Transforming USCG Logistics

A systems engineering approach to transforming the USCG Enterprise Logistics Systems

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Agenda

- USCG Logistics Transformation Background
- Enterprise Transformation Basics
- USCG Logistics Transformation
- Demos of Logistics Models and Transition Dashboards

Logistics Transformation Background

- USCG has several “stovepiped” logistics business models (surface, air, shore, IT)
- Models have evolved over time and are not integrated or strategically aligned
- Some of the various models utilize modern logistics concepts, others do not
- Limited visibility into systems performance
- Limited ability to manage costs and effectiveness
- ***Then along comes the Deepwater program, the CFO Act, and Katrina…***

Logistics Transformation Drivers

- Deepwater program – recapitalization of USCG assets and capabilities
  - Deepwater program has experienced several issues that have led to a major restructuring of the program.
- CFO Act – Mandate to institute total asset visibility and financial controls
- Success of Katrina disaster response – demonstrated strengths of USCG Aviation logistics model

Logistics Transformation Objectives/Scope

- **Admiral Allen issues CIAO #4**
- Bi-level maintenance w/more standardized procedures.
- Centralized supply chain management w/spending driven by maintenance requirements.
- *Disciplined/standard Coast Guard-wide engineering and logistics business processes, modeled after our internal best practices currently in use in aviation.*
- Strong configuration management processes, w/associated compliance inspections, to ensure all configurations are safe, effective, and supportable when installed.
- Reduce the number of financial and information systems.

Transformation Support Team

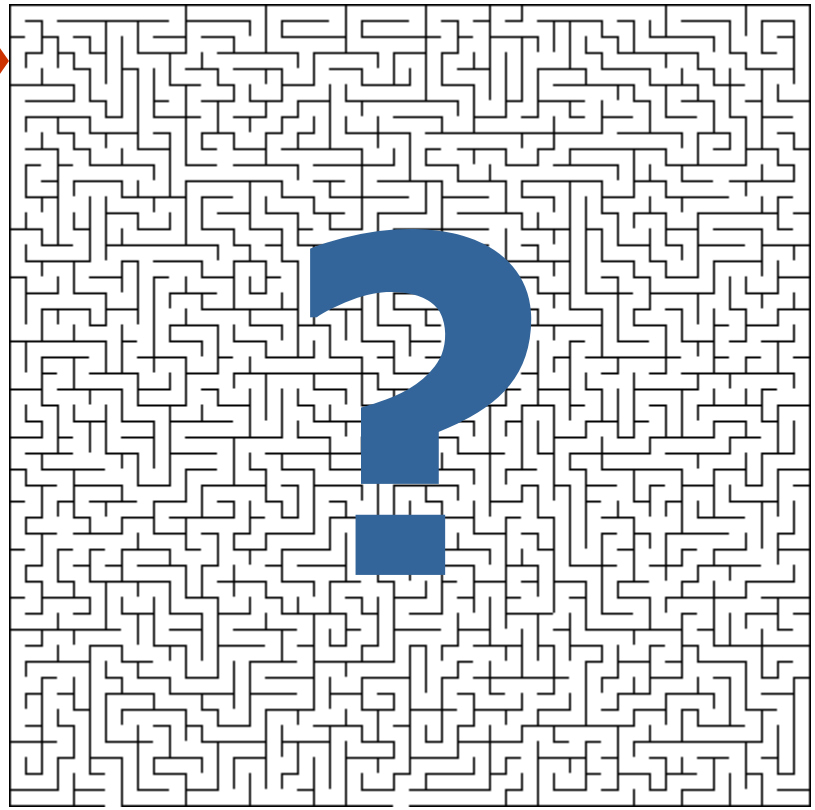
- Logistics Transformation Program Integration Office (LTPIO) established
- General Dynamics contracted to provide program management
- VectorCSP contracted to support organizational and logistics transformation

Transformation Management Approach

- LTPIO chose VectorCSP's Pathfinder approach to develop the logistics business model
- Pathfinder is a systems-oriented, tools-based transformation management methodology
- Pathfinder incorporates a complete business systems performance model, with an emphasis on behavioral engineering

