

Lean Thinking & CMS at Lockheed Martin

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Chemical Management Services Workshop
San Francisco, California

CMS @ Lockheed Martin

Recent History

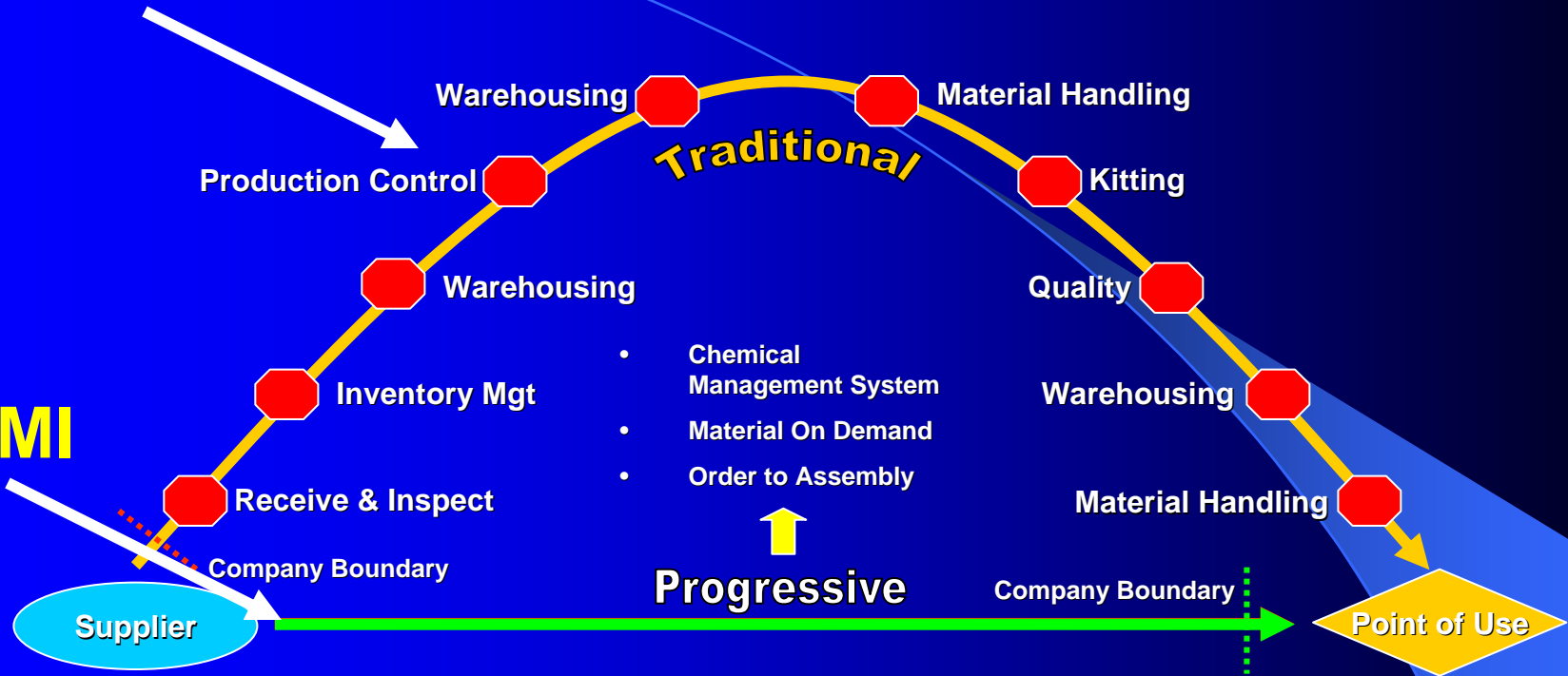
- 2004: Study leading to corporate contract with CMS provider
- 2005: Pilot implementation @ Owego site
- 2006: 5 additional site implementations
- 2007: 4 additional site implementations
- 2008 & beyond: Continuing to move to all manufacturing sites (individual site decision)

