



CMMI[®]
Institute

CAPABILITY COUNTS 2016

Annapolis, MD | May 10th - 11th

Top 10 Discoveries

From a team of industry experts who didn't set out to be lead appraisers...

Becky Fitzgerald

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President



Organization Overview

Two Harbors Consulting LLC established 4/14/2016

- Becky Fitzgerald
- Tom Klein
- Jim Shaver
- George Zack

Working with a healthcare services and information technology company:

- Revenues of \$190.9 billion for the full year (11th, Fortune 500)
- #1 Medical Necessity Utilization Management
- #1 Capacity and Workforce Analytics
- #1 Provider Revenue Cycle
- #1 Pharmacy Network
- #2 US PACS
- #2 Physician Services



Business Challenge

Fortune 500 company with growth through acquisition. Newly purchased companies typically start-ups or large strategic purchases, and each brings its own set of processes, culture, staff, and geographic locations.

The challenges?

- Improve predictability, quality, and gain efficiencies without imposing common processes across disparate entities.
- Build a culture of quality that extends across the organization while retaining the unique and successful properties of each business unit.

The Plan

1. Announce company-wide mission for improved quality
2. Select guru, and support infant program definition
 - Pick diverse R&D experts with CMMI exposure
 - Identify most accessible engagement model
 - Connect with early “burning platform” organizations
 - Publicize successes
 - Gain additional sponsorship (“mandate”)
 - Leverage relationships to share successes, intentionally extend beyond mandate
 - Build evidenced financial and political benefit

Engage, Learn, Evolve, Repeat

The Results

A high-performing corporate team, each plucked from different areas of the company.

A highly efficient collection of Lead Appraisers who developed a team approach with minimal entry hurdle for business units.

A successful program achieving business performance, credibility, and demand for services from the business units.



1

Goal Setting? You bet your measurable objectives!

Goal Setting?



Low capability organization?

Frazzled, distracted sponsor

Goal Setting?

From this:

3.1 Business Objectives

1. Faster delivery of business value
2. Higher quality
3. Higher productivity
4. Improvement in integrated project performance

Goal Setting?

To this:

Business Objectives^{1 of 2} – How Do We Measure Success?

1. Establish a Measurement System

- Represented by having a measurement system which includes ties to business objectives and contributes to system quality

2. Improve Implementations

Improve Quality:

- Accurately track and reduce total post production support defect numbers per release

Improve Cost: (April/May Baseline: 8)

- As measured by actual hours being less than or equal to the budgeted hours for billable projects

Improve On-Time Delivery:

- As measured by data being captured and an improvement in percentage of target completion dates met

3. Improve Employee Engagement

- As measured by employee survey

2

Abdicating Responsibility: Outsourcing accountability
just doesn't work

Accountability

Lead Appraiser:

“Why are we talking today, what are you hoping to gain...your objectives?”

Sponsor:

“I’ve hired a consultant to get me to CMMI ML2 by September, I want you to schedule our baseline...”