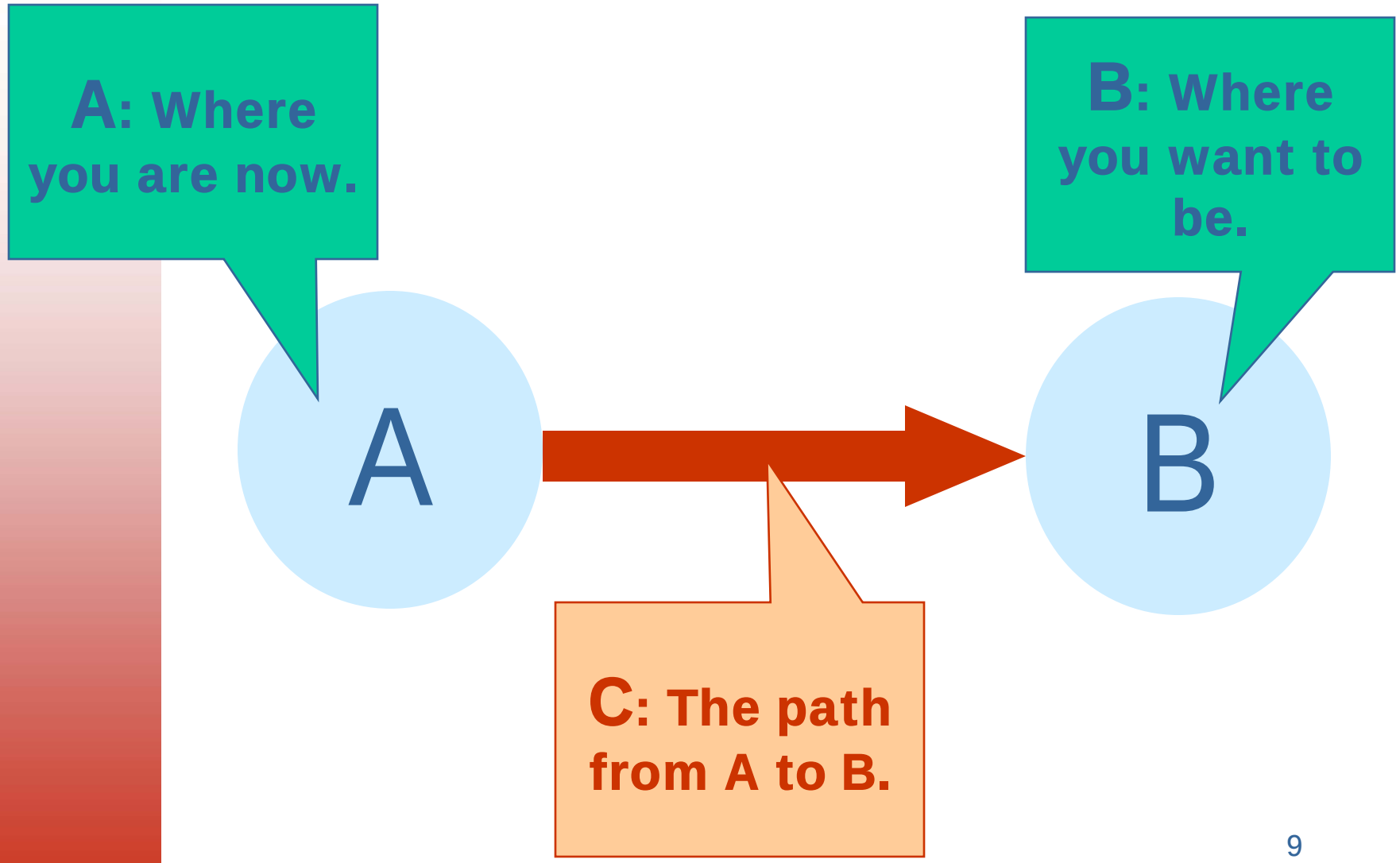
Let's go back to Org Transformation Basics!

Start Here



Finish!

Enterprise Transformation ABCs

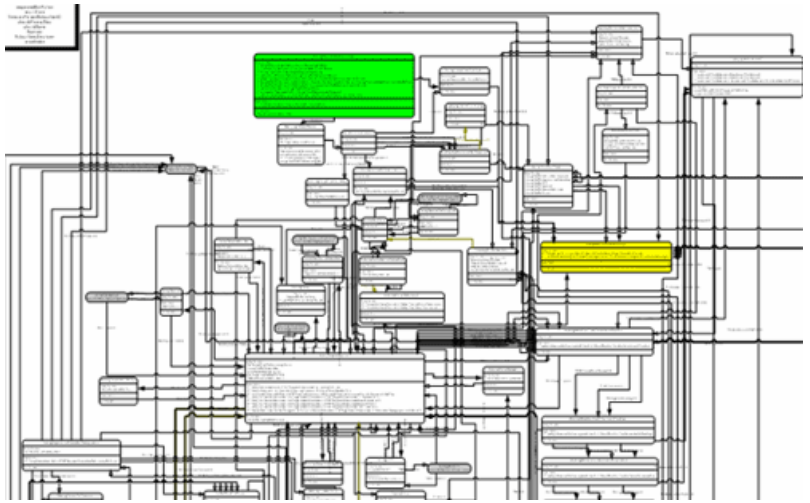


A: Where you are now.

A

- In order to get from **A** to **B**, you have to understand **A**.
- **A** is your "As-Is" organizational and business model
- **A** is usually very, very complex...

Usually the important cultural and political aspects of a business model are not well documented.

