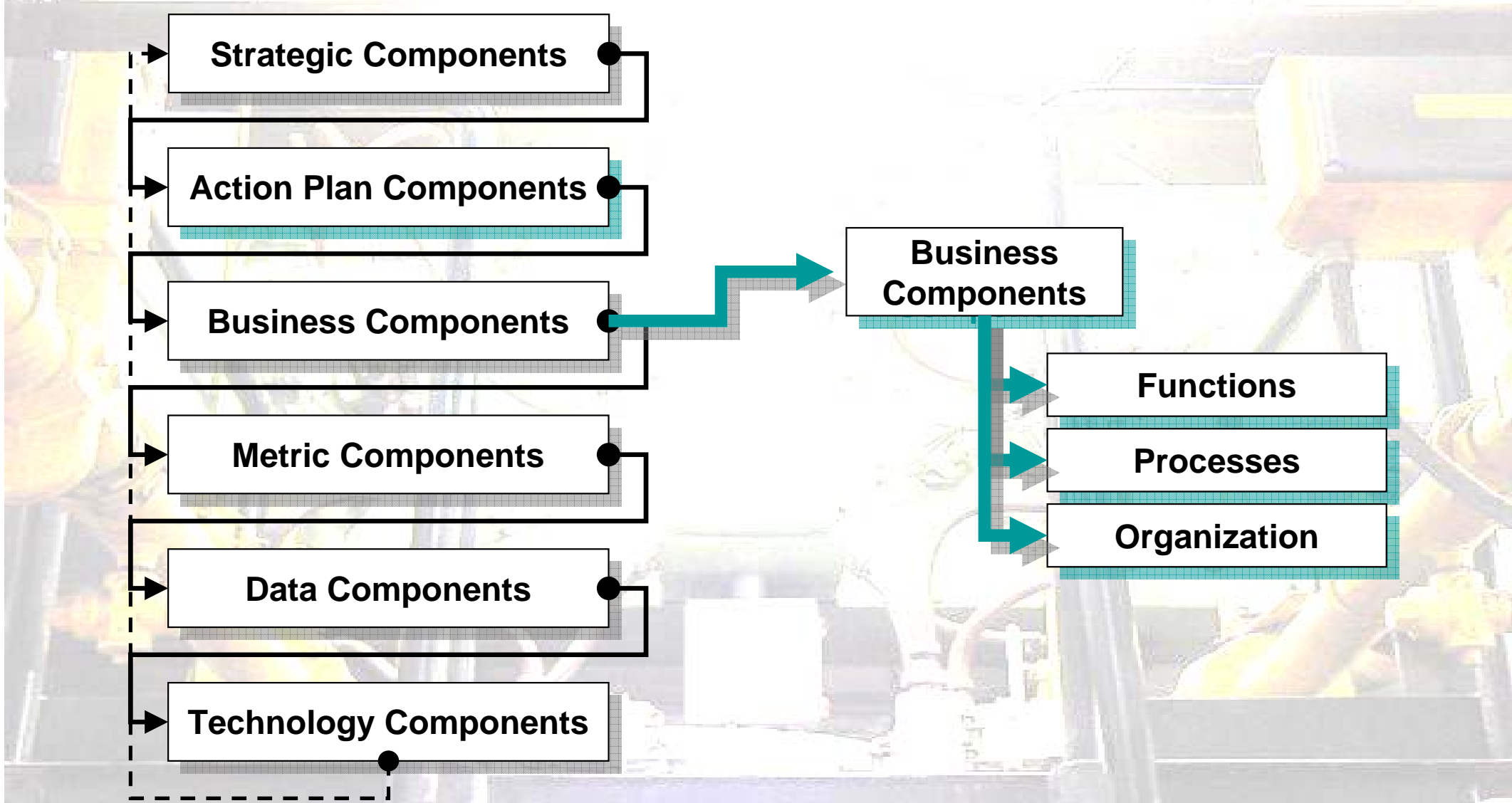
Evolution of the Model



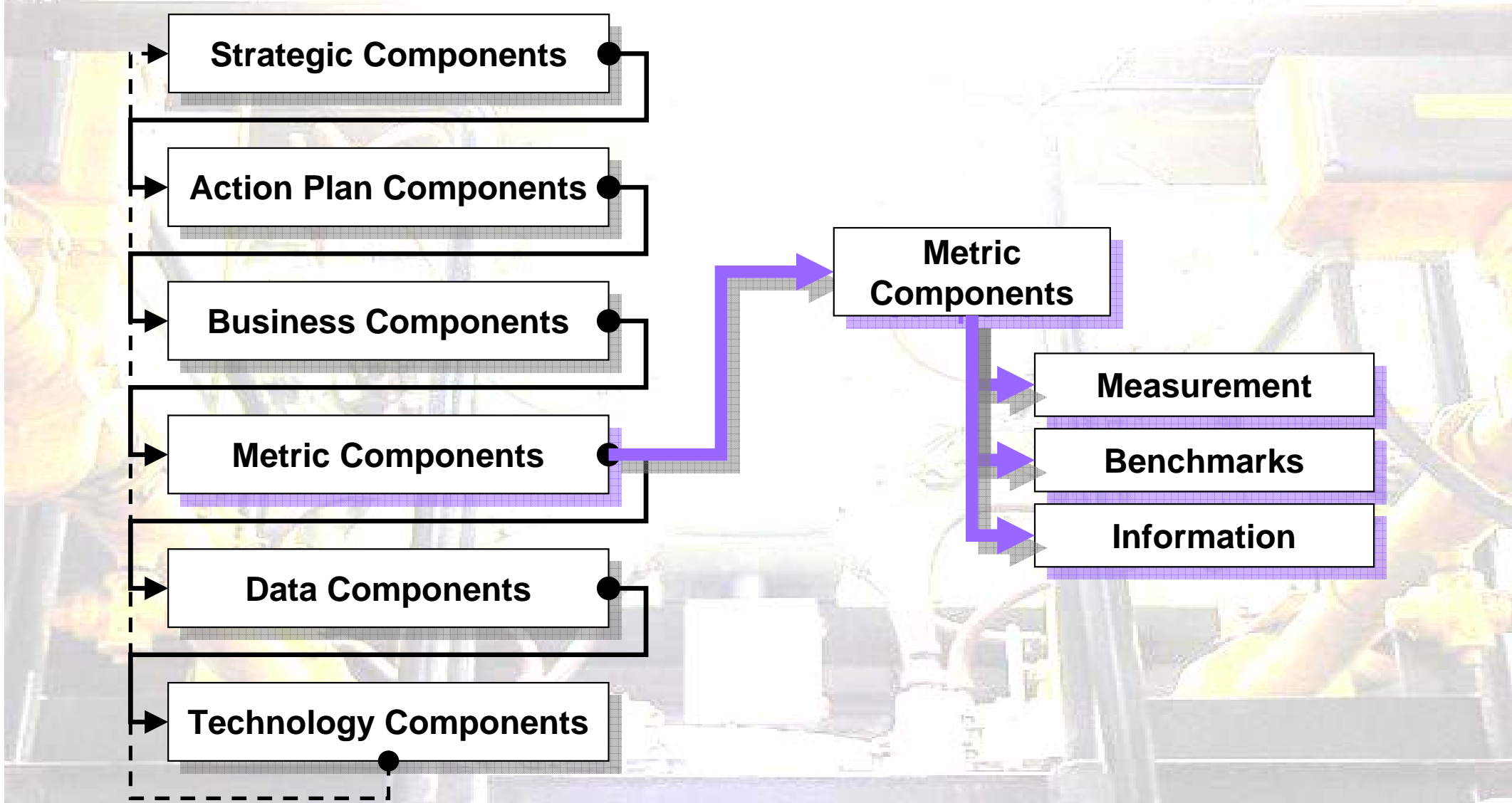
Strategic

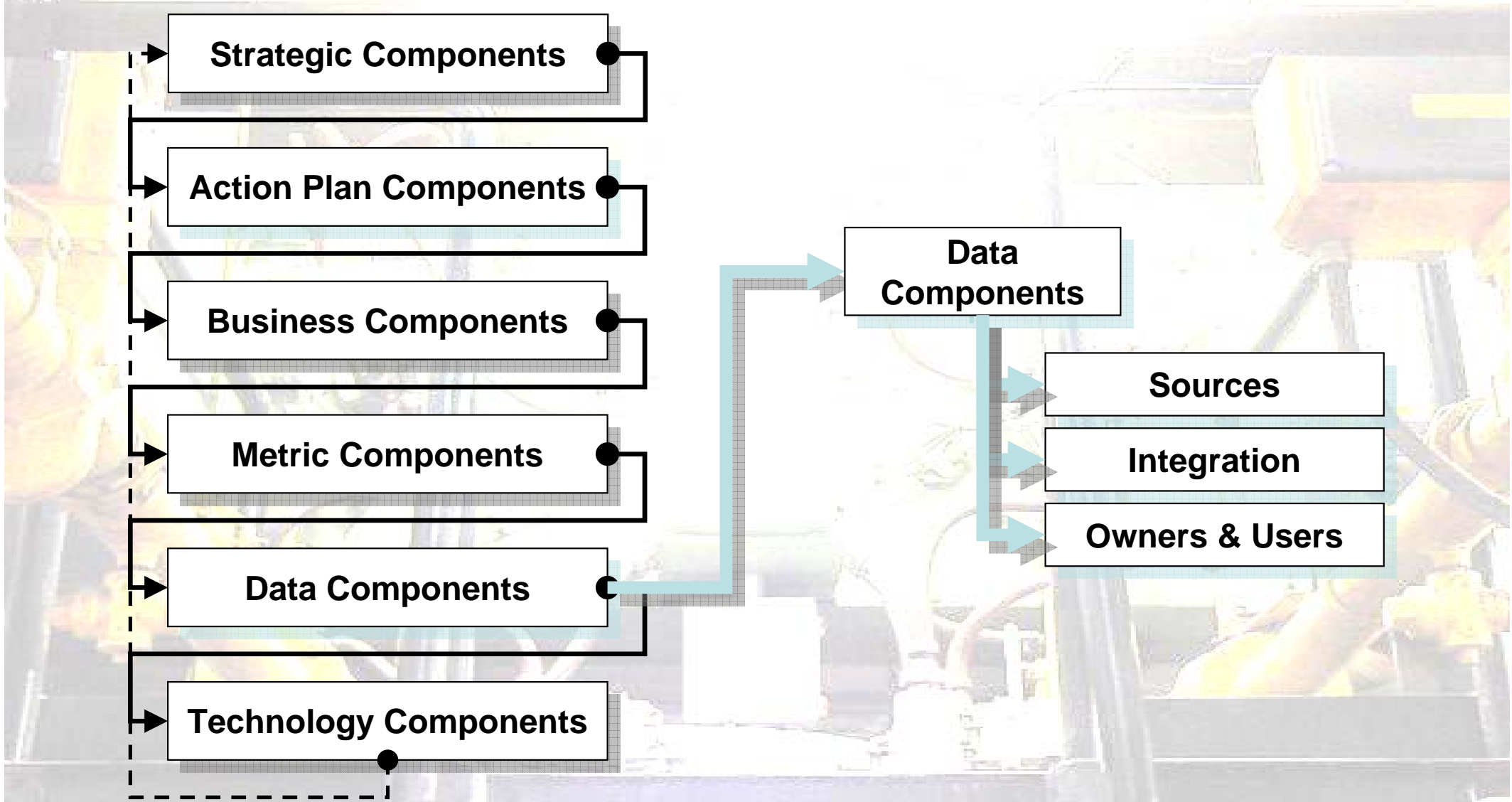




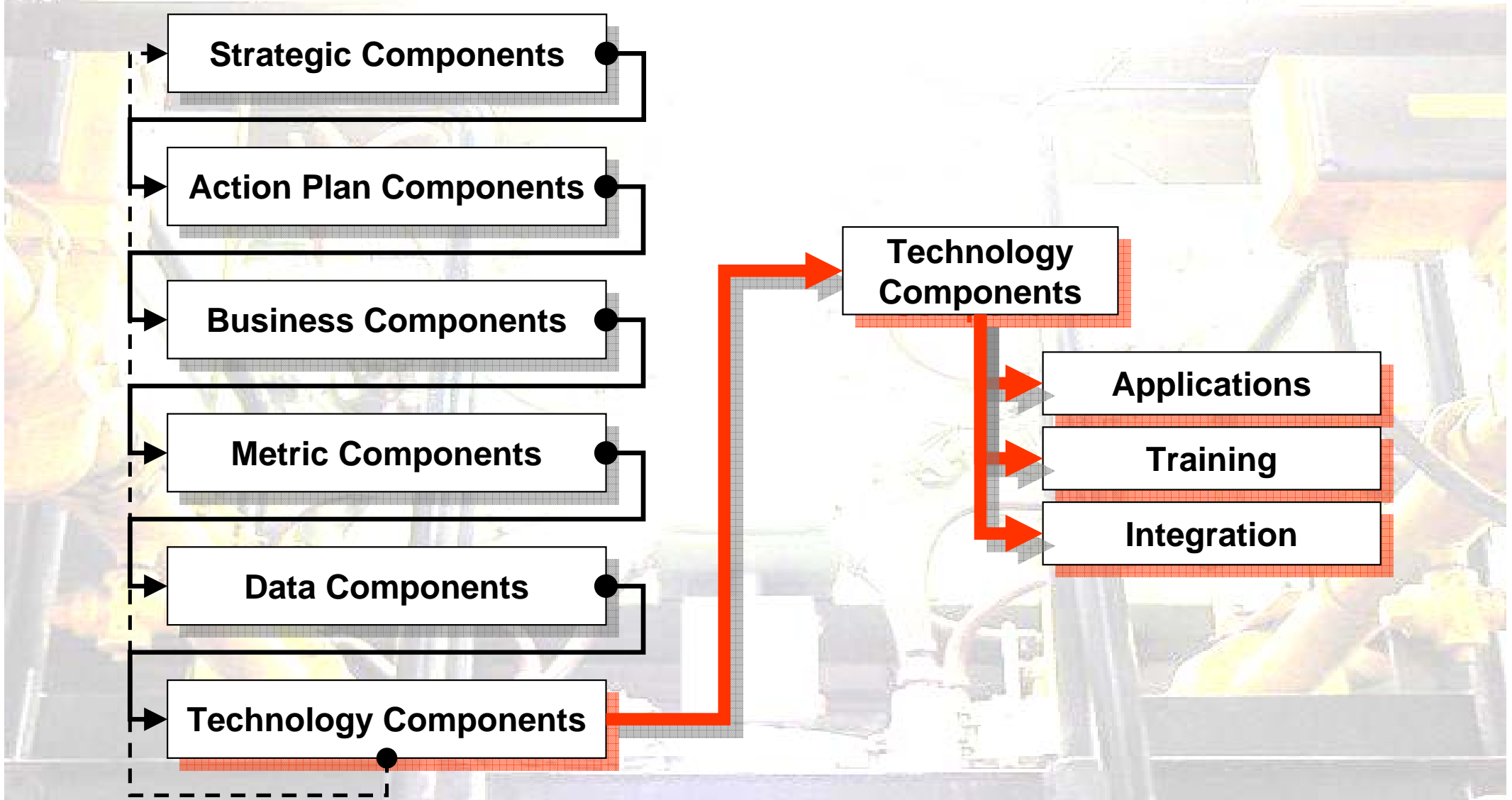


Metrics

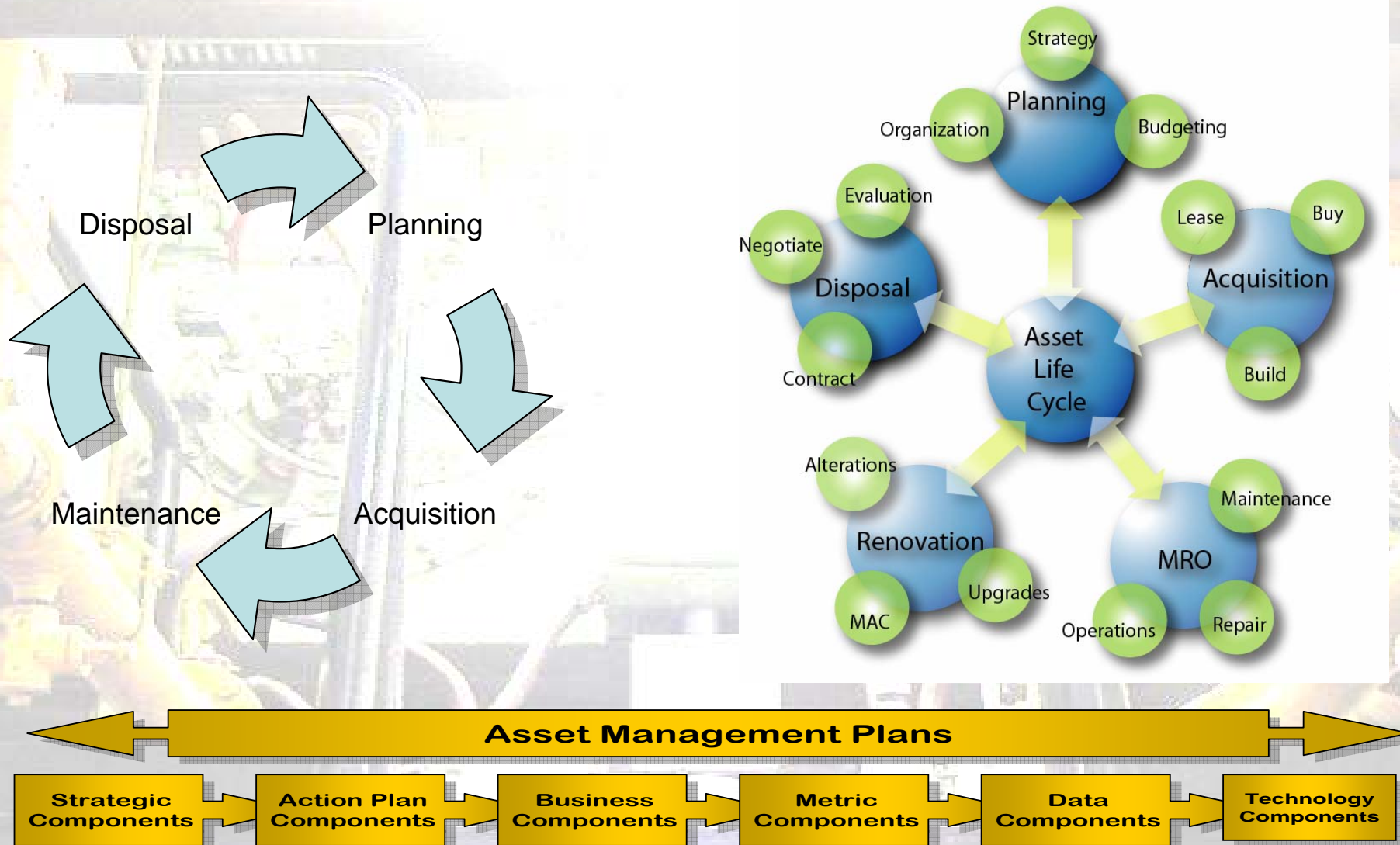




Technology



Asset Lifecycle



Asset Lifecycle

Business Lifecycle Components	Asset Management Plan																	
	Strategic Components			Action Plan Components			Business Components		Metric Components		Data Components		Technology Components					
Asset Life Cycle Elements	Strategic Business Plans	Strategic Facility Plans	Strategic Technology Plans	Goals & Objectives	Responsibilities	Schedules	Functions	Processes	Organization	Measurement	Benchmarks	Information	Sources	Integration	Users & Owners	Applications	Training	Integration
