# Performance = Organizational Excellence

Pinnacle Enterprise Group (Pinnacle) is a process engineering, management system implementation, and organizational development firm. **Pinnacle** is a pioneer of the customized accelerated management system implementation and registration approach. While the industry norm for implementation of an **ISO 9001** and **ISO 14001** based management systems is still 12 months, **Pinnacle** assists organizations through the process in an average of 3-6 months, with better overall management system performance.

The key to **Pinnacle's** success is a commitment to the knowledge transfer philosophy and our methodology. We see a relationship between **ISO 9001** and **ISO 14001** based standards, **Lean** and **Six Sigma** tools and methods, regulatory and/or industry requirements, customer satisfaction and perception, and organizational skills development. The rational combination, integration, and application of these elements will result in a **Lean QMS**® or a **Lean EMS**® that is compliant with any **ISO 9001** and **ISO 14001** based standard. But more importantly, when the a **Lean QMS**® or a **Lean EMS**® is implemented properly, the resulting business operating system (BOS) will give you:

- rationalized processes and procedures,

- improved and consistent departmental interaction,

- unfettered material and information flow,

- optimized value streams,

- the ability to identify and solve systemic process and product problems,

- improved customer satisfaction and loyalty,

- improved environmental performance and regulatory compliance, and

- the platform for continual improvement and evolution of your BOS.
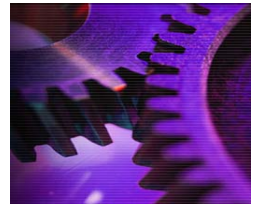
Pinnacle's approach is more than just a Quality or Environmental Management System standard compliance program, or a Lean tools training program, or a Six Sigma Black Belt curriculum. Simply addressing generic requirements and blindly learning advanced quality tools does little to move your organization toward a high performance BOS. Truly maximizing the value of your BOS mandates an integrated **Lean QMS**® or **Lean EMS**® approach, a sustained mind set, and proficiency that must be acquired through "knowledge transfer." For the long-term viability of an organization, the rationalization and integration of the business, quality, regulatory, and technical processes must be permanent. Simply put, you and your staff must receive the skills and knowledge needed to *take ownership of the process* and have the ability to maintain and improve it into the future.

Pinnacle is committed to providing the highest quality, custom tailored, and affordable training and consulting services to help organization along the road to organizational excellence.

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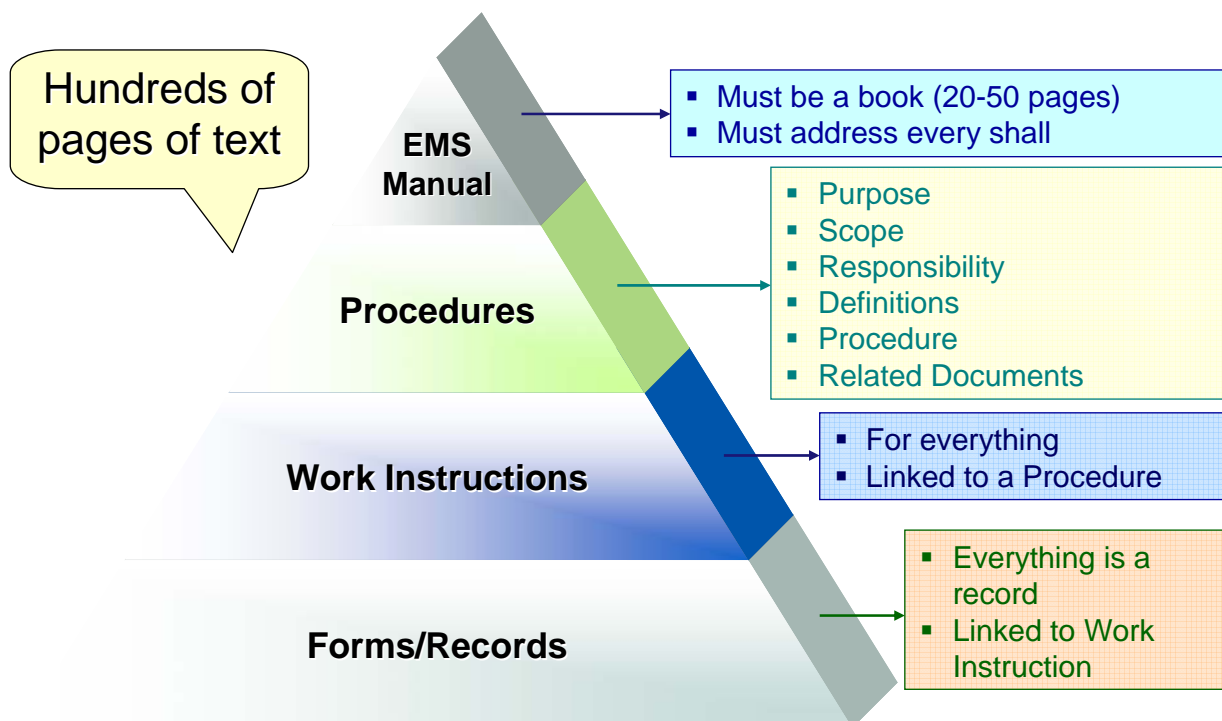
Lean QMS® Documentation – Overview

