Total Life Cycle Management Value Stream Deployment Project Overview

April 7, 2009

Mr. Gale E. Heaivilin

Headquarters U. S. Marine Corps
Marine Corps Business Enterprise Office
gale.e.heaivilin@usmc.mil
(703) 695-5768

Agenda

- **Background**
- **The Situation**
- **Project Initiation**
- **Value Stream Management**
- **Project Overview**
- **Key Findings and Outputs**
- **Way Ahead**

Background

Marine Corps leadership recognized a need to better manage the total life cycle of its weapon systems, ground equipment and materiel in order to strengthen the combat effectiveness of Marine Air Ground Task Forces.

The Situation: Problem Areas

- **Sustainment Planning**

- **Equipment Accountability**

- **Data and Information Systems**

- **Coordination, Collaboration and Oversight**

The Situation: Problem Types

- **Roles, responsibilities and relationships**

- **Information management**

- **Collaboration across organizations**

- **Internal management controls**

- **Performance standards and metrics**

- **Cross-boundary improvements**

- **End-to-end process management**

The Situation: Effects

- **Diminished equipment readiness**

- **Unnecessarily high TLCM cost**

- **Reduced ability to manage and operate equipment**

- **Sub-optimal use of facilities and distribution systems**

Bottom Line: Required a comprehensive, integrated solution

TLCM Project Initiation

- **Deputy Commandant for Installations and Logistics Priorities 2 and 3:**
  - **Total Life Cycle Management**
    - Increase equipment readiness through "cradle-to-grave" management of weapons systems

  - **Continuous Process Improvement**
    - Improve combat readiness through innovation

- **"…address in a comprehensive way the roles, responsibilities and policies for the TLCM Value Stream in order to optimize the effectiveness of the support it delivers to our Warfighters…"**

Ref: Deputy Commandant for Installations & Logistics Letter 4140 over LR of JAN 22 2008

USMC Value Stream Management

- **We are creating a system of Continuous Process Improvement -- People, processes and technologies that effectively manage production and initiatives aligned with strategic goals**
    - Improved measure-ability and visibility
    - Consistency
    - Collaborative, cross-functional ownership
    - Horizontal Value Stream Centric Strategy, Measurement and Management

- **We are not building:**
    - A Report
    - Operating Procedure Manuals
    - A Large List of Projects
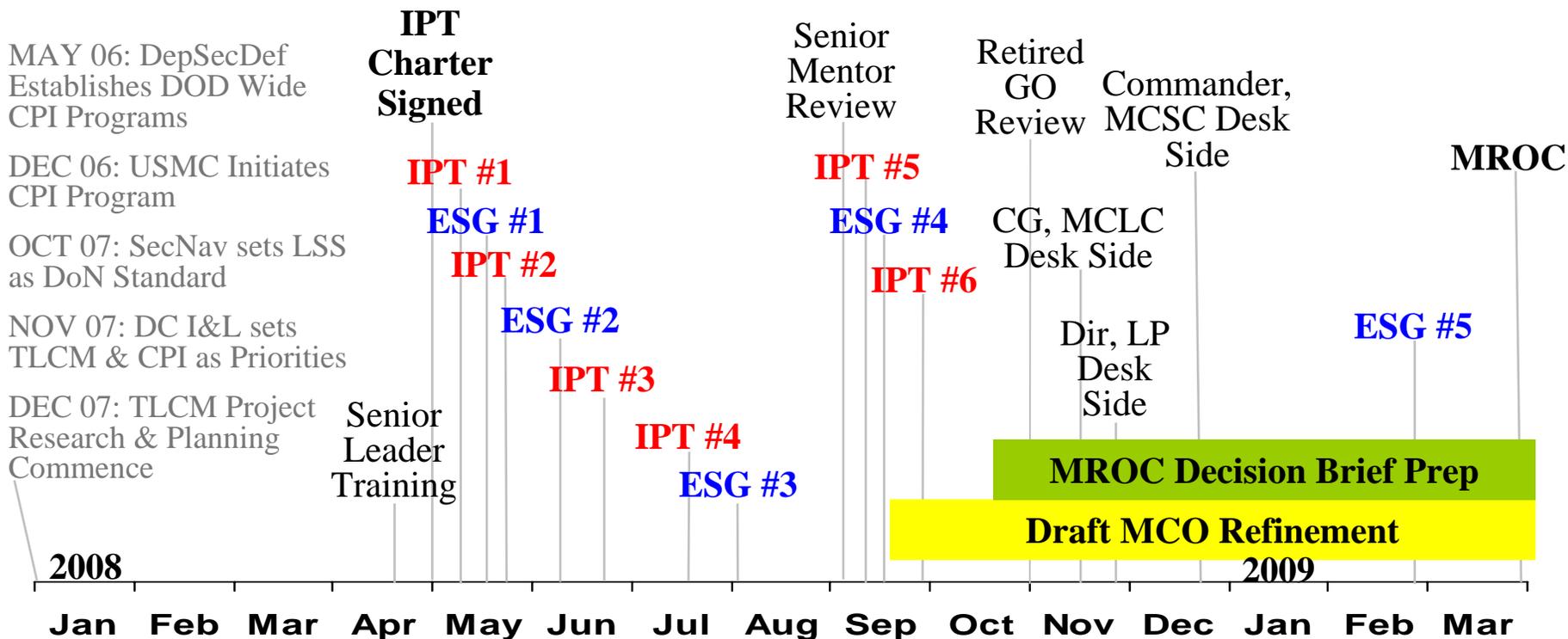   - A New Organizational Chart

