

INTRODUCTION

TO

LEAN



LEAN IS A JOURNEY

NOT A DESTINATION



Lean is a “**State of Mind**” that leads to behaviors that drive process improvements and result in a more productive use of time.



Lean is not something you learn in a classroom. **It is a mindset...**and converting the employees to this mindset is a cultural shift that most people don't have the fortitude and focus to undergo.



PASSION!

“Nothing great in the world has been accomplished without passion.”

~ “When work, commitment, and pleasure all become one and you reach that deep well where passion lives, nothing is impossible.” ~

A great leader’s courage to fulfill his vision comes from passion not possession.

John Maxwell

~ “If passion drives you, let reason hold the reins.” ~

Benjamin Franklin



You have to find those within your organization who have a passion for thinking of ways to improve the efficiency and productivity within the organization. Typically, these are individuals who will answer yes to one or more of the following questions:

Have you offered ideas to improve how tasks are done?

Do you have ideas to improve how tasks are done?

Are you open to changing the way tasks are done?

Do you like finding ways to do tasks more efficiently or productively?



Defining Lean

A systematic approach to identifying and eliminating waste (non-value-added activities) through continuous improvement, while relentlessly pursuing perfection

At it's highest level "Lean Thinking" becomes part of the DNA of the organization, it becomes as natural as breathing, sleeping, or walking.



**What does every
company or
organization have in
common?**



WASTE!

Lean is about identifying and eliminating

WASTE!



WASTE

- The elements of production that add no value to the product
- Waste only adds cost and time
- Waste is really a symptom rather than a root cause of the problem
- Waste points to problems within the system



Definition of Value Added and Non Value Added

Value Added

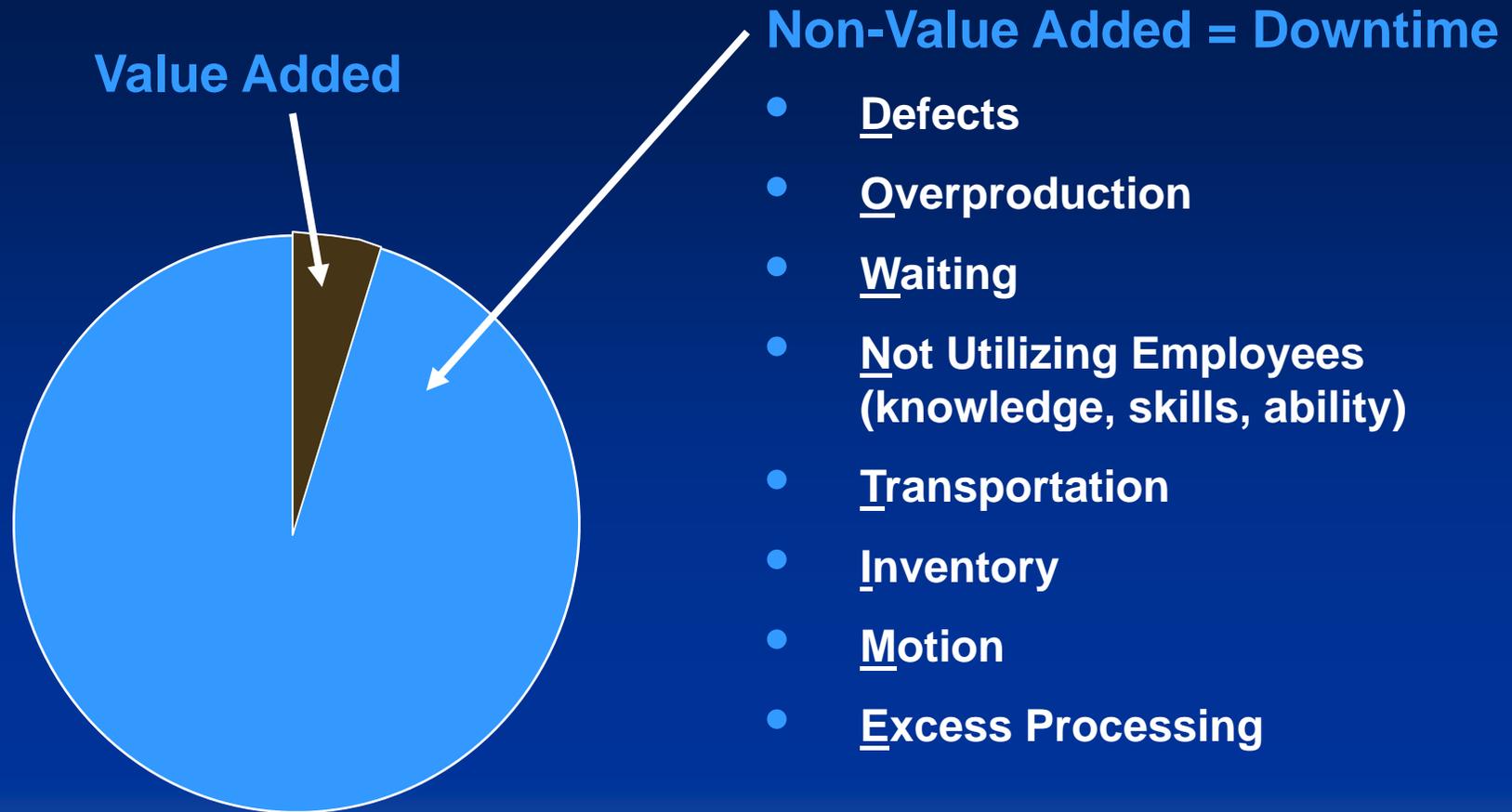
Any activity that increases the market form or function of the product or service.