Key part of LM Strategic Materials Management Initiative

Materials Management

Traditional

SMMI



Advanced

P2P / Supplier Reduction UID / RFID Horizontal Integration

Reduced Footprint



Target Zero

Inventory Turnover

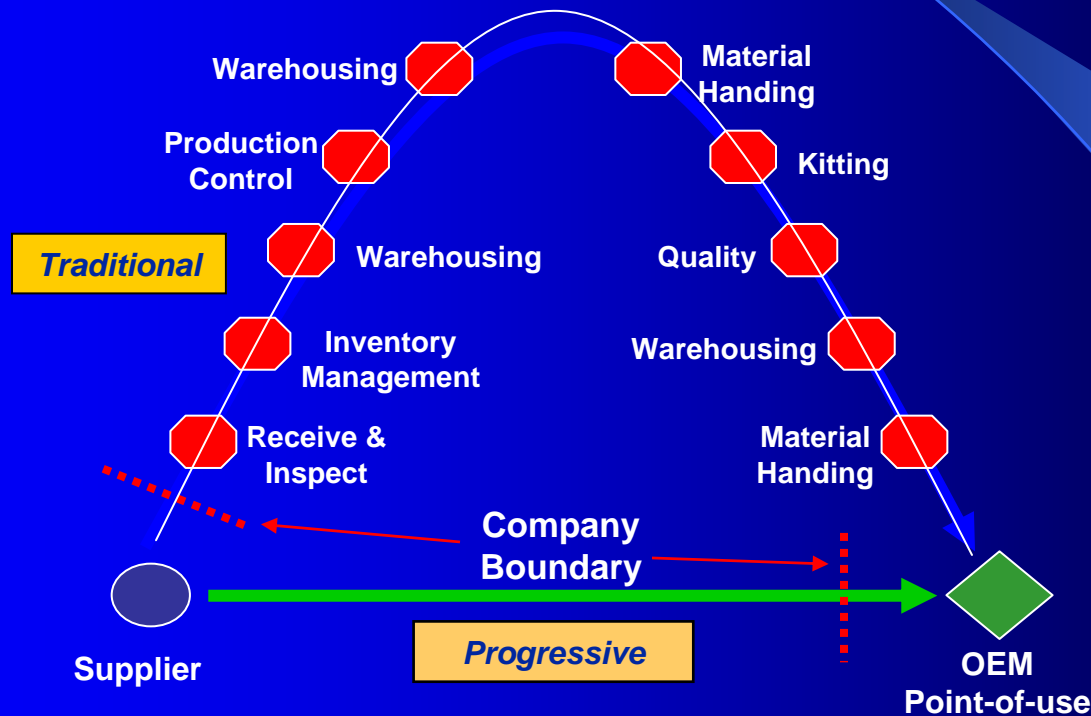
Talent Development

Maximize Impact to ROIC

Lean Links with CMS

- Elimination of non-value processes
- Elimination of waste
- Reduction of travel distances
- 6S
- Use of Lean Techniques for CMS
Introduction