Vision is cross-functional value stream members:
- Participating in strategic planning
- Reviewing output oriented performance data
- Closing and launching a stream of improvement initiatives within capacity
- Tracking improvements
- Measuring strategic progress

TLCM Project Overview
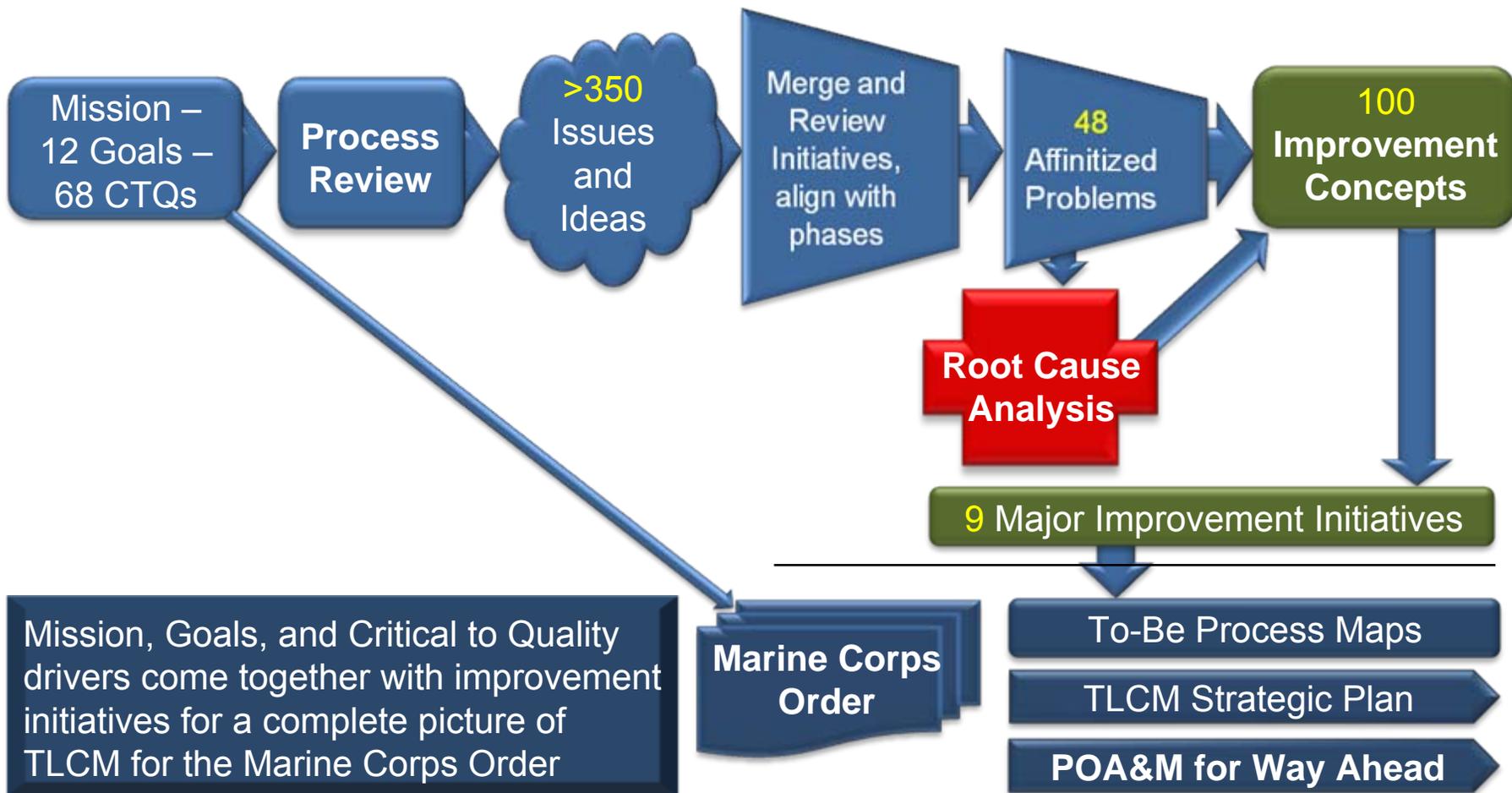
Marine Corps TLCM Project Timeline, Apr 08 – Mar 09