3

Waterfall to Agile ML5 Medical Device

Agile High Maturity



2009 – Failed Class A

2011 – Team
engagement and
Baseline

2011 – Benchmark
ML3; Waterfall

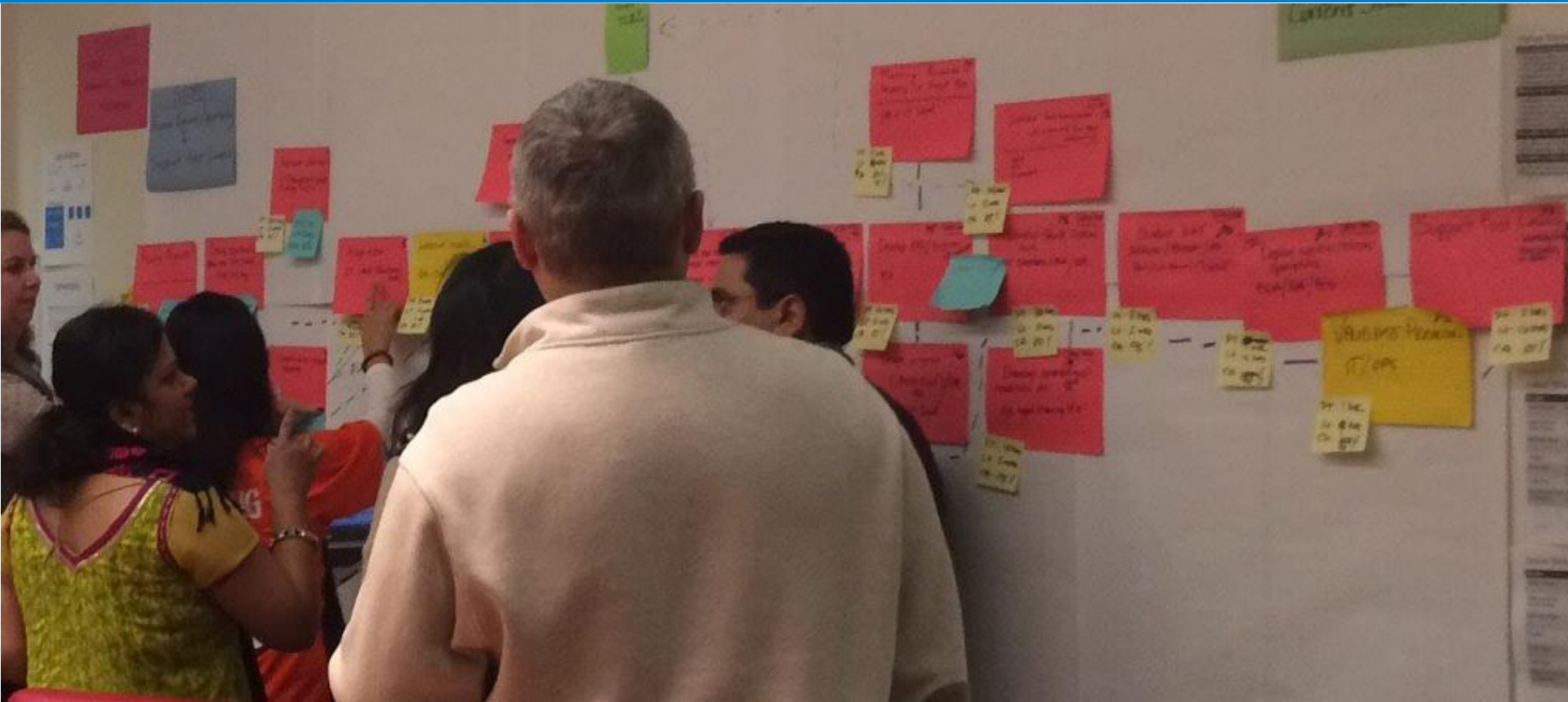