ISO 14001 only requires that, at a <u>minimum</u>, your EMS be rationalized and articulated by:

1. An **EMS Scope** statement
2. An **Environmental Policy**
3. A description of the **main elements of the EMS including their interaction and related documents**
4. **11 Documented Procedures** (Pinnacle refers to these as Support Processes)
5. At least **14 Record** types

"One important lesson I've taken away from Pinnacle's innovative approach to [Environmental] Management System is that [EMS] documentation doesn't need to be cumbersome, overwhelming and boring."

*Nick Tousi, Sr. Vice President
Nova Analytics Corporation*

Unfortunately, these requirements are traditionally misunderstood resulting in the following false paradigm being applied to an EMS:

Hundreds of pages of text

EMS Manual
- Must be a book (20-50 pages)
- Must address every shall

Procedures
- Purpose
- Scope
- Responsibility
- Definitions
- Procedure
- Related Documents

Work Instructions
- For everything
- Linked to a Procedure

Forms/Records
- Everything is a record
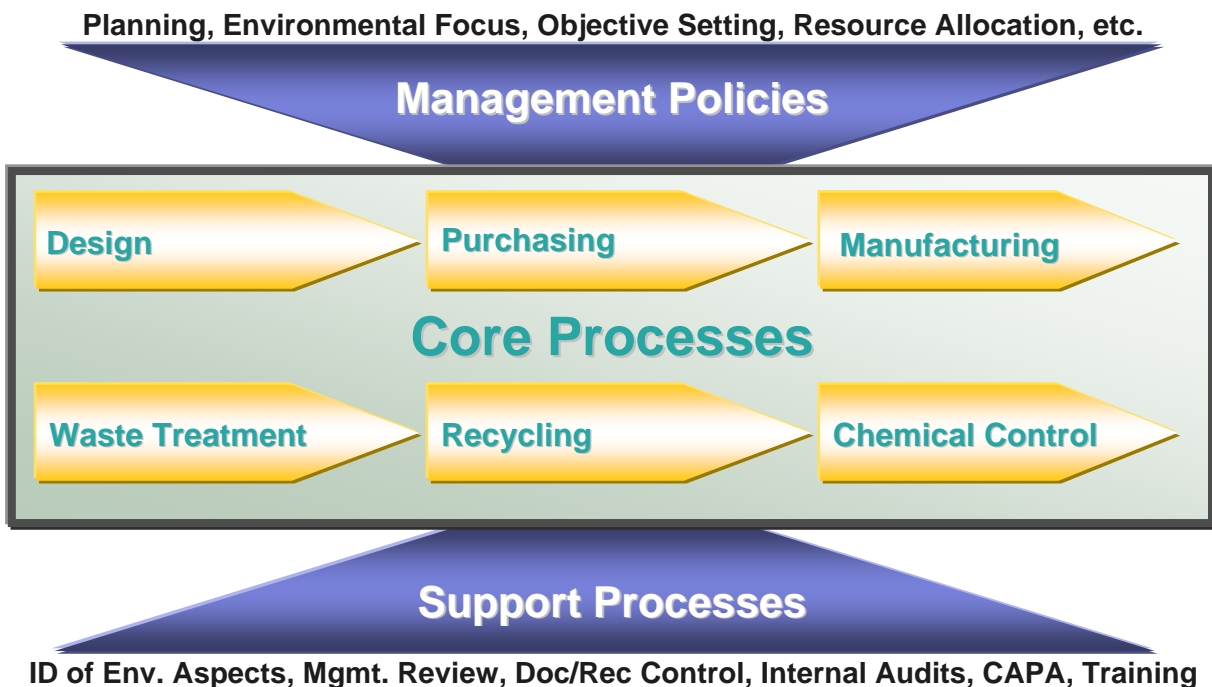- Linked to Work Instruction

While this paradigm may be appropriate for describing a documentation structure, companies rarely operate in this way. In fact, this paradigm is typically the cause of over documentation. The resulting paperwork glut quickly becomes "shelf-ware" and a burden to the EMS.