Non-Value Added

Any activity that does not add market form or function or is not necessary. (These activities should be eliminated, simplified, reduced, or integrated.)



Lean = Eliminating the 8 Wastes



Typically 95% of all lead time is non-value added

How do we identify
waste?

We need to have a visual
representation of what
is value added
and what is non-value added.



Use the Value Stream Mapping Tool!



Value Stream Mapping

- Follows a process production path from beginning to end and draws a visual representation of every process step
- The visual representation is in the form of a process flow diagram
- There are two process flow diagrams – the “Current State” and “Future State”



Current State – how the process works at the present time. The foundation for the Future State

Future State – how you want the process to work



Current State Drawing

- ✓ Draw using icons
- ✓ Start with the “door to door” flow
- ✓ Have to walk the flow and get actuals
 - no standard times
 - draw by hand, with pencil



Value Stream Map Diagram – Current State

Example - Issuing a Letter

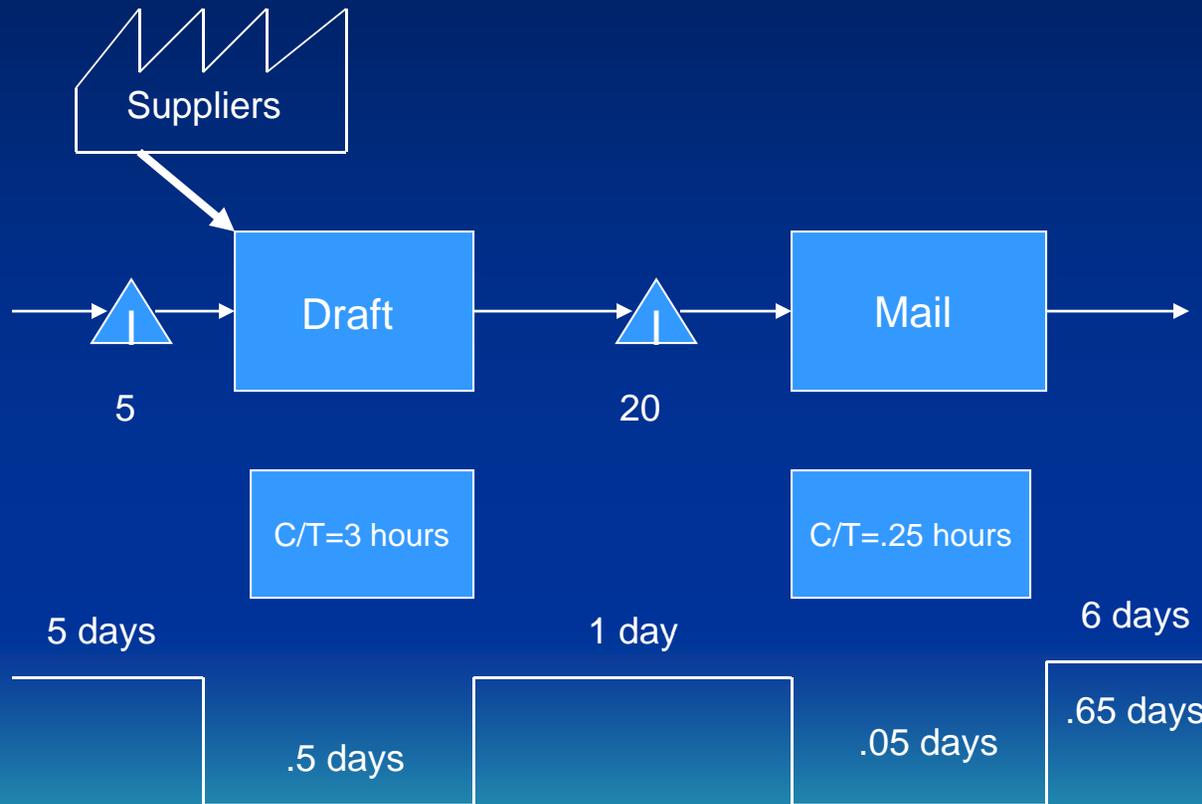


Future State Drawing

- ✓ The power behind Value Stream Mapping is you always need a Future State
- ✓ Begin by drawing on copies of Current State map