Planning																		
Planning	●	●		●	●	●	●				●	●	●			●		
Organization	●										●							
Programming	●							●			●							
Budgeting	●										●							
Acquisition																		
Leasing																		
Market Surveys													●			●		
Negotiation											●							
Contract																		
Buying																		
Market Surveys																		
Negotiation																		
Contract																		
Build to Suit																		
Concept	●										●							
Program	●										●							
Plan	●																	
Design	●																	
Bid																		
Construction													●			●		
Commissioning																		
MRO																		
Occupation	●			●									●			●		
Maintenance	●			●							●		●			●		
Repair				●							●					●		
Operations				●							●					●		
Alterations																		
MAC																●		
Disposal																		
Evaluation	●										●							
Disposal											●					●		



Conclusions I

- The first lesson that can be drawn from the case studies and past experience with other organizations is that *unless you know where you stand in relation to the problem you do not know if you are moving forward.*
 - The development of the asset management plan provides this overall assessment of where an organization stands.
 - The matrix provides a structure to organize the many issues that need to be resolved. It provides a methodology to tie decisions back to the business plan of the Agency or the Corporation.
 - The value of the business case can be recognized by senior management making it easier to justify investment in real property assets.

Conclusions II

- The second lesson relates to the relationship between the components of the plan. *Each component from the strategic plan through metrics, processes and FM/IT depends on each other for success.*
 - The FM is faced with many significant issues from security and COOP plans to capital investment plans. The ability to place each new issue in an overall context is invaluable as facility management moves away from a stove pipe role and becomes a key player in making business decisions.