MAY 06: DepSecDef Establishes DOD Wide CPI Programs

DEC 06: USMC Initiates CPI Program

OCT 07: SecNav sets LSS as DoN Standard

NOV 07: DC I&L sets TLCM & CPI as Priorities

DEC 07: TLCM Project Research & Planning Commence

IPT Charter Signed

IPT #1

ESG #1

IPT #2

ESG #2

IPT #3

Senior Leader Training

IPT #4

ESG #3

Senior Mentor Review

IPT #5

ESG #4

IPT #6

Retired GO Review

CG, MCLC Desk Side

Commander, MCSC Desk Side

Dir, LP Desk Side

MROC

ESG #5

MROC Decision Brief Prep

Draft MCO Refinement

2008

2009

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |

Legend:

IPT – Integrated Product Team

ESG – Executive Steering Group

MROC – Marine Requirements Oversight Council

TLCM Project Overview

Work Sequence and Outputs

Mission – 12 Goals – 68 CTQs → **Process Review** → **>350** Issues and Ideas → Merge and Review Initiatives, align with phases → **48** Affinitized Problems → **100 Improvement Concepts**

Root Cause Analysis

9 Major Improvement Initiatives

Mission, Goals, and Critical to Quality drivers come together with improvement initiatives for a complete picture of TLCM for the Marine Corps Order