Pinnacle developed a realistic and practical process-based model than consists of three major components:

1. **Management Policies or Processes (MP)**   Policies or processes that set the mission, vision, and direction of the organization.

2. **Support Processes (SP)**   Processes that facilitate, monitor, control, and improve the EMS, but do not directly impact the product/service or the environment.

3. **Core Processes (CP)**   A set of processes defining and controlling all product/service realization activities that can directly impact the environment.

The figure below illustrates the model and the relationship of these components:

Planning, Environmental Focus, Objective Setting, Resource Allocation, etc.

Management Policies

Design	Purchasing	Manufacturing

Core Processes

Waste Treatment	Recycling	Chemical Control

Support Processes

ID of Env. Aspects, Mgmt. Review, Doc/Rec Control, Internal Audits, CAPA, Training

In turn, these three components are supported by:

4. **Work Instructions (WI)**   Specific or individual task level instructions that support the fulfillment of Core or Support Processes.

5. **Forms/Records (F)**   Standardized forms that, when completed, collect information that is retained as records. A form becomes a record when it is written on or completed. When forms contain enough task level instructions they can replace Work Instructions.

This process model is the foundation for **Pinnacle's _Lean EMS_®** methodology. The resulting EMS documentation exceeds the requirements of ISO 14001 while laying the foundation for a rational, practical, and _Lean EMS_®.

Lean QMS® Documentation – Process Mapping

The success and value of the environmental management system (EMS) depends on consistency of best practice. Without consistency it is impossible to understand processes across functional and geographic boundaries. Without understanding business processes is impossible to make accurate projections, benefit from past experience, establish reasonable goals and plans, and make improvements to systems. Consistency of best practice allows you to analyze your systems and determine their effectiveness. You can then make targeted changes in order to improve efficiency, decrease errors, and implement other improvements.

To achieve this consistency the first step is to capture your current practices (current state). Once you have current practices properly defined and documented you can train people, keep records, and evaluate your systems for best practices. When improvements are devised the process starts again with documentation. Consequently, your EMS relies on documentation. Furthermore, it relies upon the quality of the documentation. Documents that are hard to read, comprehend, retain, and access are poor quality documents and do not bolster consistency and adoption of best practices. Documents must be easy to read, easy to understand, and readily available.

> ". . . our text based processes were difficult to implement and maintain. . . . Pinnacle led us through a four month conversion process to a Process Map based system. Now all of our processes are easy to understand, easy to follow, easy to audit and maintain. Our new system is being used on a daily basis by people throughout the organization."
>
> Kendall Ymker
> Management Representative
> RoMan Manufacturing, Inc.

ISO 14001 requires an organization to follow a process approach when managing its EMS. Process Maps are ideal for this purpose.

A Process Map is a graphical representation of a process. It represents the entire process from start to finish, including:

- process inputs and outputs,
- activities and responsibility,
- pathways, parallel processes, and process loops,
- decision points,
- key measures, metrics, objectives, and targets, and
- interaction with other processes.

Depending on your objectives, a Process Map can represent the entire process at a high or detailed level, allowing detailed analysis and process optimization. Furthermore, a Process Map is an ideal instructional tool for assuring effective training and process consistency. Once Process Maps are established, an organization can work towards ensuring its processes are effective (the right process is followed the every time), and efficient (continually improved to ensure processes use the least amount of resources). Process Mapping is a core **Lean EMS**® technique.

Traditional text procedures do not serve your EMS well. In general, they are long, confusing, unable to show parallel processes, unavailable (in binders), and require strong reading comprehension and retention skills. These issues are magnified in companies that must also contend with language and cultural differences.

Process Maps on the other hand can be 1/5 the length, show a greater amount of detail and complexity, are easy to follow, and are readily available (posted on walls, accessed via intranet, etc.). Process Maps play on the strength of the brain to recognize and recall patterns. They take a very complex system and make it a simple step-by-step operation that is visually intuitive. Inconsistencies and open loop processes are easily identified when placed in a graphical model. The Process Maps are then easily modified and used to train people quickly. Consequently, improvements are introduced in a matter of minutes. Having the ability to develop and maintain process mapped documentation as your organization evolves is a key component of the *Lean EMS*® methodology.