Value Stream Map Diagram – Future State Issuing a Letter



Keys to Success

- Find your “Grant”

It took Abraham Lincoln 11 generals before he found one who had the passion and commitment for the task and made things happen

- Get support of upper management –
Commissioner or Deputy Commissioner
Level



- Get commitment from upper management to be involved! It can be as basic as showing up for the meetings
- Choose a process that most in the organization would agree is 'broken', preferably an easy one
- Create a team to map the Current State and Future State



- Make changes slowly
- Observe successes and failures and keep working to improve the process



Using LEAN to Improve Process for Issuance of Formal Enforcement Actions

David E. Chopy, Chief
RIDEM
Office of Compliance and Inspection



Business Problem

Issuance of Formal Enforcement Actions was not timely – 1+ years in some cases – and too often went through numerous re-writes, wasting hundreds of hours each year



Upper Management Provided Impetus for Change

- ✓ Introduced managers to LEAN
- ✓ Partnered with VIBCO, a RI company that has years of experience implementing LEAN techniques
- ✓ VIBCO provided training to DEM managers and staff
- ✓ Upper management gave directive that first business problem to work on was issuance of Formal Enforcement Actions (FAs)



OVERVIEW

- Office of Compliance and Inspection (OC&I) responsible for issuing FAs for civil regulatory violations involving air, water and waste
- FAs identify facts and violations alleged and either an order to correct violations or administrative penalty or both
- FAs subject to appeal to RIDEM's Administrative Adjudication Division
- Attorney General not involved in issuance of FAs
- FAs drafted by OC&I and signed by OC&I Chief
- FAs reviewed by RIDEM Office of Legal Services and/or Assistant Director



Step 1: Developed Value Stream Map– Current State

Example – Hazardous Waste Program (3-12-09)

12 Step Process



Value Stream Map Diagram

Current State

Example – Hazardous Waste Program (3-12-09)



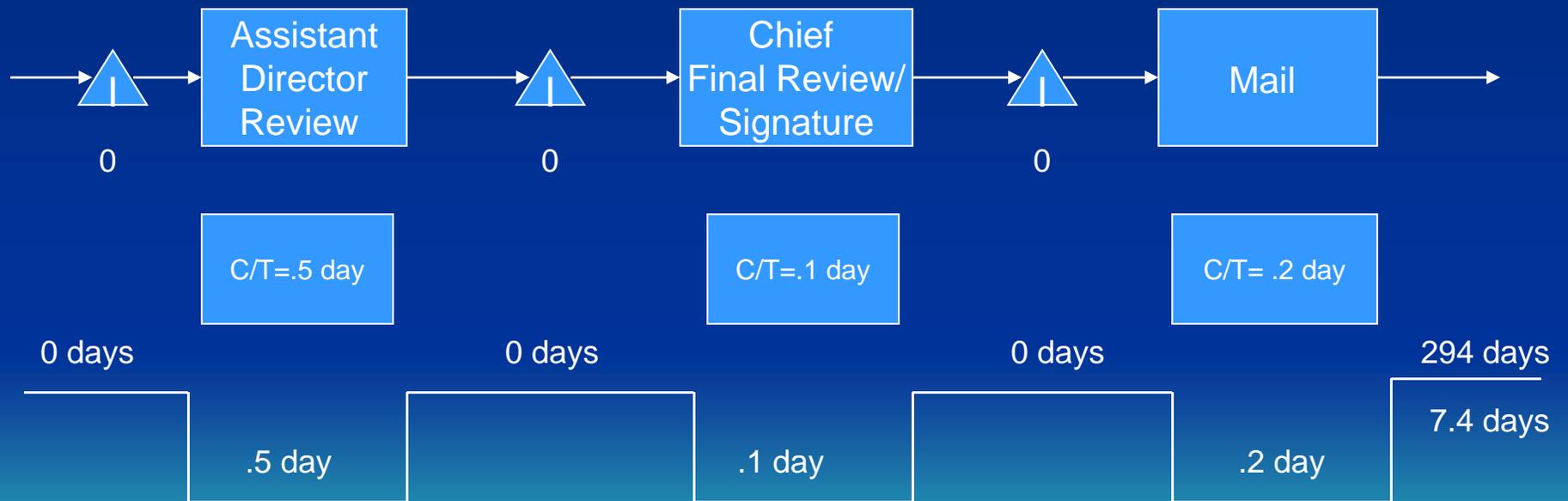
Value Stream Map Diagram (Continued)