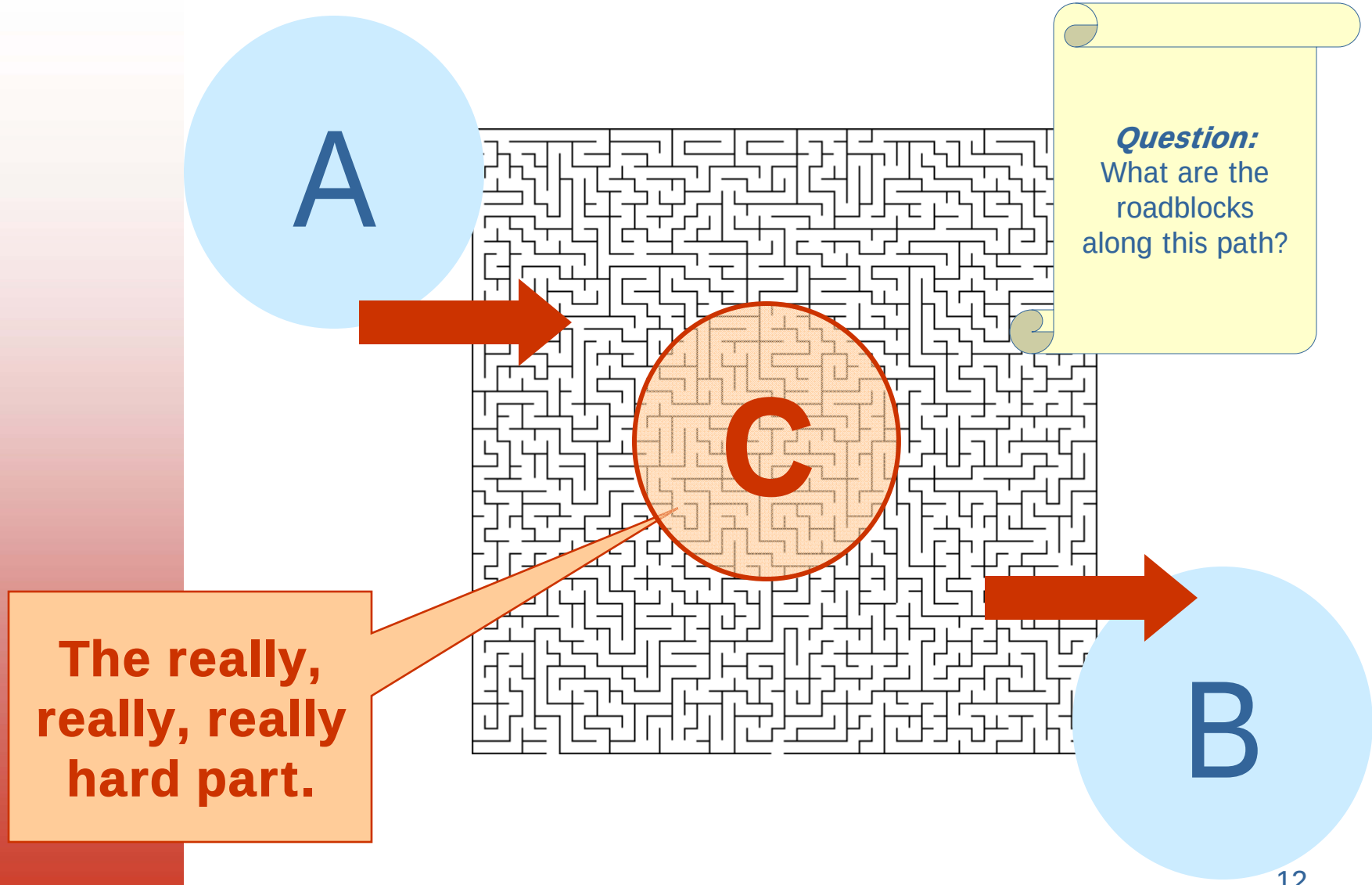


B: Where you want to be.

B

- In order to get from **A** to **B**, you also have to understand **B**.
- **B** is your “To-Be” organizational and business model
- **B** is usually not well defined...

C: The Path from A to B



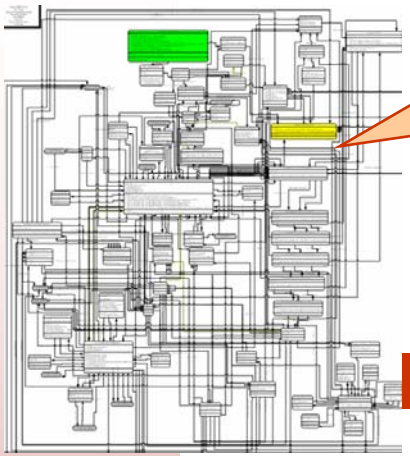
Speedbumps on the Path

- Strategic Alignment
- Technology
- Process
- Organizational Design
- Culture
- Politics

Question:
Of these roadblocks, which is most difficult to overcome?

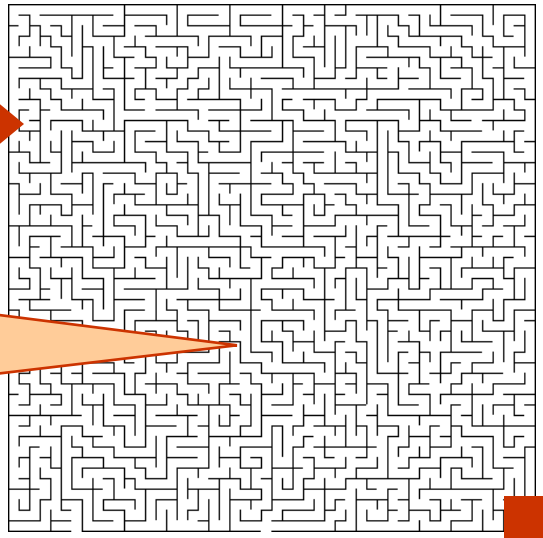
Path from A to B

To sum it up…

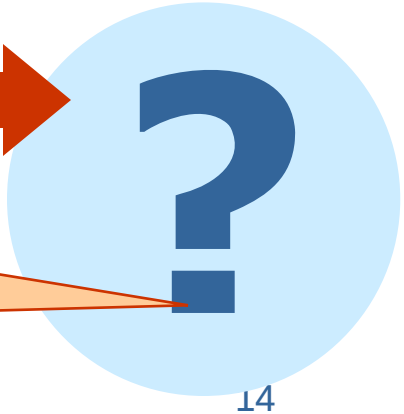


You move from a highly complex (and usually broken) system…

Question:
What percentage of enterprise transformations succeed?



…through a complex transformation process fraught with cultural, technical, and political barriers…



…to get to what is usually a poorly understood end state.