Contact Pinnacle to schedule a live on-line *Lean EMS*® demonstration and see for yourself.

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Use to start a process as well as show all inputs to a process

Predefined Process or "Football Field": Use to represent another SP or CP process map.

Process required by the organization	Process required by the standard
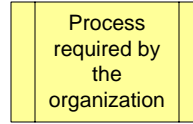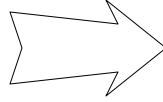
Use to depict the core action steps of each process. This is were the action is.
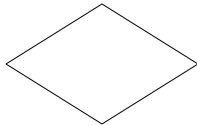
Use to depict decision point (e.g. yes or no, good or bad, internal or external, etc.)

e.g.

Rework ←No— First piece inspection OK? —Yes→ Run job
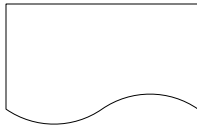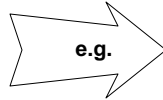
Use to show any type of document (e.g. form, record, specification, standard, etc.)

Record/Document required by the organization	Record/Document required by the standard	**External Forms/ Records**
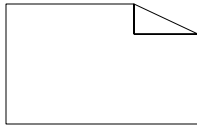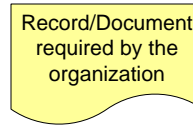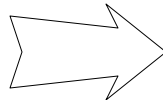
Work Instruction:
Used to represent a task level instruction that supports the fulfillment of the Core or Support Process
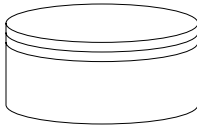
Use to depict electronic forms, documents, records, storage, application (e.g., ERP, MRP, CRM, etc.), or database.
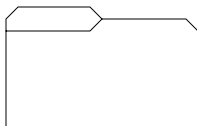
Used to show a physical file for hardcopy storage

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Use to designate Quality/Environmental Objectives, goals/targets, measurables, and metrics within a process map.

Used to show dialog when the process symbol requires more verbiage that the block allows for e.g. can add: for example, any additional comments and information to support the activity
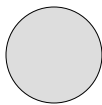
Process Terminator:
Use to show the end of a process, link to next page of process map, or link to another step of the process..

e.g.