Material Handling & Storage *Non-Value Add*

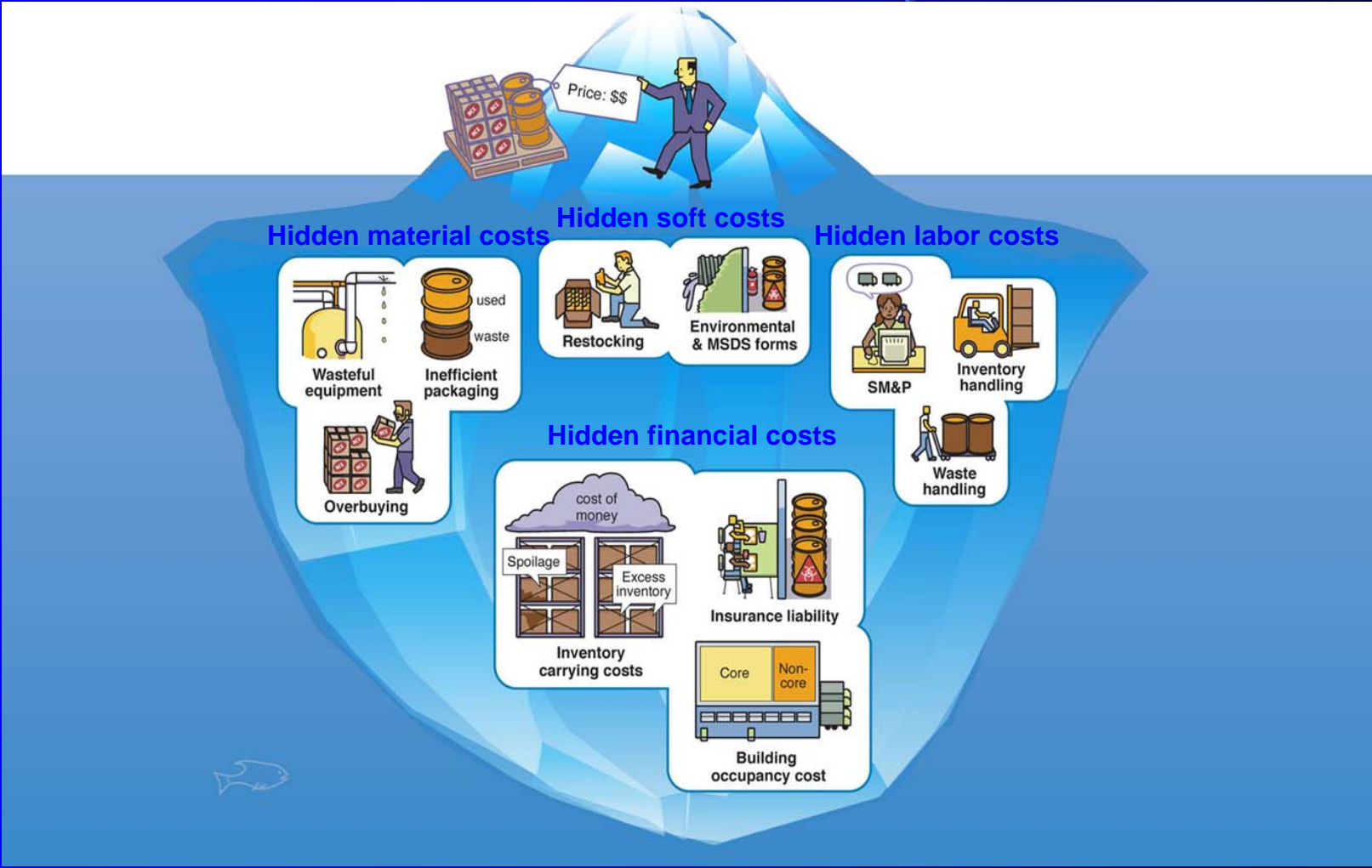


Process consumes substantial resources for transaction processing related to sourcing, production control, material operations and finance