It's no wonder that

85%

of all enterprise transformations

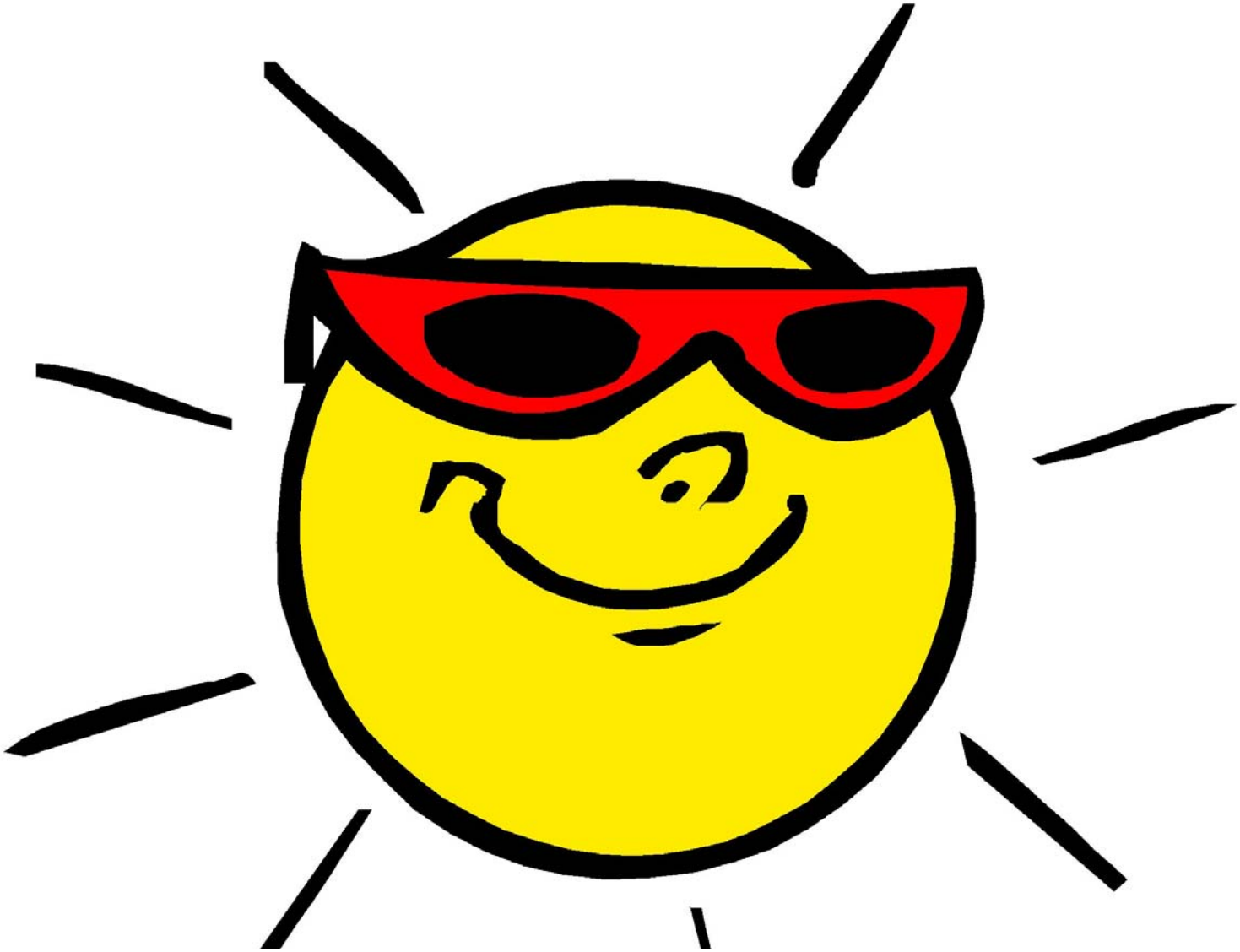
Do not fully succeed!

What you need to succeed

1. Clearly defined transformation **objectives**
2. A way to identify **A** and **B**
3. A roadmap to transform the **structures**, **processes**, **technology**, **culture** and **politics** of the organization
4. A way to manage the **astounding complexity** and **mountains of data** of such a large-scale endeavor
5. A way to **communicate** with all stakeholders
6. A way to **measure success** of the transformation
7. A **fully-dedicated** transformation management team

In other words…

…you need a systems engineering approach!



The Coast Guard Logistics Transformation

Start Here

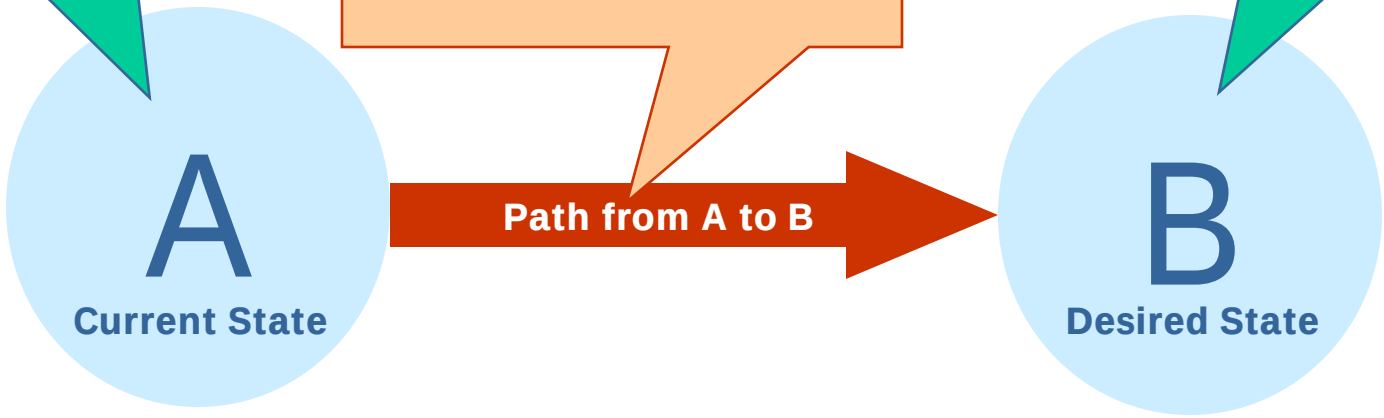
Finish!