2013 – ML4, 5 Gap
analysis

2014 – Baseline;
Benchmark ML5; Agile
Scrum

4

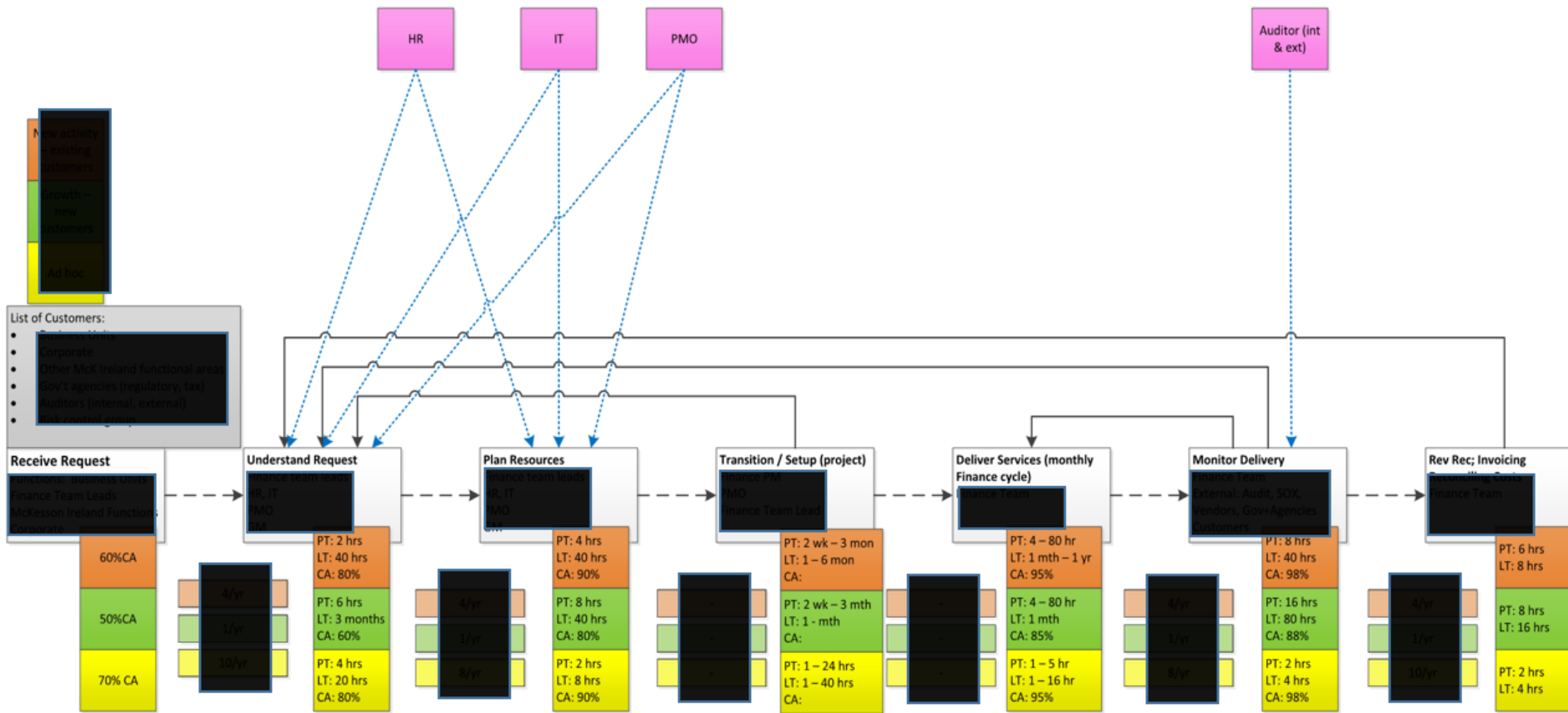
Using Value Stream Mapping (VSM) to kick-start integration and quality transformation