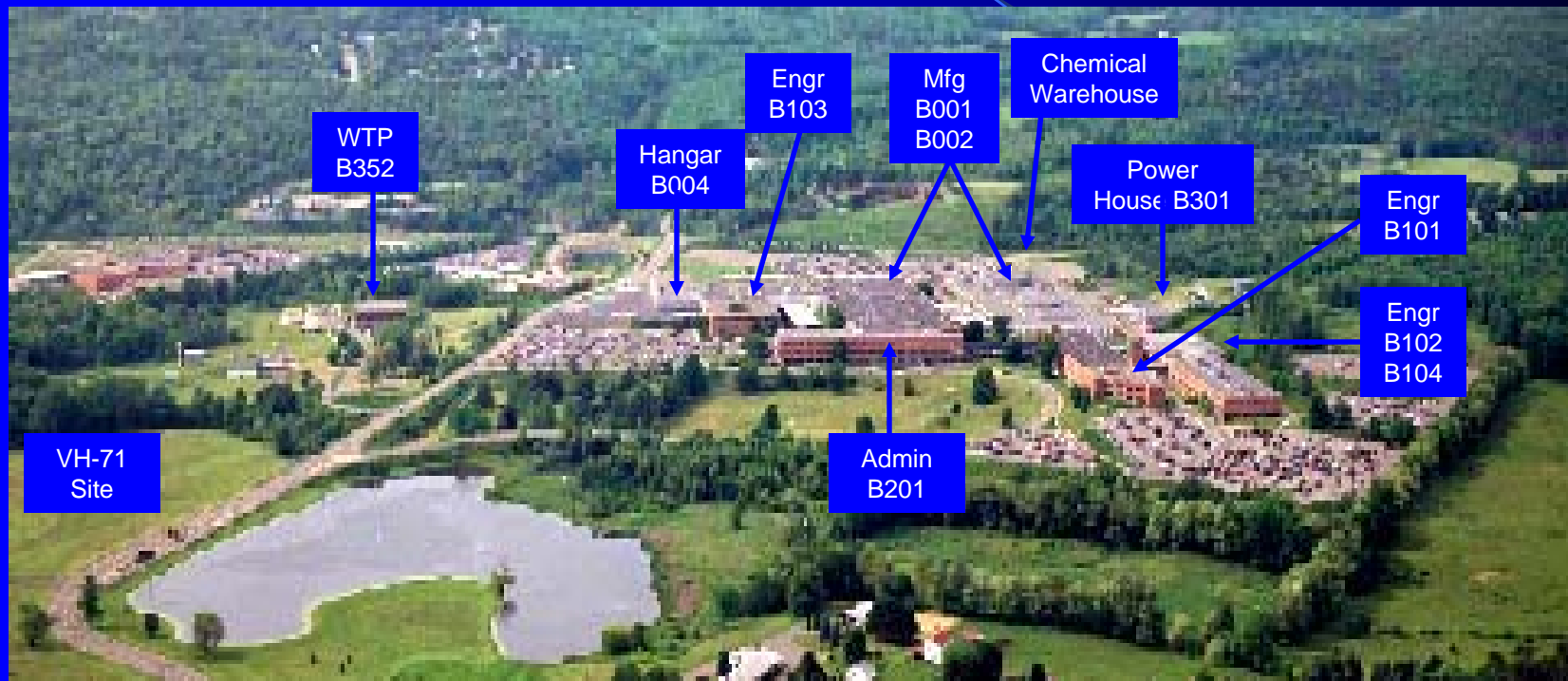
Key Sources of Waste Addressed by CMS

- Chemical Waste
 - Expiring Shelf Life material from storage & usage areas
 - Ability to Right Size chemical containers
- Time Waste
 - User Time ordering or retrieving
 - Support Time getting chemicals to user
- Financial Waste
 - Reduced Inventory Investment
 - Reduced Total Cost of Ownership

Cost Implications: Material Price - the Tip of the Iceberg



Owego



Opportunity for Travel Distance Reduction

Chemical Point of Use
It can take various shapes & sizes

Janitors
Closet



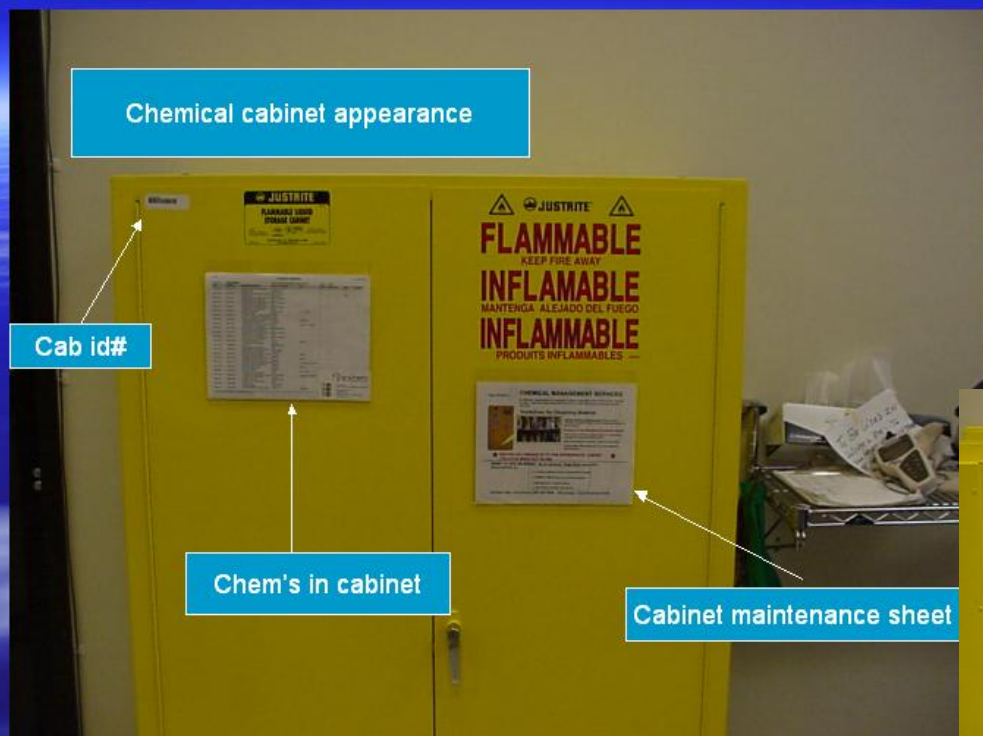
Move chemicals to closets vs. janitors going to warehouse
= *Travel Distance Savings*