Coast Guard Transformation

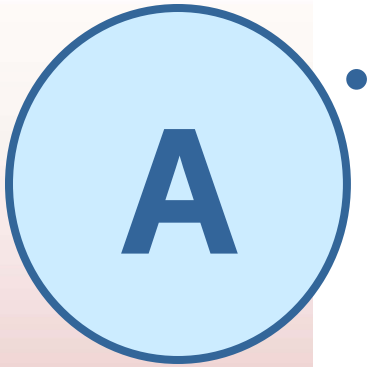
A: Separate logistics models for surface and aviation.

B: Standard logistics model based on aviation model.

C: Logistics Transformation.



A: The "As-Is" State of CG Logistics



- Multiple logistics models (naval, aviation, shore, C4ISR)
- Problematic logistics systems for naval, shore, and technology systems
  - Non-standard fleet assets and inventories
  - Antiquated logistics processes and technology
  - Sub-optimal acquisition model
  - Poor financial controls
- Not compliant with CFO Act
- Problems with Deepwater program
- Getting the mission accomplished despite sub-optimal logistics systems due to dedication and "can-do" attitude

B: The "To-Be" State of CG Logistics

B

- Adopt CG Aviation Integrated Logistics Systems (ILS) model
- Standard fleet assets and Total Asset Visibility
- Integrated technology infrastructure (based on modified ALMIS)
- Transparent and tightly controlled financials
- CFO Act Compliance
- Systems measures of effectiveness (MOEs)

C: The Path to Transition

C

- Commandant's CIAO establishes transformation objectives
- LTPIO established as the **fully-dedicated transition team**
- **Pathfinder Performance Modeling** approach chosen by LTPIO as a key transformation management tool.

About Pathfinder

- Pathfinder is a dedicated **transformation modeling** and support system
- Designed for **large-scale** organizational transformations
- Pathfinder is based upon a **systems engineering** approach to org transformation

Performance System Engineering

- Pathfinder breaks organizational performance into discrete systems elements

- It incorporates **process engineering**, **organizational design**, **enterprise architecture**, and most importantly **behavioral engineering**
- It enables modeling of all elements that **influence** organizational performance
- It makes it possible to manage the complexity of a large transformation

Performance Systems Components

- **Key building blocks of a Performance Model**


System


System Outcome


Job Role or Team (People)


Strategic Objective

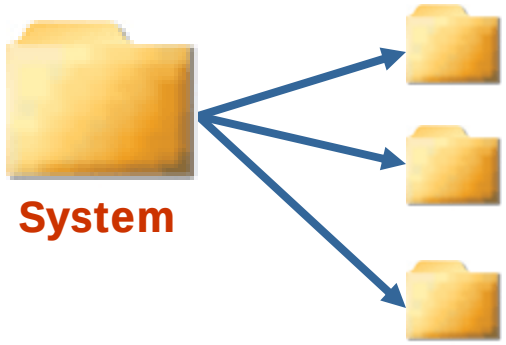

Policy


Technology

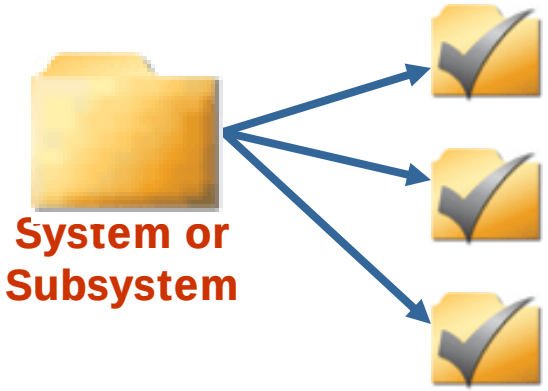

Organization

Question:
Which of these elements is most critical to performance, yet most often overlooked?

Performance Model Basics



A performance system can have multiple subsystems



A performance system is defined by its System Outcomes

The Outcome is the central element of a performance model

Examples of Systems and Outcomes

- The Coast Guard logistics performance model is based on the standard ILS (Integrated Logistics System)
- *Excerpt from the CG model:*

Coast Guard ILS System Hierarchy

Design Interface	Maintenance	Manpower	Supply	Support Equip.
Ops	Ops	Ops	Ops	Ops
Manpower	Manpower	Manpower	Manpower	Manpower
Facilities	Facilities	Facilities	Facilities	Facilities
Training	Training	Training	Training	Training
Tools/Equipment	Tools/Equipment	Tools/Equipment	Tools/Equipment	Tools/Equipment
Info Management	Info Management	Info Management	Info Management	Info Management
Tech data	Tech data	Tech data	Tech data	Tech data
Environment/Hazmat	Environment/Hazmat	Environment/Hazmat	Environment/Hazmat	Environment/Hazmat
CM/Standardization	CM/Standardization	CM/Standardization	CM/Standardization	CM/Standardization
Safety	Safety	Safety	Safety	Safety
Comms/Feedback	Comms/Feedback	Comms/Feedback	Comms/Feedback	Comms/Feedback
Finance	Finance	Finance	Finance	Finance
Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts

Tech Data	Training	IT	PHS&T	Facilities
Ops	Ops	Ops	Ops	Ops
Manpower	Manpower	Manpower	Manpower	Manpower
Facilities	Facilities	Facilities	Facilities	Facilities
Training	Training	Training	Training	Training
Tools/Equipment	Tools/Equipment	Tools/Equipment	Tools/Equipment	Tools/Equipment
Info Management	Info Management	Info Management	Info Management	Info Management
Tech data	Tech data	Tech data	Tech data	Tech data
Environment/Hazmat	Environment/Hazmat	Environment/Hazmat	Environment/Hazmat	Environment/Hazmat
CM/Standardization	CM/Standardization	CM/Standardization	CM/Standardization	CM/Standardization
Safety	Safety	Safety	Safety	Safety
Comms/Feedback	Comms/Feedback	Comms/Feedback	Comms/Feedback	Comms/Feedback
Finance	Finance	Finance	Finance	Finance
Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts	Vendor/OGA Contracts

Performance Model Relationships

All components of the model are related to Outcomes

System Outcome

What job roles are involved in producing the outcome?