Example – Hazardous Waste Program

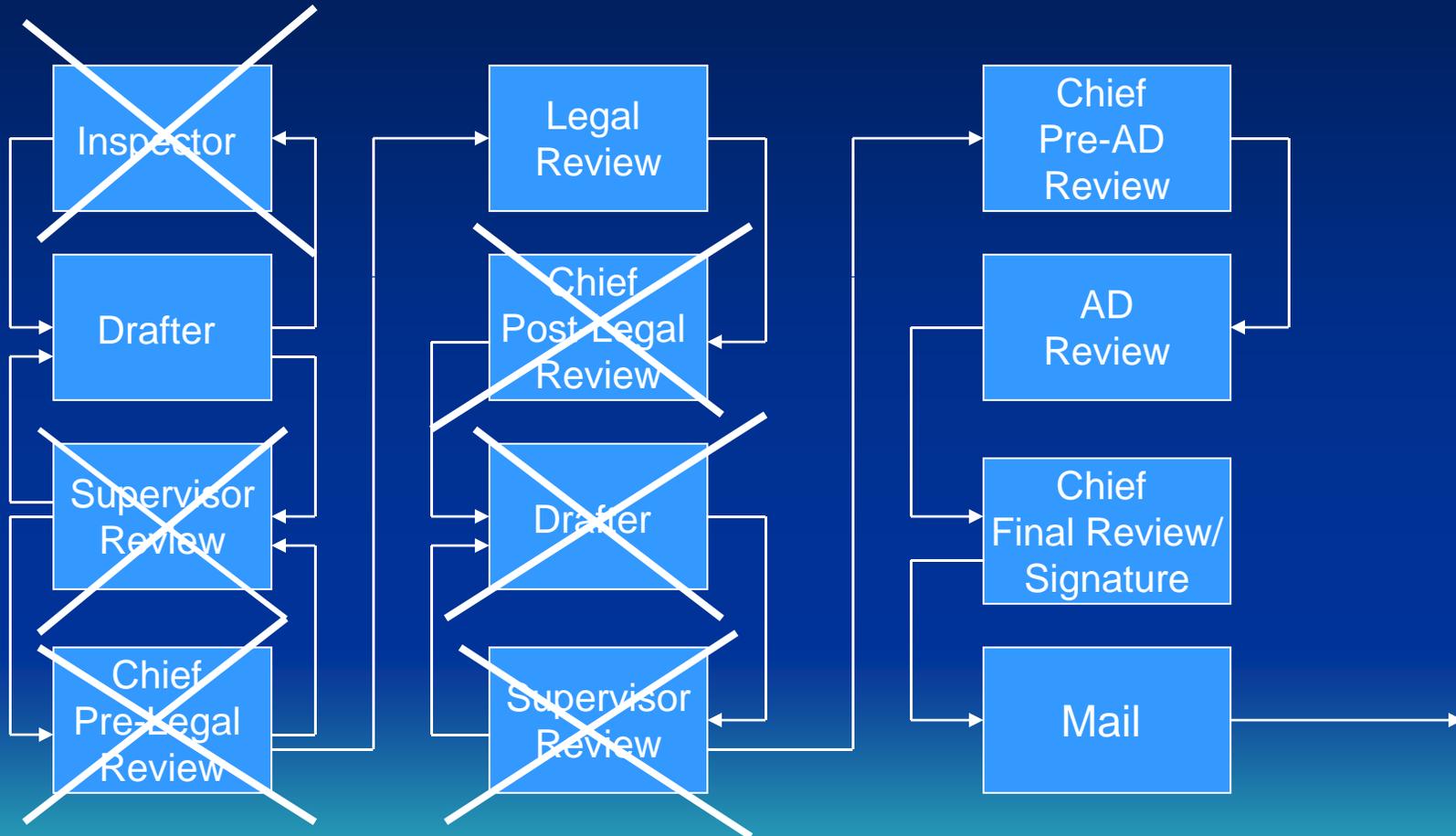


Value Stream Map Diagram – (Continued)

Example – Hazardous Waste Program



Step 2: Analyzed Value Stream Map



Step 3: Developed LEAN Group to Brainstorm Ideas to Improve Process

- ✓ LEAN Group included all program supervisors, Assistant Director, and Office of Legal Services
- ✓ Introduced LEAN to program supervisors – VIBCO's president attended along with sensei and key staff
- ✓ Explained to LEAN Group what LEAN was about and how it benefited the company and employees
- ✓ OC&I Chief presented value stream map of Current State for hazardous waste program (as an example) to the LEAN Group



