Developing a Second Generation Directive System Architecture

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Legacy directive systems
Limitations and Drivers for Change
Proposed Solutions
New Directive System
New System for Non-directive Guidelines and Templates
Lessons Learned
Engineering Process

Organizational Policy

Management Commitment

Procedures (20)

Directive/Non-Tailorable

High Level Directly Traceable to CMMI, ISO, Corp Stds

Work Instructions (132)

Directive/Tailorable

Lower Level, Further Direction on How to Meet Requirement

Enablers (414)

Non-Directive

Guidelines/Templates
Limitations and Concerns

Engineering only \(\bullet\) other areas (e.g., HR) only have policies

\(\bullet\) Systems are not compatible

Two levels of directives \(\bullet\) Procedures and Work Instructions

\(\bullet\) Programs have trouble keeping track of multiple directives per process area

Non-Directive enablers in directive system

\(\bullet\) Confusing during audits

\(\bullet\) Adds unnecessary formality to many tools and templates

Not well integrated with corporate directives

\(\bullet\) Developed prior to corporate directives becoming CMMI compliant

Large number of documents to manage (566)

Time for a change
New Process

- Policy
- Procedures
- Work Instructions
- Enablers

Old Process

- Policy
- Procedures
- Work Instructions
- Enablers

Major Categories of Management Commitment

- Shows Traceability to CMMI, ISO, Corp Stds
- Single Level Tailorable Directive
- New Enabler System

Replace with Traceability Database

Remove from Directive system
Advantages

• Compatible with other (less complex) Corporate Directive Systems

• Single level of directives
  - All Program Requirements in Work Instructions
  - Less complexity
  - Keep short and concise

• Non-Directive enablers outside of directive system
  - Eases maintenance

• Better integration with corporate directives, Industry Standards and Local Standards
  - Traceability Database

• Reduced number of documents to manage (152)
  - Removal of 414 Enablers
Å Transfer Functional Disciplines to local control
Å process simplification
Å reduce bureaucracy
Å reduce costs
Å improve cycle time

More Useful Enablers
## Enabler Type Matrix

### Organization Enabler

- **Formal CM Tool**
- **Corporate PAL**

### Discipline/Program

- **Local PAL**

### Personal

- **Document Sharing DataShare**
- **Virtual Team Engineering**

### Limited Control

### Change Control Board

- **Endorsed**
- **SAS EMS**

### Stakeholder Involvement

- **Engineering**
- **Operations**
- **Quality**
<table>
<thead>
<tr>
<th>Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Control</td>
<td>Repository Control</td>
<td>Function/ Informal or Local CCB</td>
<td>Formal Organization/ Corp. Level CCB</td>
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<tr>
<td>Repository</td>
<td>Docushare Local PAL</td>
<td>Docushare Local PAL</td>
<td>Clearcase Corp. PAL (Endorsed)</td>
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<td>Delivery</td>
<td>Repository Search</td>
<td>Web Page (Functional, Program, Dept, Site) EMS User Views</td>
<td>EMS User Views Corp. Process</td>
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<tr>
<td>Relationship to Directives</td>
<td>None Expected</td>
<td>Could be ï if related to WI Requirement</td>
<td>Yes</td>
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</tbody>
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Three Levels of Control Defined for Enabler Categories
The New DIRECTIVE System

Bureaucracy Reduction!

Old
- Policy
- Procedures
- Work Instructions
- Enablers

Interim
- Policies
- Bulletins
- Procedures
- Work Instructions

New
- Policies
- Work Instructions

Local Control Systems

Bureaucracy Reduction!
Headed Toward Single Directive System
Single Level of Management Commitment
Single Level of Directives
Simplified System - Keep it Short and Simple!
Reduction in Directive System Size (414 Enablers)
Enhanced Enablers in Separate System
Change Takes Time
Questions ? ? ?