

CMMI Implementation Strategies for Success

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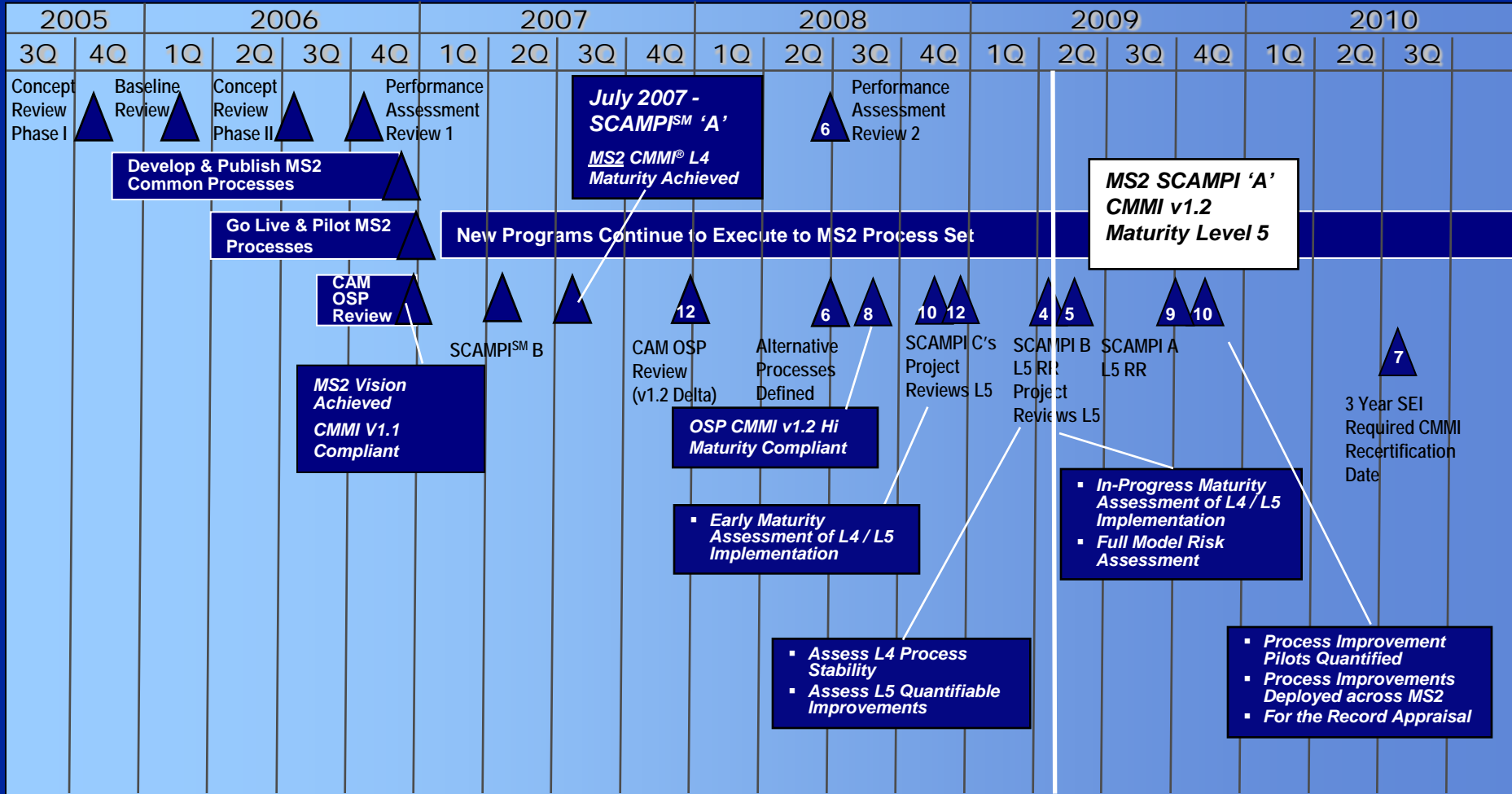