Step 4: Instituted Monthly Meetings of LEAN Group

5 meetings held from June-October 2009

General consensus that delays result of these wastes:

- Defects – lack of proper documents in file to support violations/improper citations/incorrect facts
- Waiting – file sitting on people's desk for weeks and months
- Not Utilizing Employees (knowledge, skills, ability) – unnecessary reviews and involvement
- Motion – file getting passed back and forth multiple times
- Excess Processing – stylistic/editorial edits and too much detail required



Identified 8 ideas to improve process

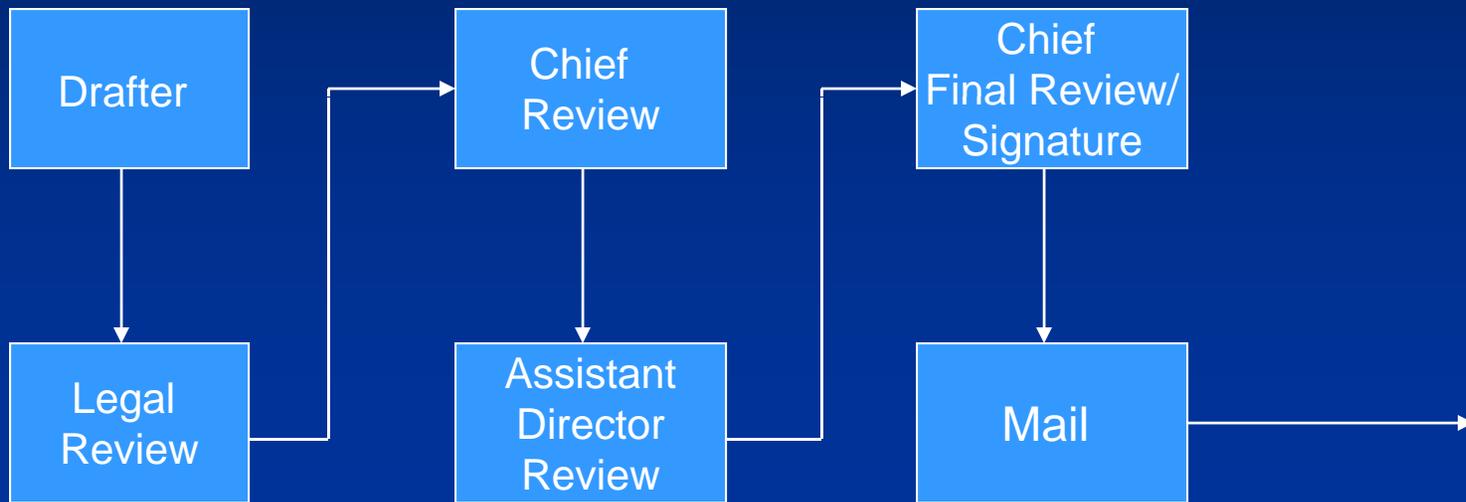
- ❖ **Develop Fast Track FA**
- ❖ **Develop Protocol for Chief Pre-Legal Review**
- ❖ **Develop Standard Completeness Checklist**
- ❖ **Develop Protocol for Legal Review**
- ❖ **Eliminate Chief Pre-Legal Review**
- ❖ **Eliminate Assistant Director Review**
- ❖ **Eliminate Stylistic Edits from Legal**
- ❖ **Develop Standard Form for Economic Benefit and Cost Recovery Assessments**



Step 5: Developed Value Stream Map–Future State

Example – Hazardous Waste Program

6 Step Process



Step 6: Implemented Ideas

❖ **Develop Fast Track FA**

Wastes Targeted: Defects; Waiting; Not Utilizing Employees; Motion; Excess Processing

Idea: Pre-approved FA for straightforward, repetitive types of violations

- **Pre-approved FAs in use for specific types of Air, UST, OWTS, Dam Safety, and Water Pollution cases**
- **Pre-approved FA under development for specific type of Freshwater Wetland case**

❖ **Develop Protocol for Chief Pre-Legal Review**

Wastes Targeted: Defects; Waiting; Not Utilizing Employees; Motion; Excess Processing

Idea: Step by step approach for preparing an FA

- **Submit electronic copy of FA along with file to Chief**
- **Stylistic changes will be made by Chief without return to drafter**
- **Substantive changes/comments will be made on electronic copy of FA and sent to supervisor and drafter with meeting held within 2 weeks to discuss**

❖ **Develop Completeness Checklist**

Wastes Targeted: Defects; Waiting; Not Utilizing Employees; Motion; Excess Processing