Leverage VSM



Build common understanding of current state

Leverage VSM

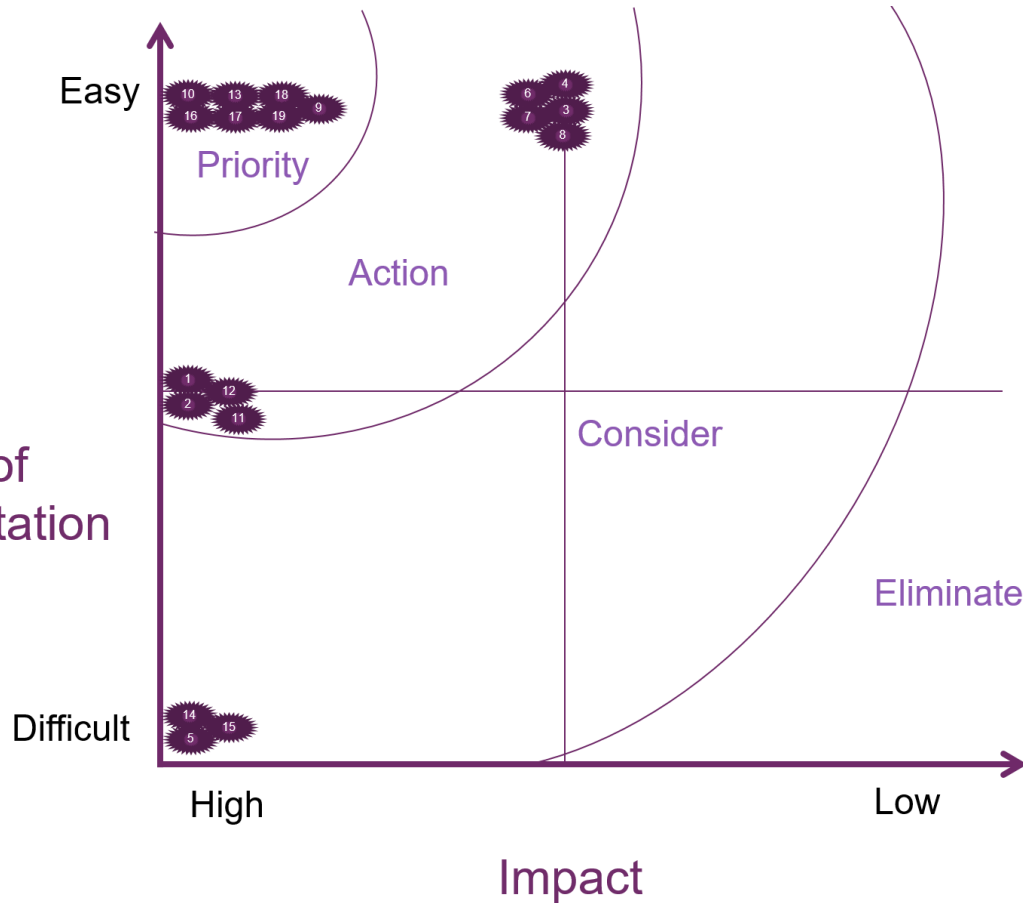


Use metrics to identify areas of opportunity

Leverage VSM

Apply PACE:

- Priority
- Action
- Consider
- Eliminate



Analyze ideas

5

Performing work management activities:
True stories of self-destruction and redemption
(with signals of each)

Two Groups – Different Outcomes

2010: Initial Baselines

Group 1:

Maturity Level 2

	SP1.1	SP1.2	SP1.3	SP1.4	SP1.5	SP1.6	SP1.7	SP2.1	SP2.2	SP2.3	SP2.4	SP2.5	SP2.6	SP2.7	SP3.1	SP3.2	SP3.3	GP2.1	GP2.2	GP2.3	GP2.4	GP2.5	GP2.6	GP2.7	GP2.8	GP2.9	GP2.10	GP3.1	GP3.2	Practices	Score			
REQM																														17	23.5%			
PP																															26	36.5%		
PMC																															22	36.4%		
SAM																															20	60.0%		
MA																															20	50.0%		
PPQA																															16	12.5%		
CM																															19	55.3%		
																															140	40.0%		
																																	Overall	

Group 2:

29% Requirements Management

- SP1.1** Obtain an Understanding of Requirements
- SP1.2** Obtain Commitment to Requirements
- SP1.3** Manage Requirements Changes
- SP1.4** Maintain Bi-directional Traceability of Requirements
- SP1.5** Identify Inconsistencies between Project Work and Requirements
- GP2.1** Establish an Organizational Policy
- GP2.2** Plan the Process
- GP2.3** Provide Resources
- GP2.4** Assign Responsibility
- GP2.5** Train People
- GP2.6** Manage Configurations
- GP2.7** Identify and Involve Relevant Stakeholders
- GP2.8** Monitor and Control the Process
- GP2.9** Objectively Evaluate Adherence
- GP2.10** Review Status with Higher Level Management
- GP3.1** Establish a Defined Process
- GP3.2** Collect Improvement Information