Marine Corps Order

To-Be Process Maps

TLCM Strategic Plan

POA&M for Way Ahead

TLCM Project Overview

TLCM Information Flow, May 2008

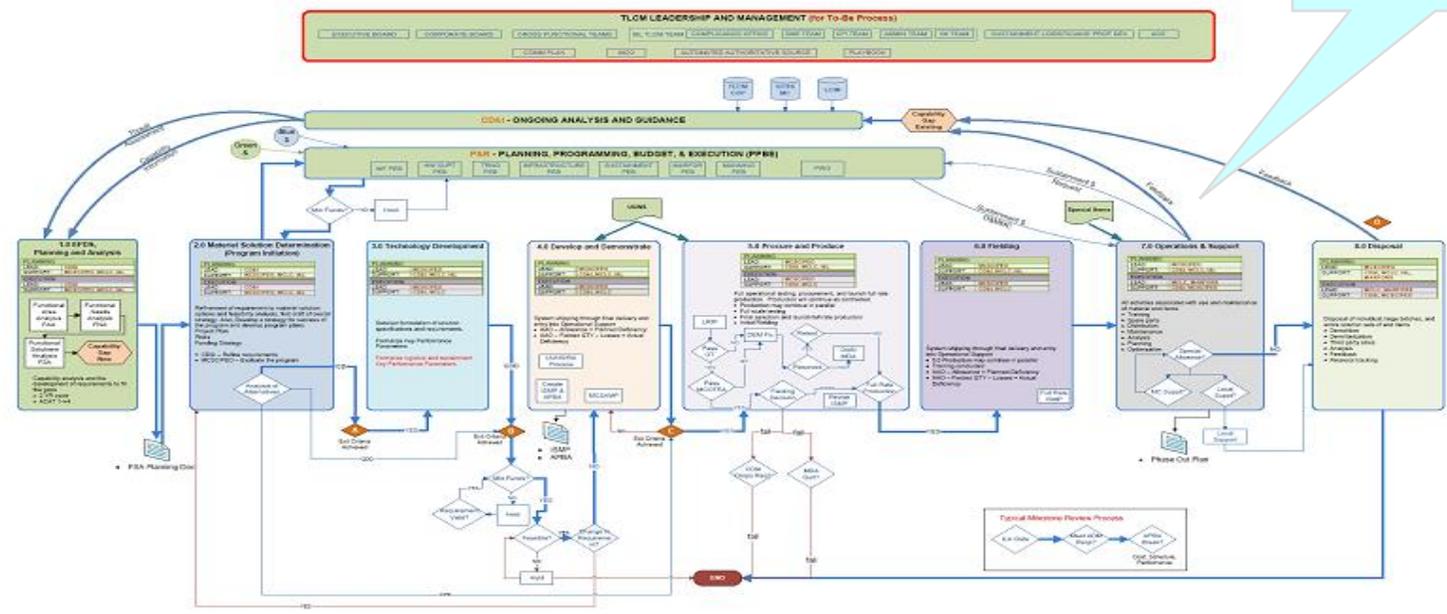Un-Coordinated Information Flow

TLCM Project Overview

To-Be Process Flow (Level 0 Map), September 2008

Planning and Analysis - Materiel Solution Determination - Technology Development - Develop and Demonstrate - Produce and Procure – Fielding - Operations and Support - Disposal

Eight Phases

Key Findings and Outputs

Major Improvement Initiatives

- **Communications**
- **Data and information**
- **Human resources**
- **Leadership and Governance**
- **Policy**
- **Process**
- **Technology**
- **Training and Education**
- **Quality Management**

Key Findings and Outputs

TLCM Project Key Deliverables

CPI PERFORMANCE EXCELLENCE

Total Life Cycle Management Charter

Final – Signed

Date Initiated: 2 May 08
Revision Date:

– Internal Management Controls are absent or do not effectively support TLCM phases
– Full cost, standard processes, standard outputs, and performance metrics are lacking

Thus, the Marine Corps is less capable to deliver and measure combat readiness performance at all levels of the enterprise.

Goal Statement

The Marine Corps requires an over arching governance policy document that clearly defines stakeholder roles, responsibilities, organization, processes and technology. Goals of this project are:
- Define and validate stakeholder roles, responsibilities, and tasks for USMC total life cycle management process
- Craft a governance document (Marine Corps Order) that publishes TLCM policy that supports the EFDS and PPBES process
- Identify follow-on CPI opportunities that support future projects, spin-offs and process improvement initiatives

Define and validate Stakeholder roles, responsibilities, and tasks for the USMC Total Life Cycle Management process	**Complete**
Craft a governance document (Marine Corps Order) to promulgate TLCM policy that supports the Capabilities Development and Resource Allocation processes	**Complete**
Identify follow-on CPI opportunities that support future projects, spin-offs and process improvement initiatives	**Complete**

Key Findings and Outputs

Proposed Solutions

Sustainment Planning:
- √ **Plan sustainment during requirements generation and acquisition strategy**

Equipment Accountability:
- √ **Integrate reporting systems**

Data and Information Systems:
- √ **Improve data for decision making**

Coordination, Collaboration and Oversight:
- √ **Create metrics and a comprehensive reporting system**
- √ **Integrate oversight efforts**

Way Ahead

- **Align TLCM roles, responsibilities and authorities**
  - **Designate a TLCM Governance Leader**
  - **Approve TLCM Leader Authorities**
    - **Policy and planning**
    - **Information and data management**
    - **Integrated cross-functional governance**
    - **TLCM Training**
- **Review all TLCM and CPI Policies**
- **Review TLCM Training**
- **Build a TLCM Oversight Process**
- **Assess and Improve Information Management systems**
- **Improve Sustainment Planning**
- **Continue Making Process Improvements**

QUESTIONS?