End   Page 2   A on Page 2   A

G-4200	Rev.: 0	***Pinnacle Process Mapping Symbols***	Owner: Mgmt. Rep.
Effective Date: 01/01/08		© 2008 Pinnacle Enterprise Group, LLC	Page 1 of 4
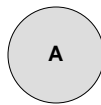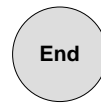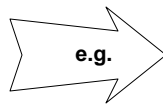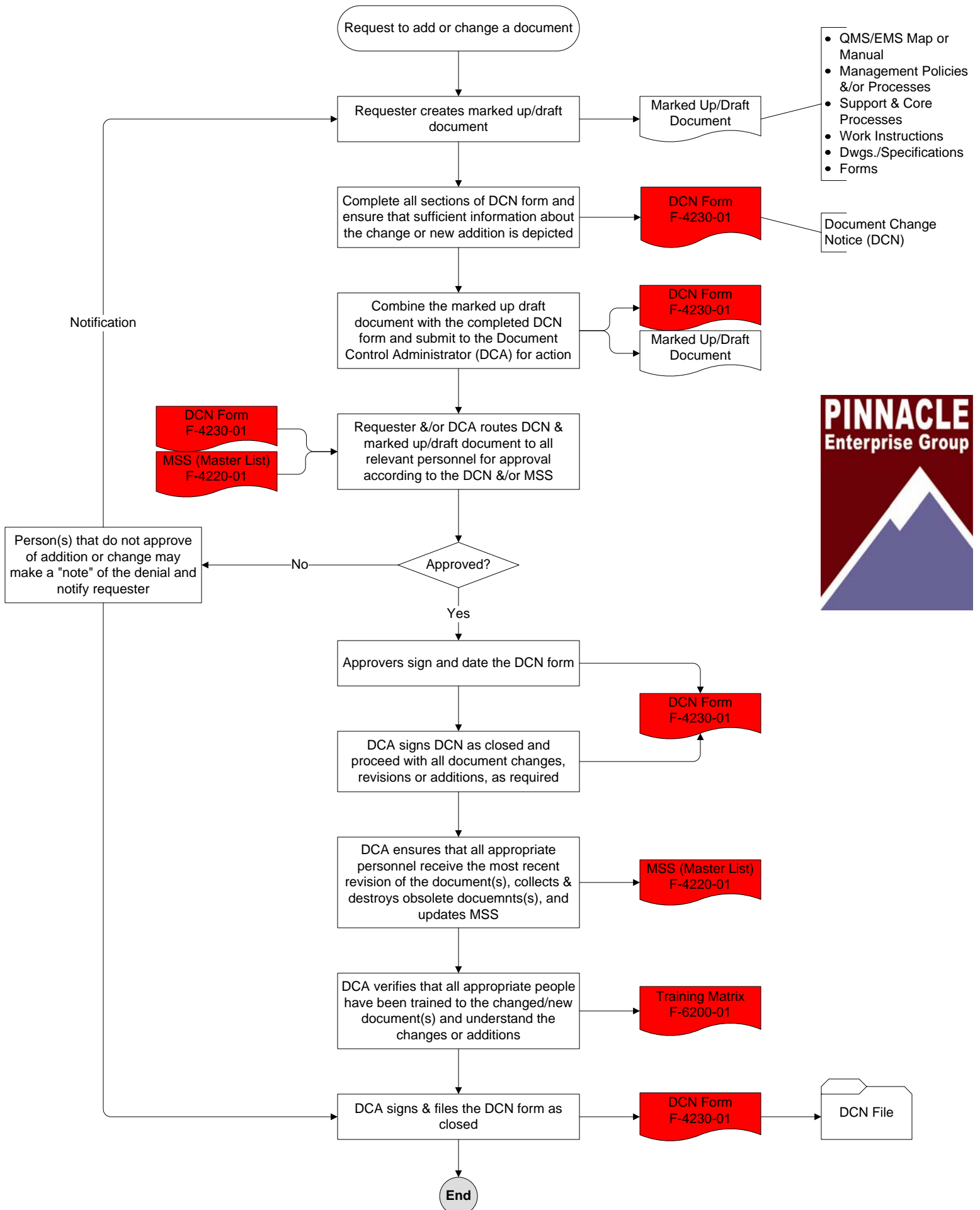
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                    ┌─────────────────────────────────┐
                    │ Request to add or change a      │
                    │          document               │
                    └─────────────────────────────────┘
                                  │
                                  ▼                        • QMS/EMS Map or
            ┌─────────────────────────────────┐             Manual
            │ Requester creates marked up/draft │   ┌──────────┐  • Management Policies
            │            document              │──▶│ Marked Up/│    &/or Processes
            └─────────────────────────────────┘   │  Draft    │  • Support & Core
                                  │                │ Document  │    Processes
                                  ▼                └──────────┘  • Work Instructions
            ┌─────────────────────────────────┐                • Dwgs./Specifications
            │ Complete all sections of DCN form│   ┌──────────┐  • Forms
            │ and ensure that sufficient       │──▶│ DCN Form │      Document Change
            │ information about the change or  │   │ F-4230-01│      Notice (DCN)
            │ new addition is depicted         │   └──────────┘
            └─────────────────────────────────┘
                                  │
                                  ▼                    ┌──────────┐
            ┌─────────────────────────────────┐        │ DCN Form │
            │ Combine the marked up draft      │────┐   │ F-4230-01│
            │ document with the completed DCN  │    ├──▶├──────────┤
            │ form and submit to the Document  │    │   │Marked Up/│
            │ Control Administrator (DCA) for  │    └──▶│  Draft   │
            │ action                           │        │ Document │
            └─────────────────────────────────┘        └──────────┘