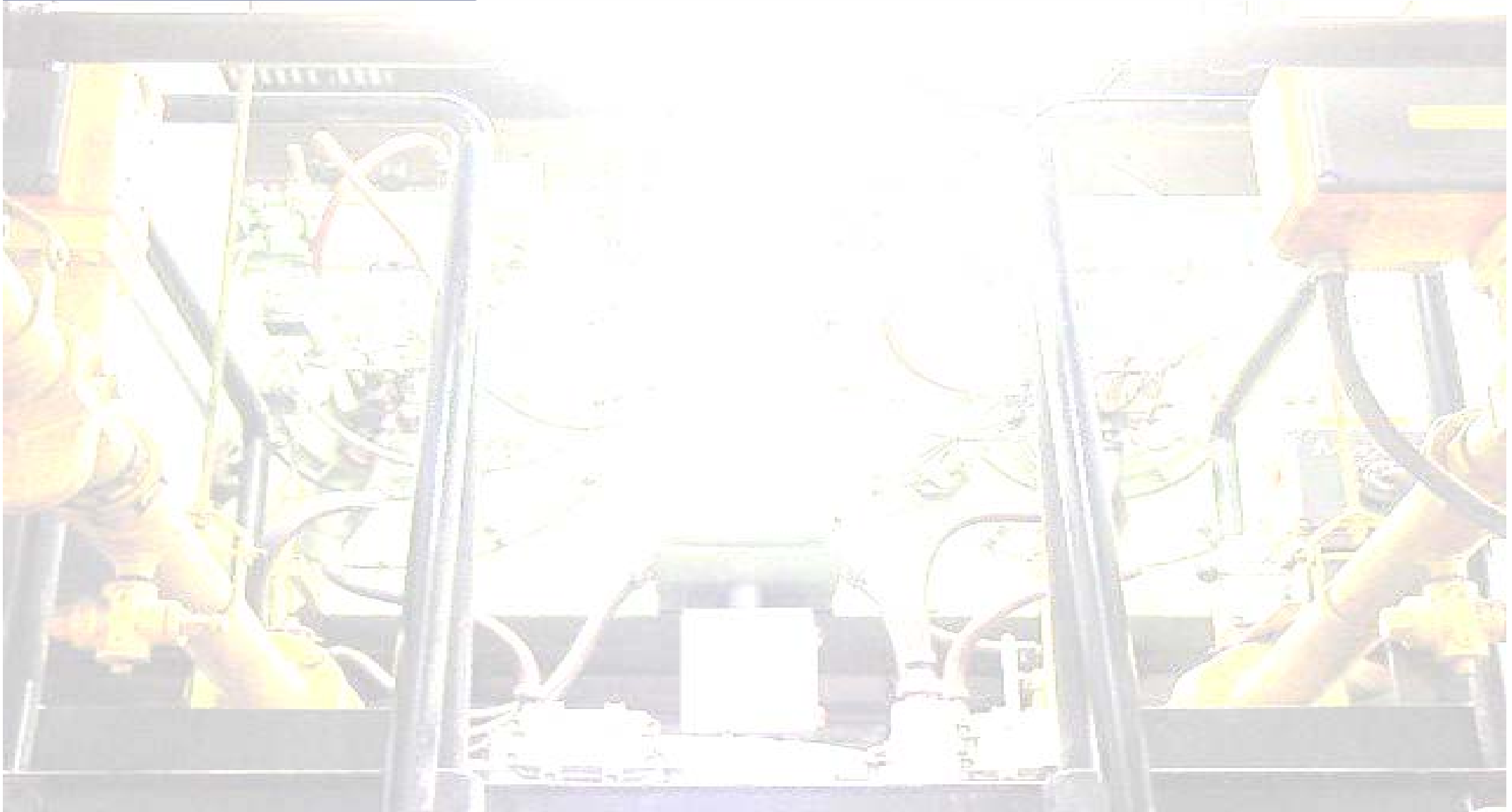
Conclusions III

- The value of developing an asset management plan is that it provides an overall structure and direction. The matrix provides the organizing methodology.
 - The use of an enterprise information system that allows the user to drill down into the source data provides the structure to support and monitor the AMP.

Future Directions

- NIBS Agenda - BIM
- FRPC -
- Sustainability
- Balanced Scorecard

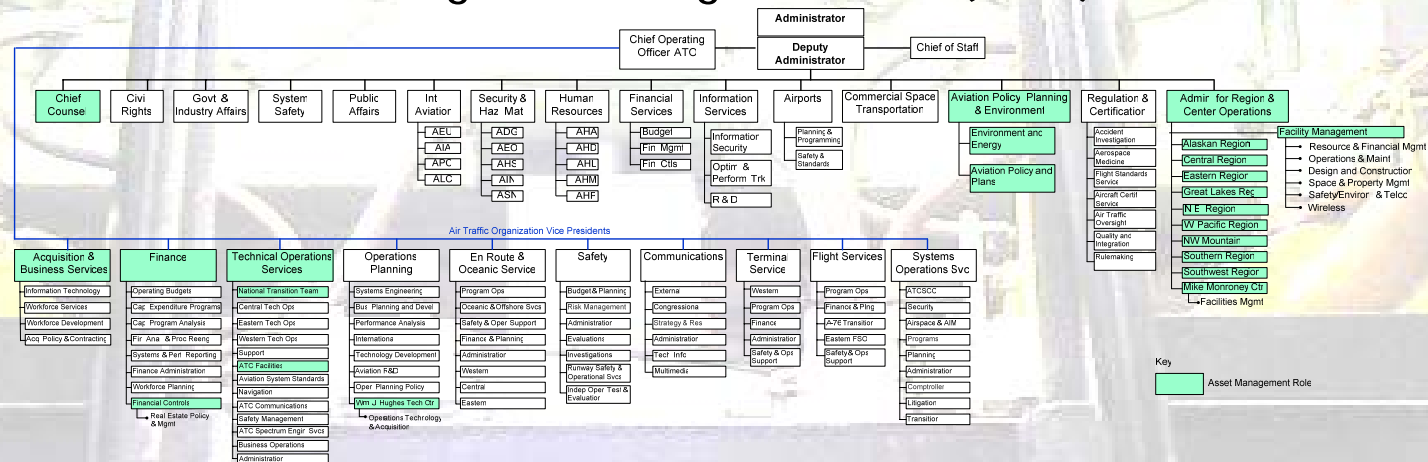
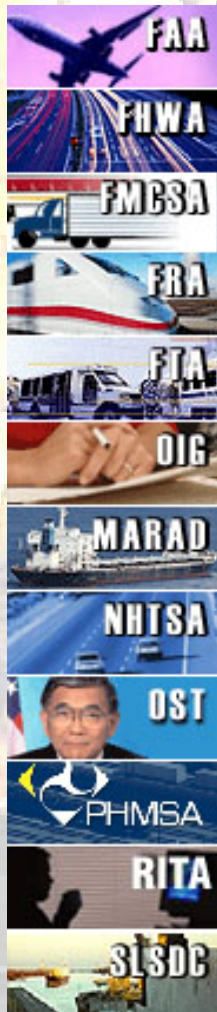
Transition



Case Study - DOT

Developing the DOT Asset Management Plan

- 12 DOT Operating Administrations
 - FAA is the major Real Property holder (69,500 out of 70,000 assets)
- Strategic Business Planning
 - In place, FAA: Flight Plan, Line-of-Business Plans
 - Real Property - to be developed, adjunct to a new Asset Management organization
- Real Property functions dispersed throughout the agency, no central Asset Management Organization (AMO)



FAA Organization Chart (Green = Asset Management Functions)



Case Study - DOT

Drivers for Change

Not having a central AMO in the agency has lead to:

- Redundant tasking, expertise bases in real property, spread across departments with no organizational structure set up to share information, practices
- Limited visibility of Real Property standards, procedures, processes
- Multiple systems tracking various segments of Real Property (leasing, inventory, work-flow, maintenance, et al); multiple CAFM systems, approaches

- External Drivers

- President's Management Agenda and Executive Order 13327

- Internal Drivers

- DOT HQ relocation - Consolidate and "refresh" Real Property efforts
- FAA internal business realignment

Goals:

- *Focus on Real Property Asset Management as a core business activity rather than a programmatic task.*
- *Ensure alignment between real property asset management goals/objectives and the DOT mission*