Idea: Tape checklist to inside cover of file to ensure completeness

- **Fact tabs on all documents to support facts in FA**
- **Electronic copy of FA along with file to Chief**
- **Economic benefit and cost recovery memos**
- **Sign off sheet**
- **Documents in file to support site-specific facts in penalty worksheets**

❖ **Developed Protocol for Legal Review**

Wastes Targeted: Waiting; Motion; Excess Processing

Idea: Step by step approach for legal review

- **Chief will forward electronic copy of FA and file to Office of Legal Services identifying person who prepared FA - email supervisor and drafter providing notice of transfer**
- **Drafter will call attorney and arrange meeting to discuss FA – goal is to meet w/in 2 weeks**
- **Drafter will familiarize attorney with the case**
- **If attorney satisfied, will sign off at end of meeting**
- **If not, comments will be made on electronic copy of FA and forwarded to drafter and Chief and file will be returned to OC&I**

❖ **Eliminate Chief Pre-Legal Review**

Wastes Targeted: Waiting; Not Utilizing Employees; Motion; Excess Processing

Idea: Improve quality of FA to eliminate need for Chief to review FA prior to transfer to Legal

- **Develop FA templates with standard language to minimize sections that require review and edit**
- **Use of completeness checklists**
- **Program demonstrates to Chief that it consistently drafts quality FA**
- **Chief will advise program that draft FAs can be transferred directly to Office of Legal Services**

❖ **Eliminate Assistant Director Review**

**Wastes Targeted: Waiting; Not Utilizing Employees;
Motion; Excess Processing**

**Idea: Identify types of FAs that can be issued without
review by Assistant Director**

- **Assistant Director developed criteria for FAs that
require review**
- **FAs against State agency or municipality**
- **FAs ordering removal of structures for wetland
violations**
- **FAs >\$25,000 penalty**
- **FAs with significant potential for controversy**

❖ **Eliminate Stylistic Edits from Office of Legal Services**

**Wastes Targeted: Waiting; Not Utilizing Employees;
Motion; Excess Processing**

Idea: Work with attorney's to eliminate stylistic edits

- **Develop FA templates with standard language to minimize sections that require review and edit**
- **Discuss purpose of editorial changes and importance**

❖ **Develop Standard Form for Economic Benefit and Cost Recovery Assessments**

Wastes Targeted: Waiting; Not Utilizing Employees; Motion; Excess Processing

Idea: Create standard memos to document that we evaluated economic benefit and cost recovery assessments in preparation of FA

- **One page standard memo created**
- **For cases with no identifiable economic benefit or cost recovery reimbursement, a copy of signed memo placed in file**

Step 6: Continued Oversight Until Policies Followed

- ✓ Continue for as long as necessary until new policies/procedures become routine