37% Configuration Management

- SP1.1** Identify Configuration Items
- SP1.2** Establish a Configuration Management System
- SP1.3** Create or Release Baselines
- SP2.1** Track Change Requests
- SP2.2** Control Configuration Items
- SP3.1** Establish Configuration Management Records
- SP3.2** Perform Configuration Audits
- GP2.1** Establish an Organizational Policy
- GP2.2** Plan the Process
- GP2.3** Provide Resources
- GP2.4** Assign Responsibility
- GP2.5** Train People
- GP2.6** Manage Configurations
- GP2.7** Identify and Involve Relevant Stakeholders
- GP2.8** Monitor and Control the Process
- GP2.9** Objectively Evaluate Adherence
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Performing work management activities: True stories of self-destruction and redemption (with signals of each)

Group 1 – too busy to improve, growth their focus

2013: Group 1 repeat baseline

2015: Group 1 repeat baseline

Group 2 – desire culture of quality, preparation for growth

2011: Group 2 ML2

2013: Group 2 ML3

2016: Group 2 ML5



6

They like me, they really like me! Samples of employee engagement through CMMI

Increase Employee Engagement

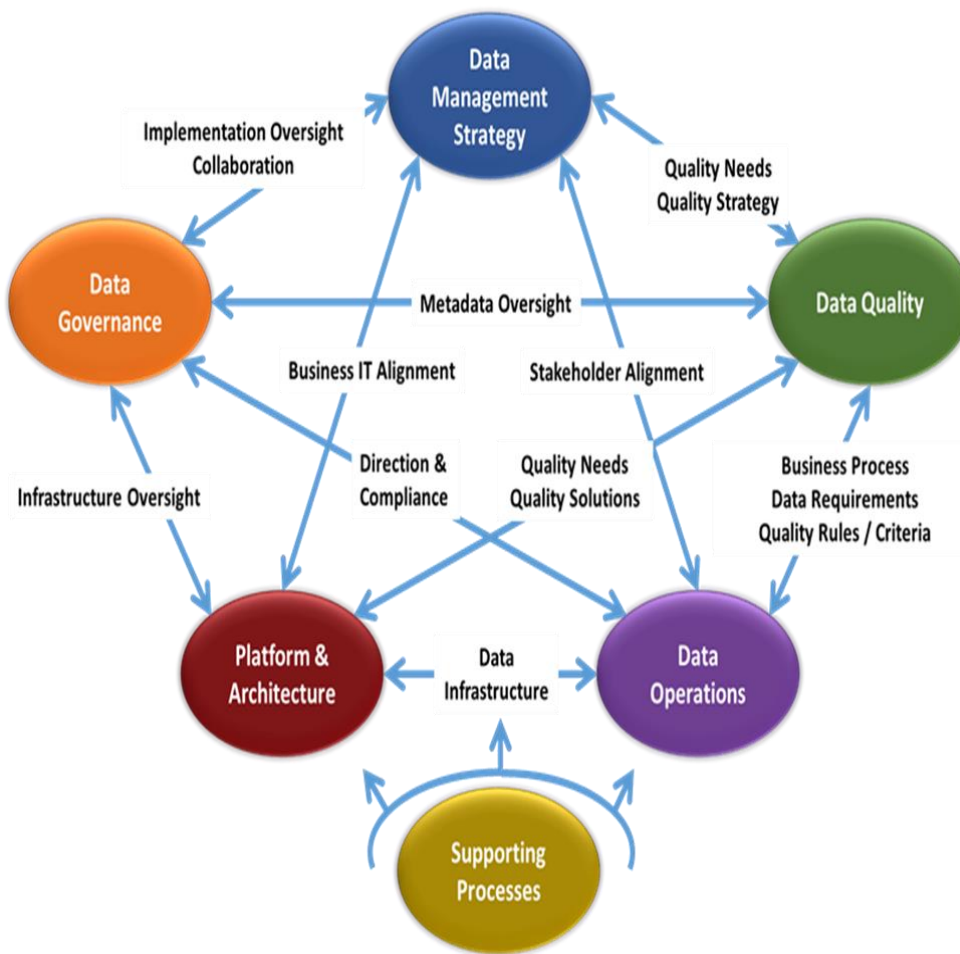


You like me, you really like me!

7

Data – it's what's for dinner: Early wins with DMM introduction

Concepts Made Consumable



Data Management Strategy

- ◆ Data Management Strategy
- ◆ Communications
- ◆ Data Management Function
- ◆ Business Case
- ◆ Funding

Data Governance

- ◆ Governance Management
- ◆ Business Glossary
- ◆ Metadata Management

Data Quality

- ◆ Data Quality Strategy
- ◆ Data Profiling
- ◆ Data Quality Assessment
- ◆ Data Cleansing

Data Operations

- ◆ Data Requirements Definition
- ◆ Data Lifecycle Management
- ◆ Provider Management

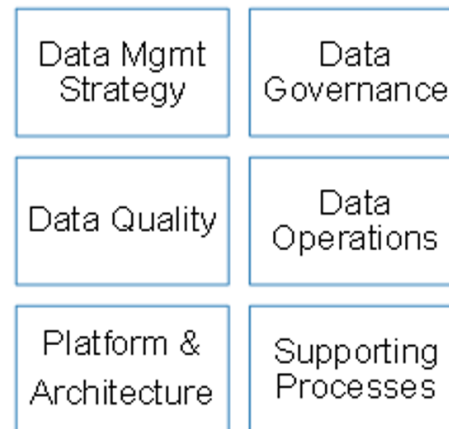
Platform & Architecture

- ◆ Architectural Approach
- ◆ Architectural Standards