Total Life Cycle Management
Mr. Gale E. Heaivilin

Headquarters U. S. Marine Corps, Marine Corps Business Enterprise Office
gale.e.heaivilin@usmc.mil   (703) 695-5768

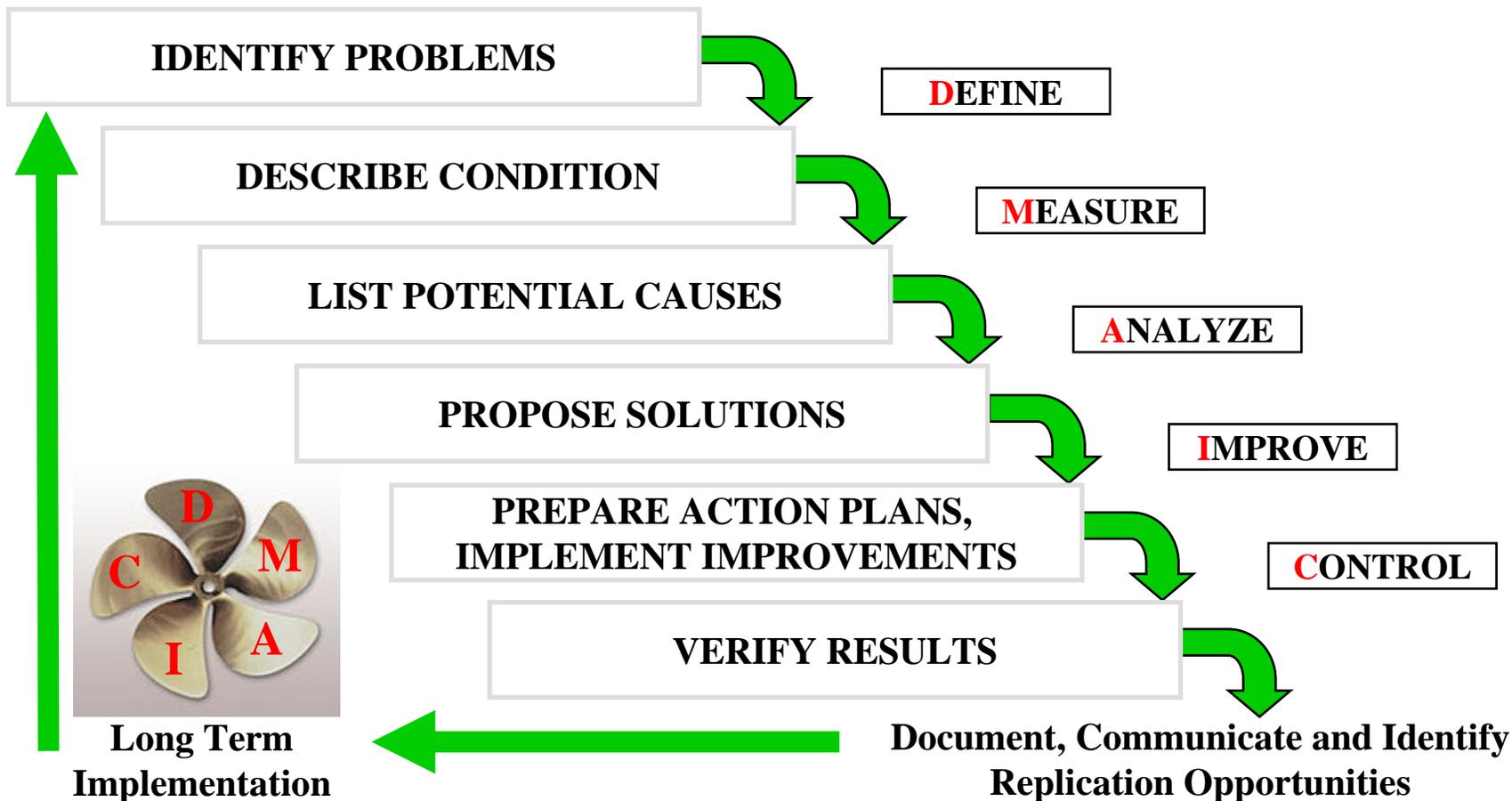## Continuous Process Improvement
Mr. Joel P. Eissinger

Headquarters U. S. Marine Corps, Marine Corps Business Enterprise Office
joel.eissinger@usmc.mil   (703) 614-4760