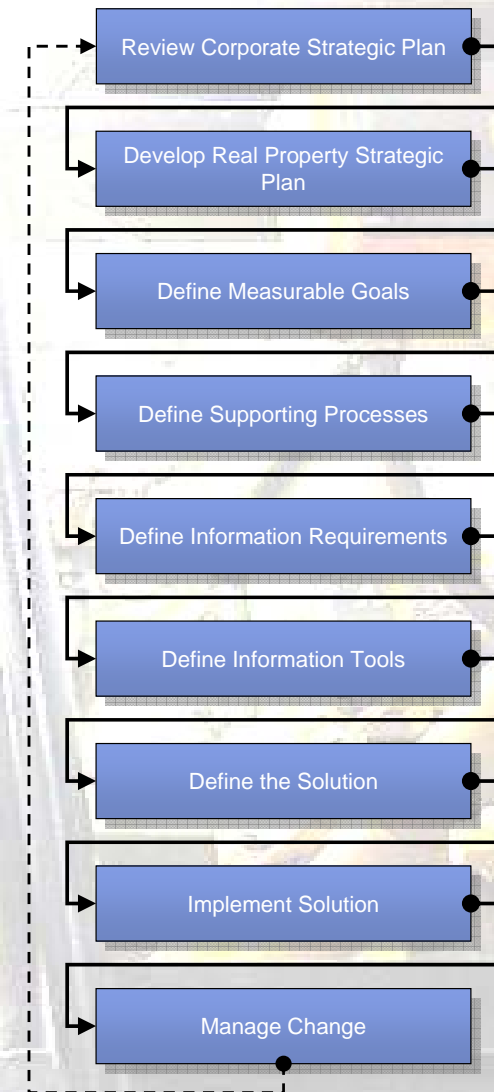
Case Study - DOT

Discovery Process

Interviews with DOT Real Property professionals throughout the agency to identify and understand:

- The nature of Real Property activity at the agency
- Current Real Property organizational structure
- Business challenges faced by Real Property professionals
- IT systems tracking Real Property activities
- Intersection/interaction between Real Property management and technical equipment support
- The nature of O&M activities
- Agency organizational transformational efforts, business challenges, funding constraints and their effect on a central AMO
- How acquisition management policies & business processes might need to be altered to meet the PMA

Goal: Address longstanding organizational fragmentation of real property asset management



Case Study - DOT

Developing the Asset Management Plan

Utilizing the GSA Shelf Document to:

- Perform GAP analysis, outline strategic components, delineate actions needed to be taken
- Develop matrix outline for each DOT operating administration
- Act as a framework for the Departmental plan, OMB submission

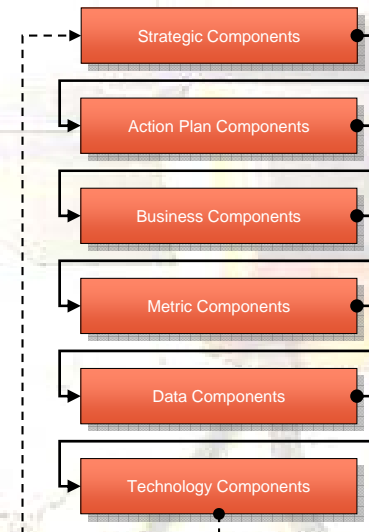




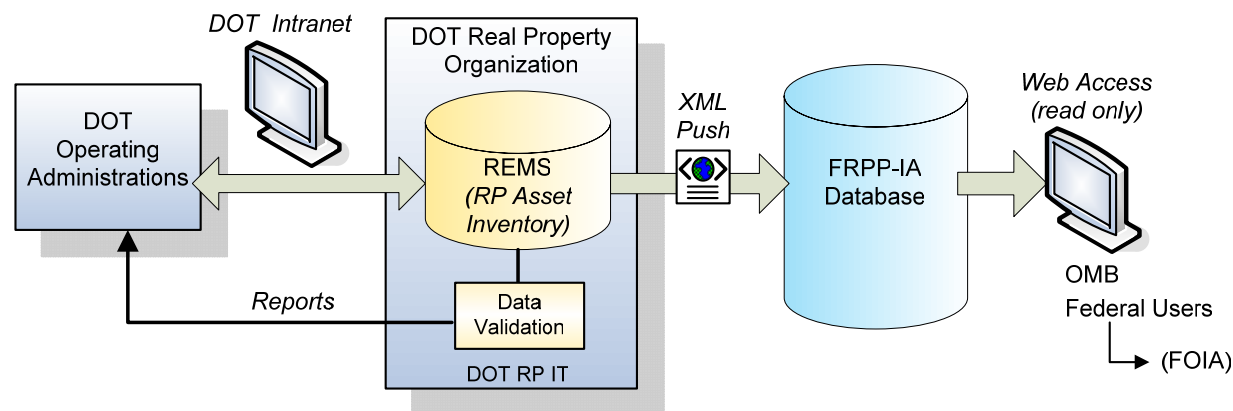
Table: Portion of DOT Gap Analysis Using GSA Shelf Document Format