   ┌──────────┐
   │ DCN Form │    ┌─────────────────────────────────┐
   │ F-4230-01│─┐  │ Requester &/or DCA routes DCN &  │
   ├──────────┤ ├─▶│ marked up/draft document to all  │
   │MSS (Master│ │  │ relevant personnel for approval  │
   │ List)     │─┘  │ according to the DCN &/or MSS    │
   │ F-4220-01│    └─────────────────────────────────┘
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┌──────────────────┐        ╱─────────╲
│ Person(s) that   │◀──No──╱ Approved? ╲
│ do not approve   │       ╲           ╱
│ of addition or   │        ╲─────────╱
│ change may make  │             │
│ a "note" of the  │            Yes
│ denial and       │             ▼
│ notify requester │   ┌─────────────────────────────────┐
└──────────────────┘   │ Approvers sign and date the DCN  │──┐
                       │           form                   │  │
                       └─────────────────────────────────┘  │
                                 │                           │
                                 ▼                    ┌──────────┐
                       ┌─────────────────────────────┐│ DCN Form │
                       │ DCA signs DCN as closed and  ││ F-4230-01│
                       │ proceed with all document    │└──────────┘
                       │ changes, revisions or        │
                       │ additions, as required       │
                       └─────────────────────────────┘
                                 │
                                 ▼
                       ┌─────────────────────────────┐
                       │ DCA ensures that all         │   ┌──────────┐
                       │ appropriate personnel receive│   │MSS (Master│
                       │ the most recent revision of  │──▶│ List)     │
                       │ the document(s), collects &  │   │ F-4220-01│
                       │ destroys obsolete docuemnts(s│   └──────────┘
                       │ ), and updates MSS           │
                       └─────────────────────────────┘
                                 │
                                 ▼
                       ┌─────────────────────────────┐
                       │ DCA verifies that all        │   ┌──────────┐
                       │ appropriate people have been │   │ Training │
                       │ trained to the changed/new   │──▶│  Matrix  │
                       │ document(s) and understand   │   │ F-6200-01│
                       │ the changes or additions     │   └──────────┘
                       └─────────────────────────────┘
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                                 ▼
                       ┌─────────────────────────────┐   ┌──────────┐
                       │ DCA signs & files the DCN    │   │ DCN Form │   ┌────────┐
                       │ form as closed               │──▶│ F-4230-01│──▶│DCN File│
                       └─────────────────────────────┘   └──────────┘   └────────┘
                                 │
                                 ▼
                              ( End )
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Notification

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SP-4230	Rev.: 0	*Document Control*	Owner: DCA
Effective Date: 01/01/08		*(Pinnacle Example)*	Page 2 of 4

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Quality Objective:
- Orders entered same day received
- Orders processed within 2 days of receipt

Metric:
Order adustments/mo.

Telephone, Mail, Fax, E-mail, Web

Customer Order Request (or Order Change Request)

Sales & Contract Review CP-7200

Quality Objective:
Orders entered same day received

Includes determination & review of:
- Identification of ordered products (& quantity)
- Delivery date
- Special product marking/labeling requirements (if any)
- Special packaging &/or shipping requirements (if any)
- Shipping & billing addresses & instructions

Customer Service enters order or change

Or

Order Form F-7201-01

Used only when the order entry system is not available (e.g. system down) & discarded once entered.

Order Entry Systems

Verbal Orders

Information entered into the system is repeated back to the customer to confirm.

Confirm verbal order/change with customer & correct, as needed

Other Orders

May includes checking appropriate sources or depts. (e.g. inventory, production, scheduling, etc.).

ERP/MRP Scheduler Etc.

Inventory

Can order or change be met?

No

Contact customer to adjust order/ change

Customer agrees to adjustment?

Yes

No

Metric:
Order adustments/mo.

Quality Objective:
Orders processed within 2 days of receipt

Yes

Accept (process) order in Order Entry System & confirm with customer

Order Entry Systems

Delete (cancel) order in Order Entry System

End

Notify appropriate areas

Order Entry Systems

ERP/MRP Scheduler Etc.

Order Fulfillment CP-7501

CP-7201	Rev.: 0	*Order Processing*	Owner: Cust. Serv. Mgr.
Effective Date: 01/01/08		*(Pinnacle Example)*	Page 3 of 4

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                        ┌──────────────────────┐
                        │  New Chemical Needed  │
                        └──────────────────────┘
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New Chemical Needed

Purchasing CP-7400

Contract or temporary personnel that use their own chemicals must obtain and provide MSDS

Requestor obtains MSDS for new chemical

MSDS → Obtained from chemical supplier via internet, mail, fax, etc.

Associate goes to dept. manager with:
- reason why new chemical is needed
- its intended use
- where chemical is going to be used
- planned quantity
- MSDS
- Vendor/Supplier

Env. Aspects, Objectives, Targets, & Programs ESP-4300

Manager reviews MSDS w/EMS team member

Environmental Aspect associated with the new chemical are considered

Acceptable? — NO → Find similar chemical that is environmentally friendly/acceptable

YES

MSDS → **Forwards MSDS to Plant Safety Rep. or EMS team member**

Plant Safety Rep. or EMS team member adds new chemical to SARA List → **SARA Chemical Inventory Log EF-4465-01**

Plant Safety Rep or EMS team member adds MSDS to Table of Contents and adds to all MSDS books. → **MSDS Table of Contents EF-4465-02**

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