USMC Improvement Methodology

U. S. Marine Corps Standard Continuous Process Improvement (CPI) Methodology: DMAIC

IDENTIFY PROBLEMS

DEFINE

DESCRIBE CONDITION

MEASURE

LIST POTENTIAL CAUSES

ANALYZE

PROPOSE SOLUTIONS

IMPROVE

PREPARE ACTION PLANS, IMPLEMENT IMPROVEMENTS

CONTROL

VERIFY RESULTS

Document, Communicate and Identify Replication Opportunities

Long Term Implementation

Ref: U. S. Marine Corps Continuous Process Improvement Guidebook, March 1, 2009

DMAIC Methodology Explained

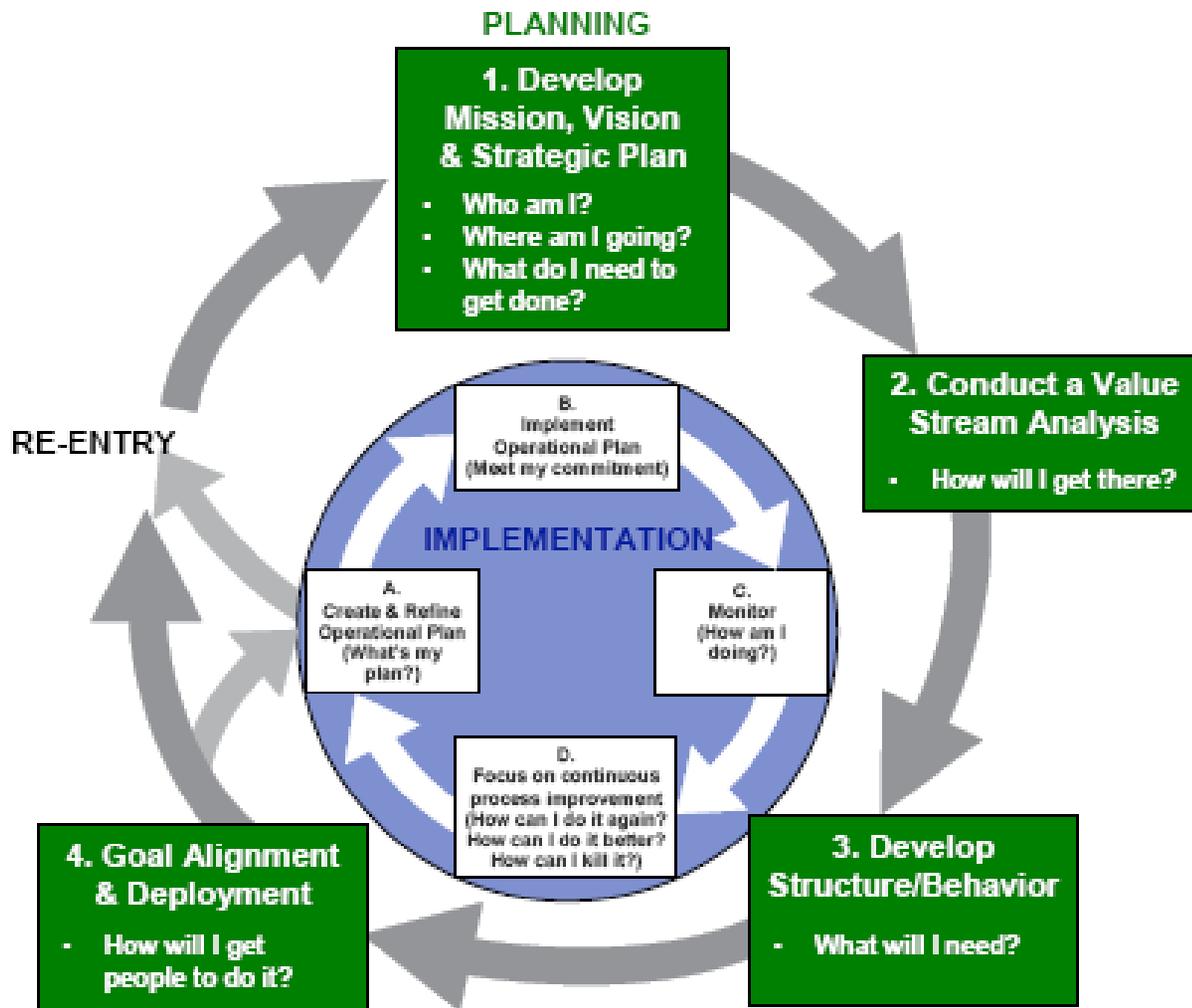|		
Define	What exactly is (and what is not) the problem to be addressed by this project	Define prevents teams from jumping straight into solution mode
Measure	What is the true current process performance	Data is used as a benchmark for before-after comparison so benefit can be proved at end of project
Analyze	Find the root cause of the problem using process analysis and data analysis techniques	Prevents "band-aid" solutions, which never really work
Improve	Develop, validate and risk-proof a focused, innovative solution	Solution directed at proven root causes will almost always be successful
Control	Make sure the solution sticks and quantify the benefits	Solution does not "fall over" when project ends but becomes the new standard way of operating the process