Before & After 6S – Sort & Straighten



Typical Point of Use under CMS

6S - Standardize

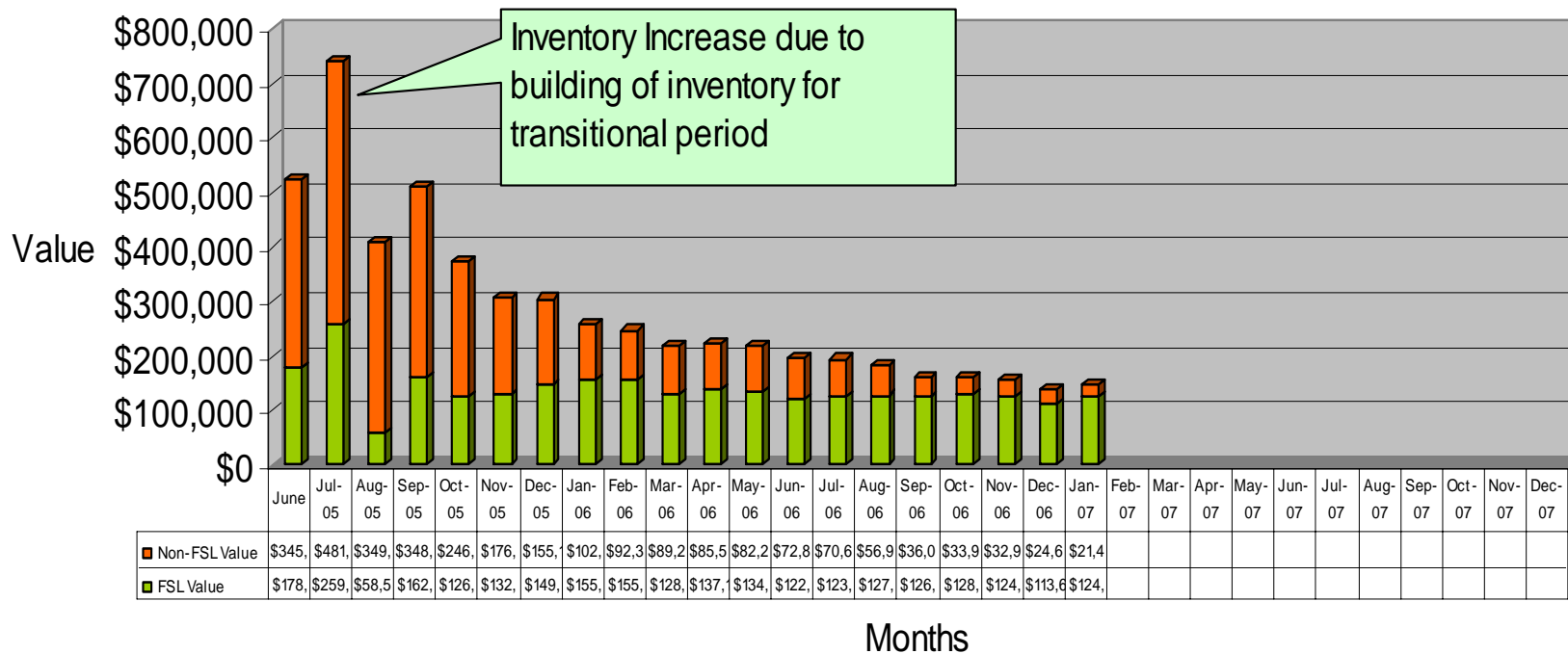


- Standardize** Also Applies to:
- *Chemical Management Process*
 - *Chemical Information Management System*
- On an Enterprise wide basis*

Chemical Inventory Reduction

6S - Safety

Site Stock Value - 2005-06



72% Reduction in inventory is significant reduction in *spill potential*

2 Years Later Users keep POU's looking good! **6S - Sustain**



SMMI Use of Lean Techniques

- Value Mapping Event
 - After initial introduction
 - Enabled by SMMI and Site Black Belts
 - Includes ALL organizations that touch chemicals or data/paper related to chemicals
 - Defines Process
 - Existing State
 - Future State
 - Basis for SOW
 - Basis for defining existing system costs for business case
 - Key value is it ***BUILDS BUY IN***

Use Lean as Change Enabler for CMS

Questions?