MS2 Locations

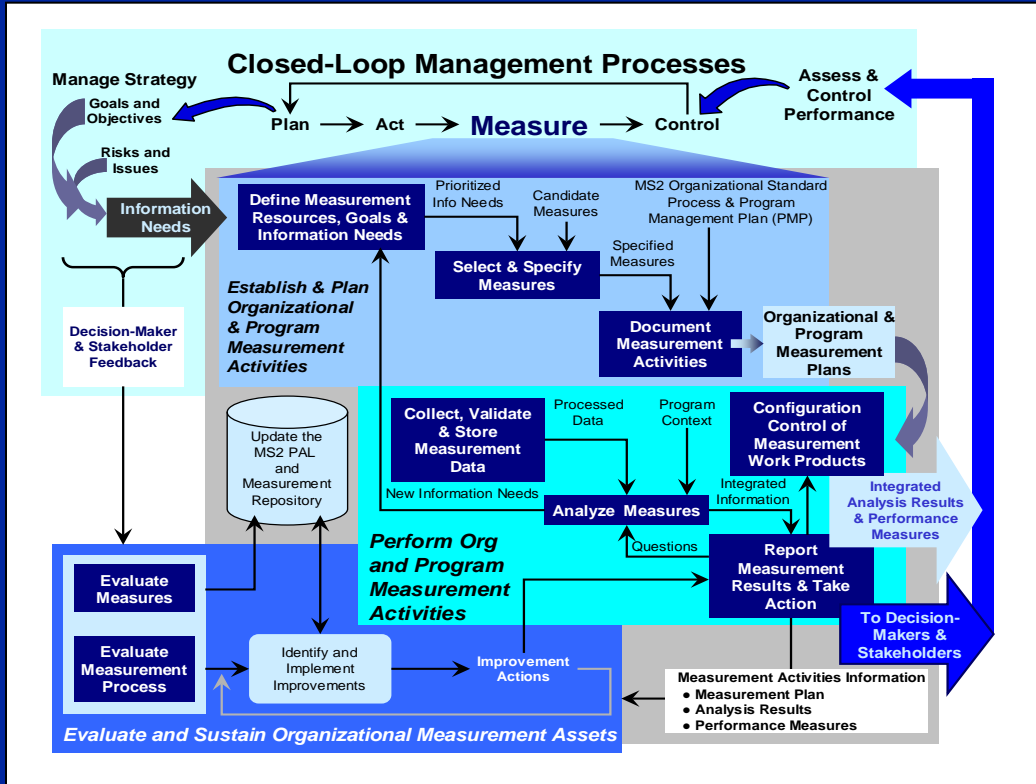


Geographically Dispersed - 13,000 Employees in 6 Primary Locations

MS2 Path to CMMI Level 5



MS2 Measurement Program Core Components



MEASUREMENT DATA DICTIONARY

Double-click the icon below to access the Program Measurement Data Dictionary (PMDD):

PMDD

Double-click the icon below to access the Organizational Measurement Data Dictionary (OMDD):

OMDD



Plans

Tier 2: MS2 COMMON PROCESS			
Title	Program Measurement Process	Identifier	PLM.PM.001
Owner	Executive VP	Revision	002
Created		Effective Date	11/03/2008
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PURPOSE:			
The purpose of the Organizational Measurement process is to provide decision makers with information to make critical decisions, adding their in the ability to meet business and functional objectives. The process documents requirements for establishing and planning the organizational measurement activities, performing organizational measurement activities, and evaluating and sustaining organizational measurement assets.			

Defined Process



Common Measures



Training



Tools & Infrastructure



Business & Program Decision Making

Goal Flowdown Drives Information Needs Across the Enterprise



Business Process Management					
Measure	YTD Plan	YTD Plan	Apr 2019	Sep 2018	Oct 2018
Organizational Process Measures					
Business Process Management Actual Spend vs Plan	\$9,904	\$889.2K	\$2,034	\$884	\$892.2K
ROI Score	\$9.124	\$1,004	\$1,022M	\$3,214	\$4,074
Program Process Adoption percent	100%	100%	96%	96%	97%
Num of S&R Docs to be Revised	200 docs	140 docs	184 docs	189 docs	383 docs
MS2 Process Adoption Legacy Programs remaining to transition	27	35	37	38	34
Program Tailoring Cycle Time (Full Tailoring)	60 days	80 days	143 days	87 days	87 days
Program Tailoring Cycle Time (Using Pre-Defined PDFs)	7 days	7 days	1 days	5 days	1 days
Percent of Pre-defined PDF and Product Line to Total PDFs	40%	49%	79%	81%	87%
Percent PDF releases on schedule	100%	100%	74%	75%	80%
Organizational Num QA Audits Planned vs Held	313	230	7	207	230
Avg days from Receipt to 1st COB Review	25 days	25 days	12.4 days	10 days	9 days
Avg days from Approval to PAL Release	5 days	5 days	4.3 days	4.4 days	5.3 days
City MS2 ODPs completing 3-year review in 2019	229	190	174	187	190
Customer Satisfaction with Measurement Team	80%	79%	79%	79%	79%