Ref: www.sixsigmascotland.co.uk

DOD CPI Deployment Cycle

PLANNING

1. Develop Mission, Vision & Strategic Plan
- Who am I?
- Where am I going?
- What do I need to get done?

RE-ENTRY

B. Implement Operational Plan (Meet my commitment)

IMPLEMENTATION

A. Create & Refine Operational Plan (What's my plan?)

C. Monitor (How am I doing?)

D. Focus on continuous process improvement (How can I do it again? How can I do it better? How can I kill it?)

2. Conduct a Value Stream Analysis
- How will I get there?

3. Develop Structure/Behavior
- What will I need?

4. Goal Alignment & Deployment
- How will I get people to do it?

Ref: DOD Continuous Process Improvement Transformation Guidebook, May 2006

CPI "Musts"

1. An established infrastructure to support CPI implementation — Champion, Steering Committee, Support Team, Work Groups and Peer Groups

2. Outcome-focused goals, strategically aligned and mission related, that add customer value

3. Thorough problem Definition, Measurement, Analysis, Improvement and Control (DMAIC) within a logical methodical plan of action

4. Strong, continuously visible leadership commitment from the top that stresses and supports a culture of innovation and teamwork

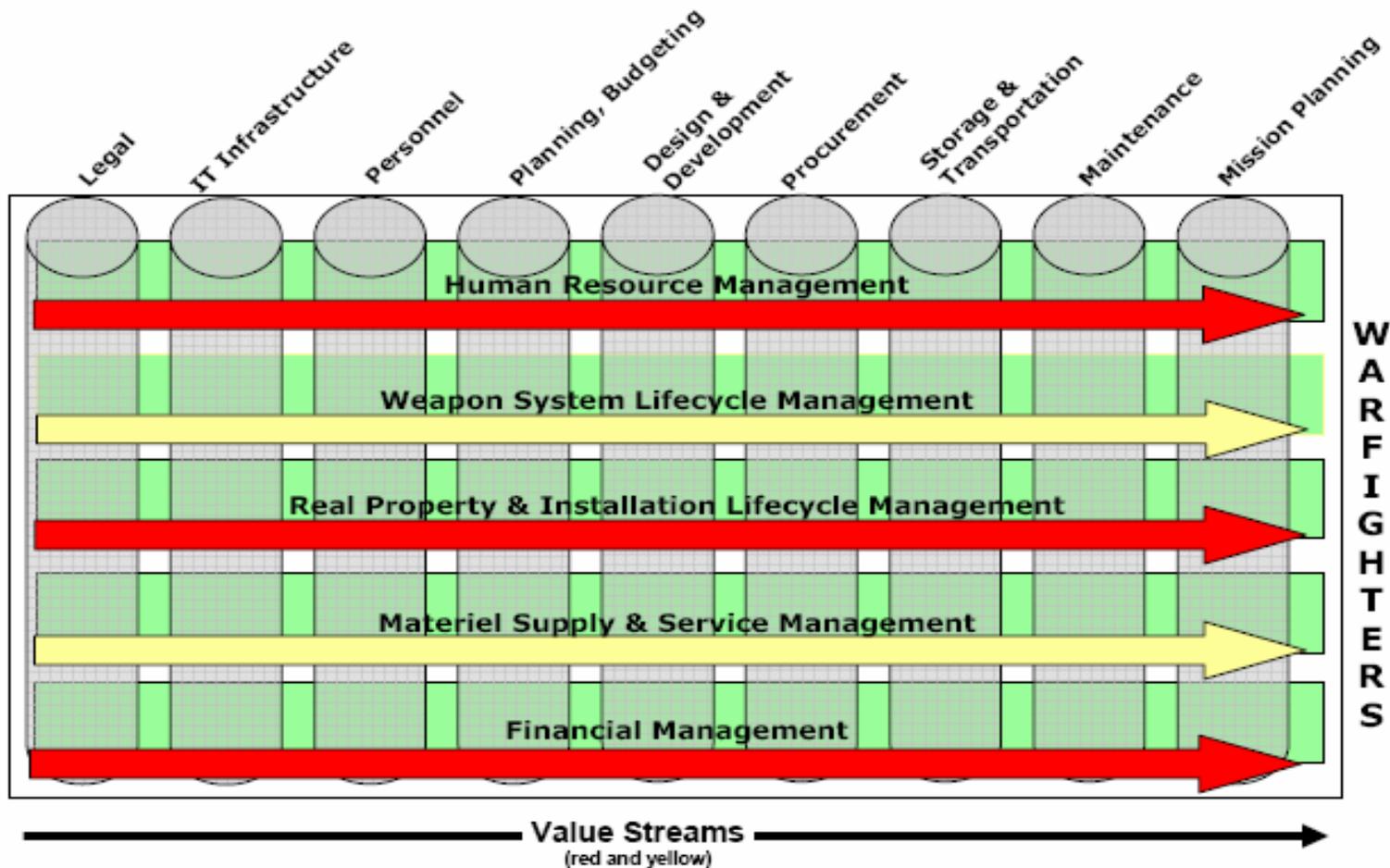Ref: DOD Continuous Process Improvement Transformation Guidebook, May 2006