- ◆ Data Management Platform
- ◆ Data Integration
- ◆ Historical Data, Archiving and Retention

Supporting Processes

- ◆ Measurement and Analysis
- ◆ Process Management
- ◆ Process Quality Assurance
- ◆ Risk Management
- ◆ Configuration Management

DMMI Key Areas



8

Linking Six Sigma: Clarifying the “what” and the “how”

“We already have Six Sigma”



CMMI (what)



Six Sigma (how)

9

CMMI in healthcare? Only if quality in a healthcare system is important

Healthcare CMMI Synergy

Operating with regulatory compliance (e.g. FDA, CE, etc.)

Before CMMI:

- ❑ Large, compliant medical device business
- ❑ Global presence

Changes through CMMI:

- ❑ On time completion increased by 60%
- ❑ Met 100% critical milestones (post ML, 5yrs and counting)
- ❑ 50% reduction in support FTEs required (priority defects reduced to 0%; defects reduced by >40%)
- ❑ Disciplined framework for adoption of new tools and new development methodology while retaining full regulatory compliance
- ❑ Audits became “non-events”

10

Would I work here? {Awkward silence} to an
award-winning culture

Shifting Organizational Culture Through CMMI



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Sample Business Unit Outcomes

- ❑ 100% deliverable targets met inclusive of a 10% reduction in FTEs
- ❑ 82% on-time completion improvement in first year
- ❑ Annual roadmap forecasting within 5% across geographically distributed agile Kanban teams
- ❑ 17 billion transactions with 99.999% up time
- ❑ Reallocation of 23,000hrs to strategic project pipeline due to reduced rework
- ❑ 100% critical milestones met every year for last four years
- ❑ Project budget variance reduced by 8 percentage points (shrunk standard deviation)
- ❑ Post-release maintenance costs reduced from 108% to 12%



Two Harbors Consulting

Experience, Integrity, Creativity

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