PRIORITY	GSA SHELF DOCUMENT	ACTION TYPE	DOC TYPE	ACTIONS	ASSIGN TO:	START DATE
	Operating Costs					
	FAA is consistent with the Council's latest standards by tracking cleaning/janitorial, maintenance, and utility costs at the asset level. These operating costs are then benchmarked to the private sector for office and office-like space and used as a part of the FAA's annual performance measures. As the Council further defines its version of operating costs FAA will work to ensure consistency with the Council's standards.	POLICY	Performance Metrics Standards	DELPHI for cost center tracking costs. CAS for costs by specific site.	AFM	
	Mission Dependency					
	FAA is consistent with the Council's latest standards by categorizing its assets into the following categories: Mission Critical, Mission Dependent Not Critical, and Non-Mission Dependent. As the Council further defines its version of mission dependency, FAA will work to ensure consistency with the Council's standards.	POLICY	Performance Metrics Standards	FAA can calculate the Mission dependency based on the Cost Center Code, this can be derived-3rd position 8 or 2(NAS)=Mission Critical, B=Mission Dependent, all others Not Mission Dependent, but not at the asset level	AFM	
	4.8.2 Agency Specific Measures					
	(Briefly describe any additional agency specific performance measures used to measure the effectiveness of the Operations portion of the life cycle of asset management). For example, FAA measures the effectiveness of its real property asset management operations through a series of measures that track financial performance, asset condition, and operating efficiency.	POLICY	Performance Metrics Standards	Procurement Guidance T.3.2.2 (revised 1/2005)	ATO & ARC	

Case Study - DOT

FRPC Data Reporting & Management

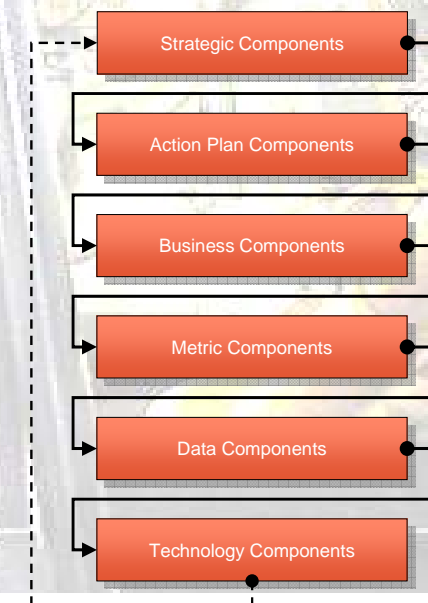
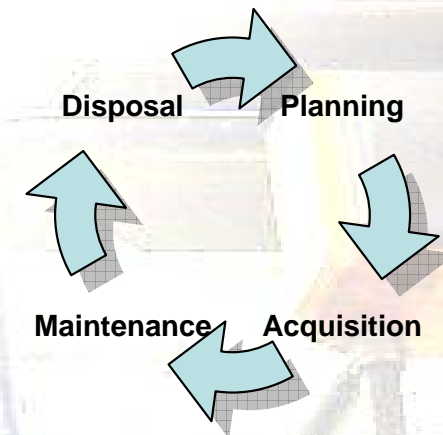
- Consolidate a myriad of systems tracking real property data
 - Identify REMS as the DOT Real Property Inventory System
 - Upgrade and support the system - accommodate 23 FRPC data elements
- Accommodate the 4 FRPC performance metrics
(Condition Index, Operating Costs, Plant Replacement Value, Mission Dependency)
 - Conduct internal data call, data validation
 - Development of processes for collecting metrics - aligning departmental standards/procedures with FRPC requirements
 - Submit three waivers for FY05 data calls (OC, PRV, CI)
 - Establish processes for future data collection



Case Study - DOT

Asset Management Plan - Provisions

- **DOT Real Property Processes: Planning - Acquisition - Maintenance - Disposal**
 - Asset Business Plans
 - Periodic Evaluation of Assets
 - O&M Plans
 - Capital & Operating Resource Requirements
 - Performance Measures & Continuous Monitoring (FRPC/DOT Specific)
 - Operations Initiatives
- **Definition of the Real Property Organization**
 - Existing Policies
 - Human Capital & Organizational Structures
 - Decision Making Processes
- **Key Initiatives**
 - Department wide oversight of policies & procedures - Real Property Council
 - FAA Asset Management Organization - Plan Finalization and Organizational Development
 - Centralized Data Management and Metrics Development



Contact Information

- Questions and Answers
- Contact information
 - Eric Teicholz - 617-492-1148 - teicholz@graphicsystems.biz
 - Boston MA
 - Graham Thomas - 240-375-9532 - gthomas@graphicsystems.biz
 - Washington DC
 - Louise Sabol - 301-555-5555 lsabol@graphicsystems.biz
 - Washington DC
 - Gary Evans - 703-555-5555 gevans@graphicsystems.biz
 - Washington DC
 - www.graphicsystems.biz