What policies are related to the outcome?

What strategic objectives does the outcome support?

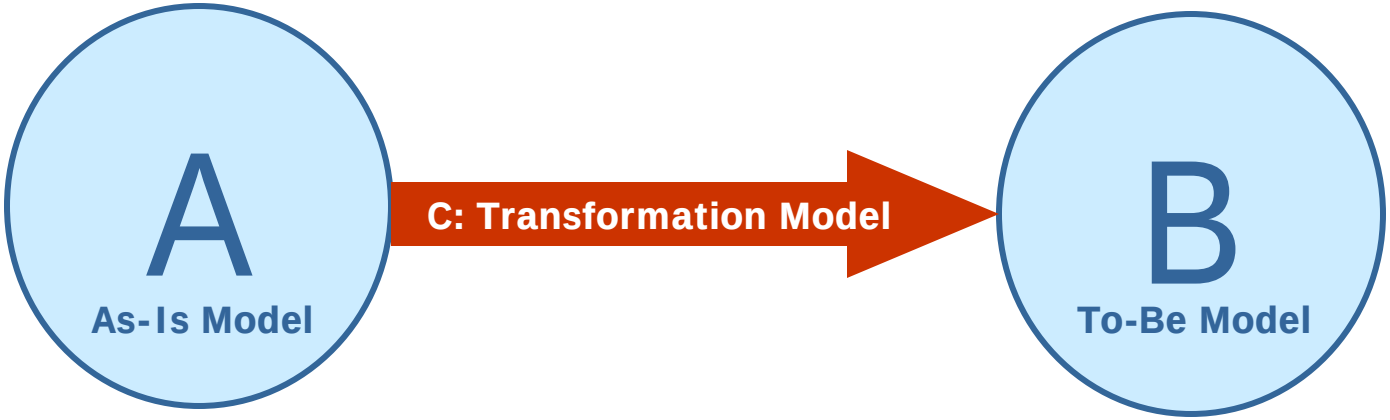
What organizations are involved in producing the outcome?

What technology is involved in producing the outcome?

What systems are related to the outcome?

Modeling A and B for CG Logistics

- This “performance modeling” approach is used to create as-is (**A**) and to-be (**B**) models of CG logistics



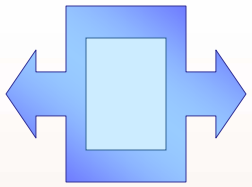
- *The next step is to develop the Logistics Transformation Model (**C**)*

Outcomes as Key Transformation Drivers

"To-Be" System Outcome

- In the Pathfinder transformation model, system outcomes are the **key transformation drivers**.
- *In other words, **if the "to-be" outcome can be achieved**, then the transformation to that part of the system is considered a **success***