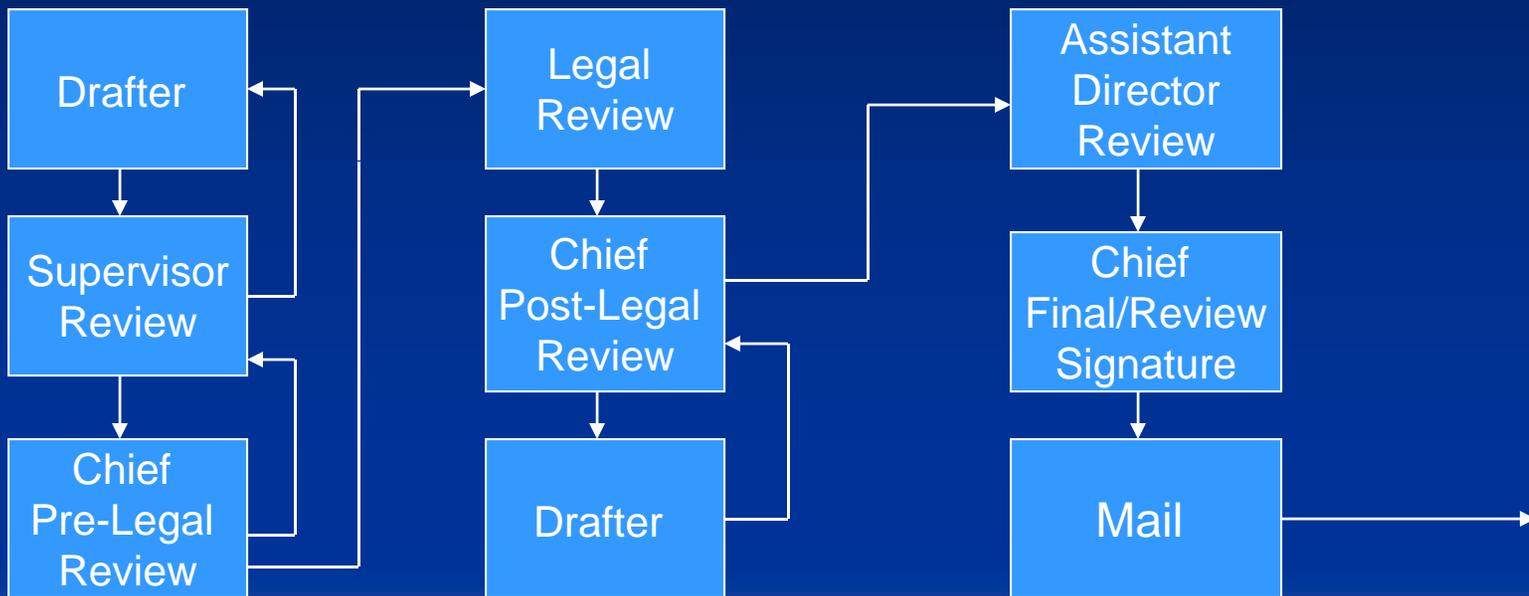


Value Stream Map

Current State

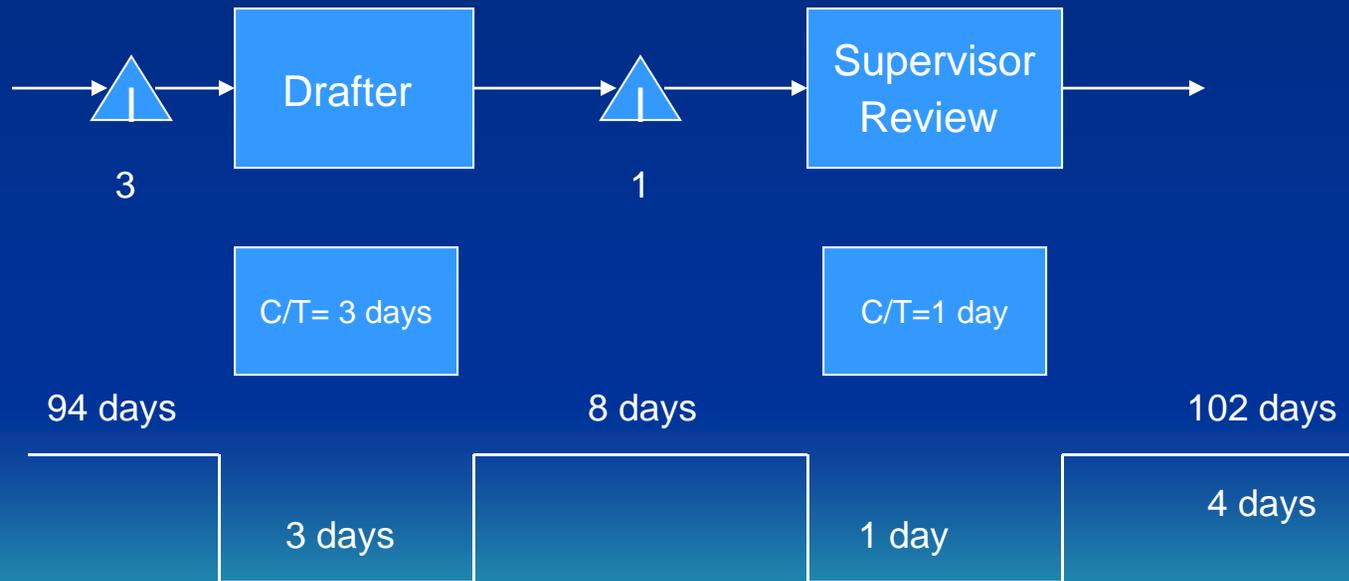
Example – Hazardous Waste Program (2-1-11)