Lockheed Martin MS2 Program Measurement Plan

Defect Discovery PDD Row: 152

Table 7. Quality and Process Performance Objectives (Q&PPOs)

Imperative: MS2 Goals & Objectives	Input Source (Table 6)	Quality and Process Performance Objectives (Q&PPOs)	Measure	Goal Value	Process Performance Model (PPM)
MS2 Strategic, Protect and Generate Core	7	Perform within budget	CPI - Red Threshold CPI - Yellow Threshold	0.90 - 1.10 0.95 - 1.05	N/A N/A
	7	Perform within schedule	SPI - Red Threshold SPI - Yellow Threshold	0.90 - 1.10 0.95 - 1.05	N/A N/A
	1	Produce quality products	Latent Defect Density (Software Quality)	< 2.1 Major SW Defects KISS	Latent Defect Prediction Model & Alternate Peer Review Model
	7	Meet key milestones	Milestone Compliance	≥ 95%	N/A
	7	Fulfill program within cost	Variance (Cost)	± 0	Probabilistic Estimation Models [COSIMO & COSYSMOR]

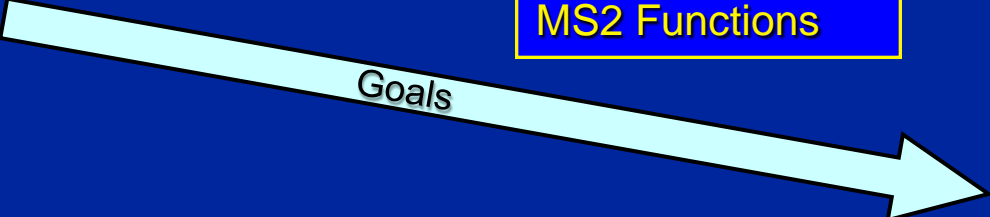


MS2 ELT

MS2 LoBs

MS2 Functions

Project 1
Project 2
.
.
Project N



Discrete Goals Allocated to Lines of Business (LoBs), Functions & Programs

Lockheed Martin MS2 Program Measurement Plan Template

PROGRAM MEASUREMENT PLAN TEMPLATE

Table 8. Program Quantitative Goals

MS2 Goal	Program Goal	Measure	Goal Value	Product's MS2-M6
Minor Crosscut to Customer and Operator	Perform within budget	CPI	0.90 - 1.10	3/A
	Perform within schedule	SPI	0.95 - 1.05	3/A
	Produce quality products	Latent Defect Density	< 2.1 Major SW Defects KISS	3/A
Meet Key Milestones	Milestone Compliance		≥ 95%	3/A
	Fulfill program within cost	Variance (Cost)	± 0	3/A
Customer Satisfaction	Customer Satisfaction		79%	3/A
	Customer Satisfaction		79%	3/A
Customer Satisfaction	Customer Satisfaction		79%	3/A
	Customer Satisfaction		79%	3/A
Customer Satisfaction	Customer Satisfaction		79%	3/A
	Customer Satisfaction		79%	3/A
Customer Satisfaction	Customer Satisfaction		79%	3/A
	Customer Satisfaction		79%	3/A

Final Thoughts...



- **Once you make the Decision to Pursue an Appraisal – Run it Like a Program**
- **Centralize Activities that Need to be Common**
 - **Measurement Infrastructure Supports both the Organization and Programs**
 - **Robust Organizational Measurement Repository**
 - **Establish set of PPBs and PPMs to meet Business Needs**
 - **PPMs satisfy intent of “Healthy Characteristics”**
 - **Continue to refine / evolve PPBs**
- **Leverage existing efforts as much as possible:**
 - **Programs leverage Black Belts for statistical thinking**
 - **Existing Operating Excellence efforts synergistic w/ Level 5**