Eliminating Outcome Performance Gaps

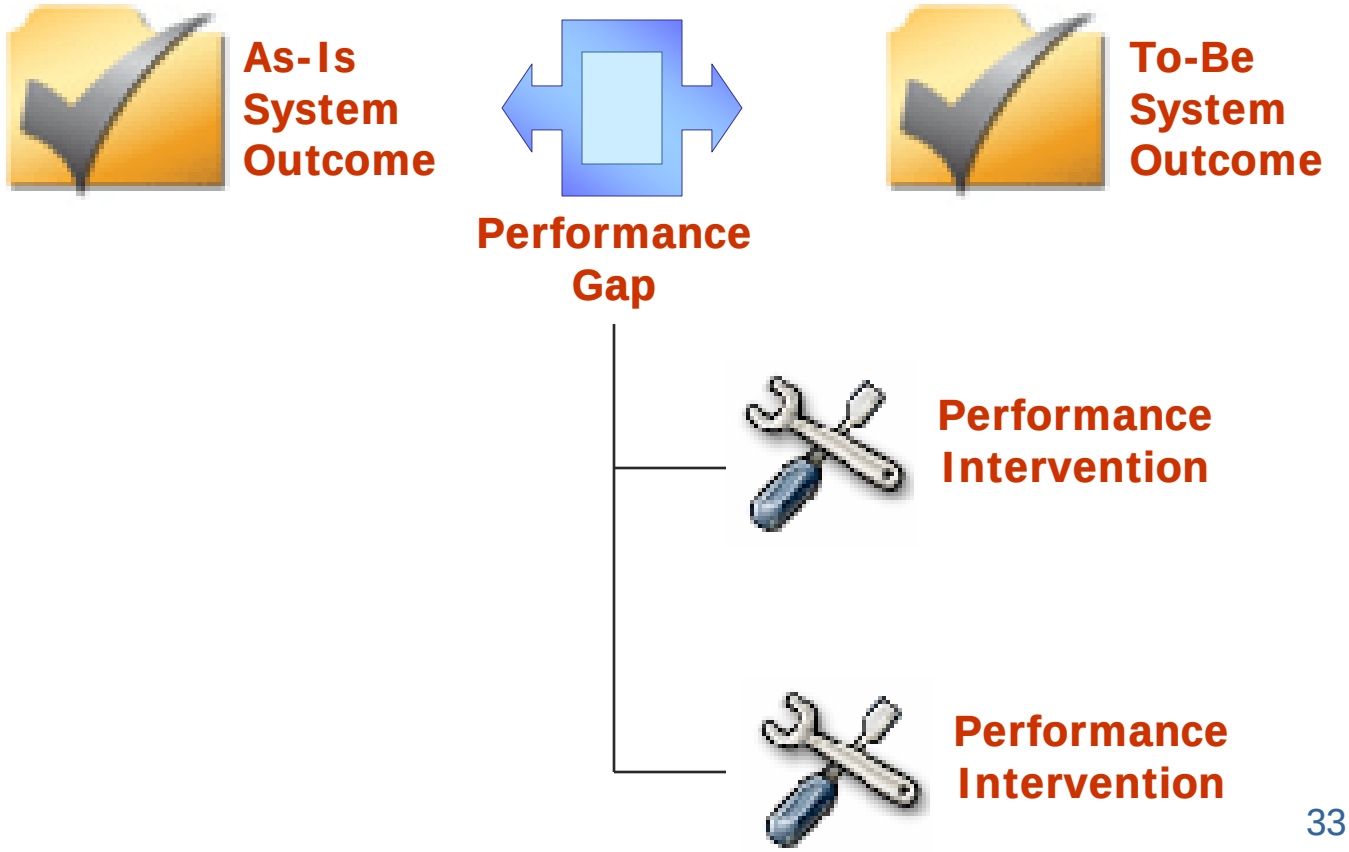


Performance Gap

- There are typically **gaps** between an **as-is** outcome and the **to-be** outcome
- These gaps are recognized in our model as a **performance gap** element
- Some gaps are simply differences in processes or personnel
- Other gaps may require technology, infrastructure, or organizational changes to eliminate
- These gaps must be eliminated by actions called **performance interventions**

Elements of the Transformation Framework

- Pathfinder includes **gaps** and **interventions** as discrete elements of the transformation model



Coast Guard Intervention Examples

- **Outcome: Approved Maintenance Procedure Card produced IAW COMDINST xxx.x**
  - **Gap: Maintenance Requirements List (MRL) not defined for surface assets**
    - Intervention: Perform MSG-3 logic analysis
    - Intervention: Enroll asset in ACMS
    - Intervention: Modify MPC process guide
    - Intervention: Identify and train MPC production staff

About Interventions

Performance Intervention

- Each intervention:
  - Is an actionable item
  - Has an accountable owner
  - Has schedule constraints
  - Has associated resources
  - Can be used to build a transition project plan
  - And most importantly, **has measurable success criteria**

Putting the elements together…

- **Strategies**
- **Systems**
- **Subsystems**
- **Outcomes**
- **Influencers** (policies, organizations, people, technology, etc.)
- **Gaps**
- **Interventions**
- *How does it all fit together?*

Transformation Model Framework

Strategic Framework

Systems Framework

Org Framework

Technology Framework

Vision/Mission

Strategic Goal

Statute

Policy

Best Practice

Documentation

System

Sub-System

Outcome

Requirement

Org Unit

Performer:

- Job Role
- Team
- Automated System

IT System

IT Feature

Facility/Equipment

Facility

Tool/Equipment

Transition Framework

Transformation Goal

Performance Gap

Transformation Objective

Intervention

Transition
Success Criteria

The USCG Transition Process

- LTPIO alignment conducted, **transformation objectives identified**
- Docs and resources reviewed
- SMEs identified
- **ILS systems outcome-based framework developed**
- Best practices identified by SMEs (42)
- Preliminary outcomes identified by SMEs (800)
- Org and strategic models defined
- **Key outcomes identified (250)**
- Framework relationships to key outcomes identified by SMEs (docs, job roles, policies, best practices, etc.)
- Skilled Performers (SPs) identified by USCG
- SP outcome review worksheets prepared
- SP outcomes reviews and validation conducted
- All data collected in Pathfinder Performance Modeler
- All data reviewed
- Analysis reports prepared
- PVs and PIs developed using facilitated meetings with LTPIO working groups
- Activity crosswalks prepared
- **Project plans and transition dashboards developed**
- **Transition training prepared and delivered**

Aviation Logistics Framework Scale

- 800 aviation logistics model outcomes were identified in all 10 ILS elements (and a cross-cutting set of subelements)
- 250 Key Outcomes (transformation drivers) identified
- Key Outcomes mapped to
  - 41 Systems
  - 698 Job roles, teams, or org units
  - 80 Documents (Policy/Directives/Statutes, etc)
  - 122 IT systems and features
  - 84 Strategic elements (goals and objectives)
  - Over 600 functional and business requirements
  - Over 7,000 performance factors and influencers
- Nearly 22,000 performance relationships

Model Configuration Management

Aviation Logistics WPM Configuration Management

WPM Web Based Interface

1 User Review

Using the WPM web page, users review jobs, orgs, processes, etc.

Feedback Form

2 Feedback

User notes change to process, org unit, job role, IT system, etc. via feedback form located on each page of LPMS.

LTPIO Feasibility Review

3 Review

LTPIO evaluates feasibility of proposed change. If feasible and substantive, forward to CG-22 process.

CG-22 Process

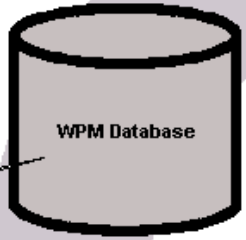
4 CCB

WPM change reviewed and approved via CCB and CG-22.

WPM Administrator

5 Change

The WPM administrator makes the CCB-approved change to the WPM.



WPM Database

6 Update

The WPM database is updated.

CONTINUOUS IMPROVEMENT

This is a high-level overview of the proposed Aviation Logistics WPM configuration management process which can be used both to validate and enhance WPM content and also to manage its configuration over time.

People are Key

- **Changing the behavior of your people is the most difficult task of all…**

- Culture and politics are the most difficult roadblocks to logistics transformation
- You've got to convince people at all levels to change the way they operate.