9 Step Process



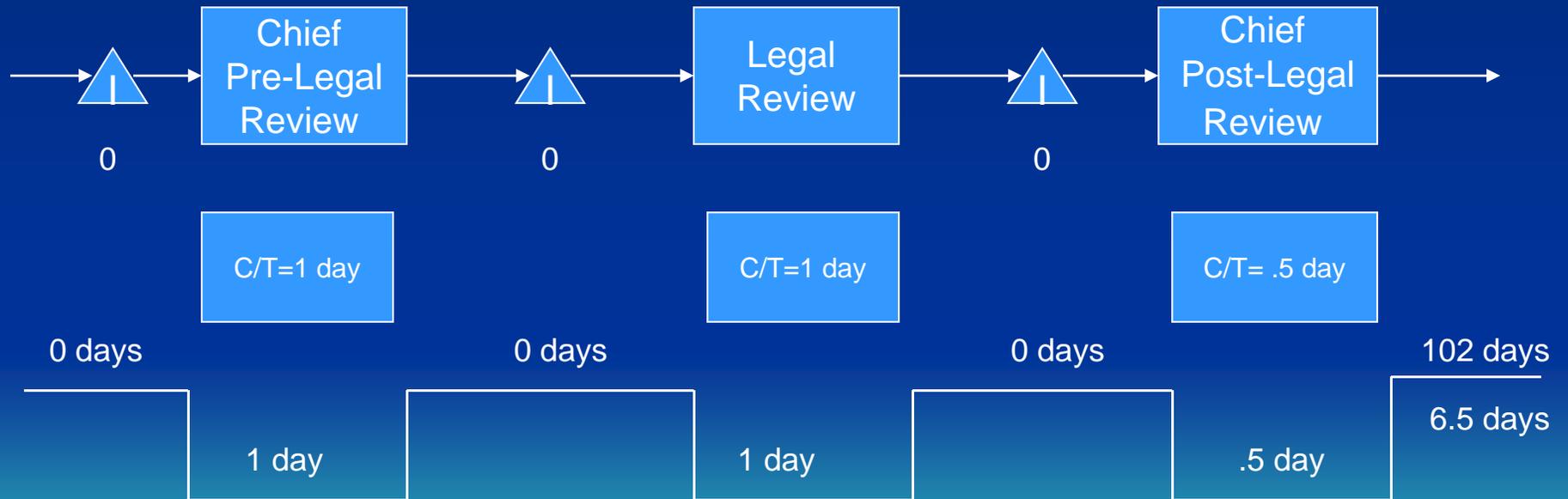
Value Stream Map Diagram (Continued)

Example – Hazardous Waste Program



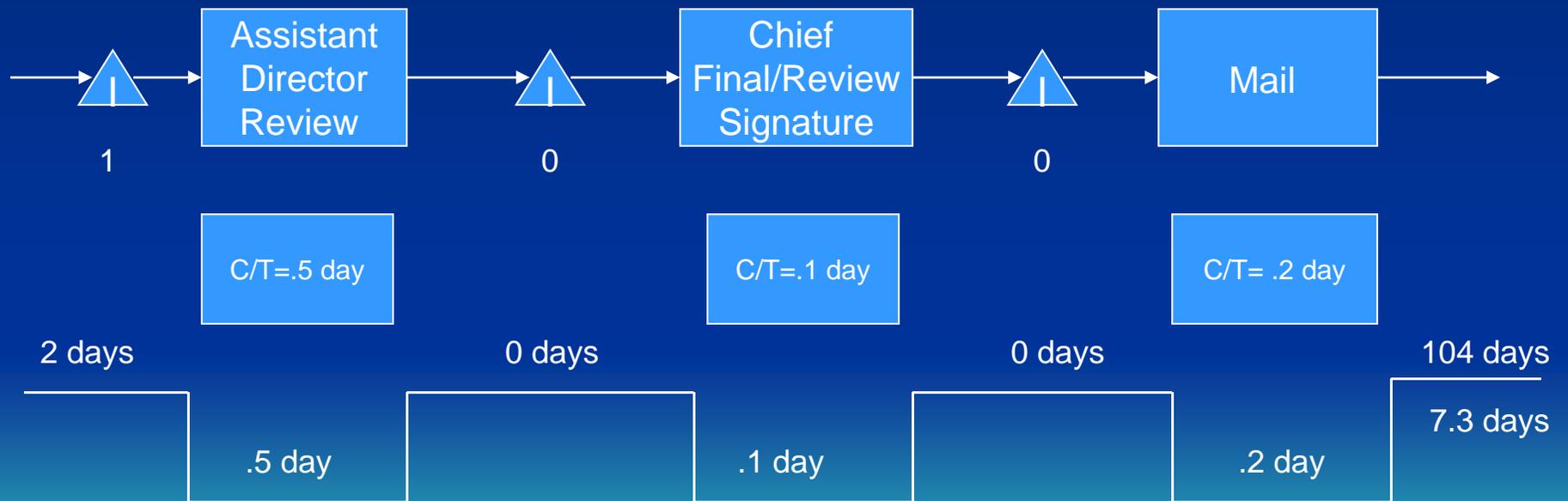
Value Stream Map Diagram (Continued)

Hazardous Waste Program



Value Stream Map Diagram – Current State (Continued)

Hazardous Waste Program



Results So Far

- ✓ Reduced number of FAs pending from 69 to 47
- ✓ Reduced age of FAs pending – currently oldest case is 8 ½ months
- ✓ Increased number of FAs issued from 83 in 2009 to 105 in 2010