CPI Principles

1. Determine current situation using objective (fact-based) data analysis

2. Analyze problems as a variation from a known or expected standard

3. Set a goal to holistically improve the entire system and avoid sub-optimization through isolated focus on process sub-elements

4. Focus on the people, machines, and systems that add value

5. Improve processes through continuous controlled experimentation

6. Make decisions based on long-term improvement

7. Employ partnering with suppliers, customers, and other stakeholders

Ref: DOD Continuous Process Improvement Transformation Guidebook, May 2006

Value Streams and the DOD Enterprise

Ref: DOD Continuous Process Improvement Transformation Guidebook, May 2006

Marine Corps Value Streams

U. S. Marine Corps High Impact Core Value Streams

HIGH IMPACT CORE VALUE STREAM	HICVS LEADER
CAPABILITY DEVELOPMENT	DC, CD&I
TOTAL LIFE CYCLE MANAGEMENT	DC, I&L
ACQUISITION	CG, MCSC
AVIATION MATERIEL LIFE CYCLE	
MANAGEMENT	DC, AVN
HUMAN RESOURCE DEVELOPMENT	DC, M&RA
RESOURCE ALLOCATION	DC, P&R
INSTALLATION MANAGEMENT	DC, I&L
INFORMATION TECHNOLGY	DIR, C4/CIO
SERVICE ADVOCACY	DC, PP&O

Ref: U. S. Marine Corps Continuous Process Improvement Guidebook, March 1, 2009

Value Streams and the DOD Enterprise

USMC Business Enterprise Architecture ◆ **DoD Business Enterprise Architecture**

U. S. Marine Corps High Impact Core Value Streams

HIGH IMPACT CORE VALUE STREAM	HICVS LEADER
CAPABILITY DEVELOPMENT	DC, CD&I
TOTAL LIFE CYCLE MANAGEMENT	DC, I&L
ACQUISITION	CG, MCSC
AVIATION MATERIEL LIFE CYCLE MANAGEMENT	DC, AVN
HUMAN RESOURCE DEVELOPMENT	DC, M&RA
RESOURCE ALLOCATION	DC, P&R
INSTALLATION MANAGEMENT	DC, I&L
INFORMATION TECHNOLGY	DIR, C4/CIO
SERVICE ADVOCACY	DC, PP&O

Legal · IT Infrastructure · Personnel · Planning, Budgeting · Design & Development · Procurement · Storage & Transportation · Maintenance · Mission Planning

Human Resource Management
Weapon System Lifecycle Management
Real Property & Installation Lifecycle Management
Materiel Supply & Service Management
Financial Management

WARFIGHTERS

Value Streams (red and yellow)