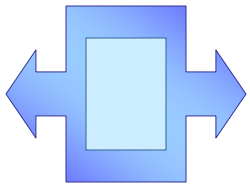
Promoting cultural and political change

- Each outcome identifies human factors influencers (technological, environmental, social, and process)
- Relationships in model indicate cultural and political power bases
- Model enables stakeholders to “see” vision
- The **Transformation Dashboard** is key to producing measurable changes in organization, infrastructure, processes, systems, and behavior.
- Manages and measures progress in **making the changes required to achieve “to-be” outcomes**

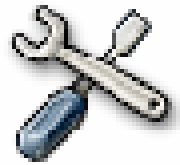
Transition Success Criteria

Each level includes a summary scorecard that shows transition progress.

To-Be System Outcome



Performance Gap



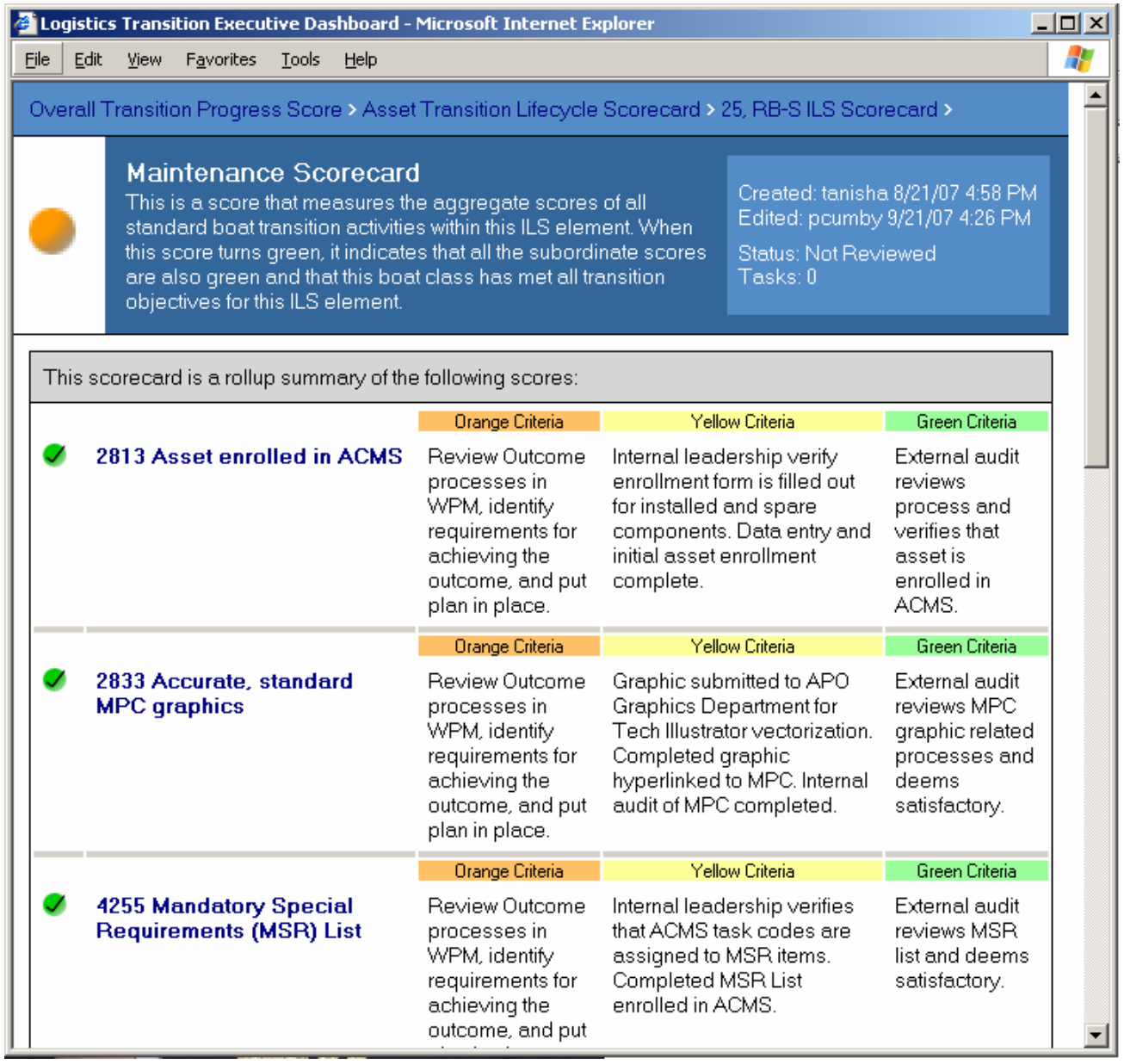
Performance Intervention

- External audit conducted - Final Operating Capability (FOC) achieved
- Internal audit conducted - Initial Operating Capability (IOC) achieved
- Process requirements identified and plan of action in place
- No Progress

Example Success Criteria

- **Outcome: Authorized Chemical List**
  - **Intervention: Chemical Locker Storage Established**
  - **Criteria:**
    - **Red:** No Progress
    - **Orange**: Location for chemical storage locker identified.
    - **Yellow**: Authorized Chemical List established and utilization instruction developed and signed by Sector Engineering Officer.
    - **Green:** Personnel trained in proper storage procedures and usage of the Chemical locker IAW Hazmat plan.
    - ***Owner, schedule criteria, compliance inspection process, etc. defined for intervention in model***

Sample USCG Scorecard



Summary

- Performance Model Framework identifies all elements of logistics system performance
- All relationships between systems elements are defined
- Performance outcomes are central to model
- Each outcome has transition plan that identifies gaps and interventions
- Each intervention has measurable success criteria
- Success criteria form the basis for the Transition Dashboard
- Transition Dashboard drives systems, organizational, technological, and behavioral change

Demos and Questions

- USCG Logistics Performance Management System (LPMS)
- Logistics Transition Dashboard
- Transformation support materials