CSCMP

Council of Supply Chain Management Professionals

The World's Leading Source for the Supply Chain Profession.™

CSCMP Suggested Minimum Supply Chain Benchmarking Standards

eBook Edition

- Develop Vision and Strategy
- Develop and Manage Products and Services
- Market and Sell Products and Services
- Deliver Products and Services
- Manage Customer Service
- Develop and Manage Human Capital
- Manage Information Technology
- Manage Financial Resources
- Manage Environmental Health and Safety
- Manage Knowledge, Improvement, and Change

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eBook Edition

Created and Compiled by
Supply Chain Visions
and CSCMP

ACKNOWLEDGEMENTS

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eBook Edition

INTRODUCTION

The Council of Supply Chain Management Professionals is dedicated to developing, advancing, and disseminating supply chain knowledge. During our research for the *CSCMP Supply Chain Process Standards* it became apparent that there was a lack of free and accurate cross-industry benchmarking data available to supply chain practitioners. CSCMP, in an attempt to fill this gap, is making available the suggested minimum process benchmarking data excerpted from the popular *CSCMP Supply Chain Process Standards, Second Edition.* CSCMP has developed the *CSCMP Suggested Minimum Supply Chain Benchmarking Standards—eBook Edition* available as a free download for to all supply chain practitioners.

It is our belief that making available a set of suggested minimum cross-industry process standard benchmarks will give supply chain managers a point of reference to benchmark their supply chains against what our research found to be common practice across a large sample of industries. Our goal is to help spark improvement initiatives that will make all industries more productive and enhance supply chain knowledge and awareness.

CSCMP will continue to provide supply chain research and tools to supply chain professionals. Those interested in further exploring benchmarking or who are interested in performing a self assessment can obtain the second edition Standards from CSCMP's bookstore.

USING THE CSCMP SUGGESTED MINIMUM SUPPLY CHAIN BENCHMARKING STANDARDS

This eBook is meant to be used as a reference tool to help companies identify common supply chain processes across a broad spectrum of their supply chain. CSCMP recognizes that not all industries are the same and compiled the Standards for general use by as many industries as possible. The Standards are intended to be used "out of the box" and they apply to most industries. Different industries, companies within the same industry, and even different locations of the same company may have practices which are best for them—but different from those used by others. The Standards are meant to be general guidelines to help companies assess their current processes. However, it should also be noted that no company should attempt to achieve best practice across all processes as this would be cost prohibitive. Companies need to determine which processes and attributes are essential to their industry and competitive strategy, and focus their energies on achieving best-practice goals in these areas, while maintaining minimum standards in all other applicable areas.

PROCESS CLASSIFICATION FRAMEWORK^SM (PCF)

The second edition of the *Standards* utilized the American Productivity & Quality Center (APQC) Process Classification Framework^SM (PCF) to present the suggested minimum attributes.

The PCF serves as a high-level, industry-neutral enterprise process model that allows organizations to see their business processes from a cross-industry viewpoint. This cross-industry framework has experienced more than 15 years of use by thousands of organizations worldwide, enabling companies to perform beneficial benchmarking.

The PCF was developed by APQC and its member companies as an open standard to facilitate improvement through process management and benchmarking regardless of industry, size, or geography. The PCF organizes operating and management processes into 12 enterprise level categories, including process groups and over 1,000 processes and associated activities.

OPERATING PROCESSES

1.0 Develop Vision and Strategy	**2.0** Develop and Manage Product and Services	**3.0** Market and Sell Products and Services	**4.0** Deliver Products and Services	**5.0** Manage Customer Service

MANAGEMENT AND SUPPORT SERVICES

6.0 Develop and Manage Human Capital

7.0 Manage Information Technology

8.0 Manage Financial Resources

9.0 Acquire, Construct, and Manage Property

10.0 Manage Environmental Health and Safety

11.0 Manage External Relationships

12.0 Manage Knowledge, Improvement, and Change

UNDERSTANDING THE PCF NUMBERING SCHEME

The Standards practice statements are mapped to the process and/or the activity level related to the supply chain. The PCF is a comprehensive framework that includes end-to-end business processes. CSCMP and the researchers have intentionally excluded processes and attributes not directly related to supply chain functions. For example, PCF section 11.0 Manage External Business Relationships, entails processes focused on investor, government, and other stakeholder relationships. These processes are not directly tied to the supply chain function, and the research team did not develop statements for them. There will be gaps in the outline numbering where these non-supply chain processes have been omitted. Also note that each PCF element has two numbers: a number used to locate the content within that particular framework (in the format 1.1.1.1), and a serial number (beginning with 10000) used to uniquely identify the process element across all of the various Open Standards Benchmarking Collaborative℠ (OSBC) research databases, which allow organizations to benchmark comparable business processes. For example, the process element "1.2 Develop Business Strategy (10015)" is uniquely identified by the serial number "10015" and the hierarchical reference number "1.2."

The Process Classification Framework℠ overview is available from APQC, and may be downloaded at www.APQC.org/pcf. Access to the Open Standards Benchmarking Collaborative℠ research is available at www.APQC.org/osbc.

RESEARCH METHODOLOGY

The Standards were compiled by Supply Chain Visions utilizing academic research, as well as on-site observations of companies in practice. In addition, a thorough validation process was used, where leading subject matter experts (SMEs) in the profession reviewed and validated the accuracy of the Standards.

The following are representative sources that were used to compile the Standards:

- White papers/case studies from companies specializing in benchmarking and best practices research, such as the Performance Measurement Group, Bain and Company, Best Practices LLC, and various universities, etc.

- Journals and trade magazines such as *Supply Chain Management Review*, *Journal of Business Logistics*, *Logistics Management*, *DC Velocity*, *Inbound Logistics*, *American Shipper*, and *International Journal of Logistics Management*

- Functional white papers from sites like WERC, APICS, American Productivity & Quality Center (APQC), etc.

- Site visits by researchers to over 250 locations to observe practices

This Minimum Standards edition of the CSCMP Supply Chain Management Process Standards covers a broad spectrum of supply chain processes and activities—derived from research into current cross-industry standards.

CSCMP worked with over 50 SMEs in developing the Standards, including academics, researchers, practitioners, and consultants who are widely considered experts in the field of supply chain management. The Standards truly represent a unique, broad-based, cross-industry repository of supply chain knowledge.

THE STANDARDS

THE STRUCTURE OF THE STANDARDS

The Standards are an assessment tool offering general guidelines on what is considered to be common and minimum practices, and are organized as follows:

- The Standards cover 10 of the 12 main categories in the PCF that are supply chain related or have processes that impact the supply chain:

1.0	Develop Vision and Strategy
2.0	Develop and Manage Products and Services
3.0	Market and Sell Products and Services
4.0	Deliver Products and Services
5.0	Manage Customer Service
6.0	Develop and Manage Human Capital
7.0	Manage Information Technology
8.0	Manage Financial Resources (limited to accounts payable and accounts receivable)
10.0	Manage Environmental Health and Safety (EHS)
12.0	Manage Knowledge, Improvements, and Change

- Each main category section is further organized by process groups—process groups in the PCF that are not supply chain related are not included.

- Process attributes are listed for each process or activity included in the Standards. Descriptions of the suggested minimum process standards are included.

The graphic on the next page illustrates how this reference book is organized.

TABLE 1: STANDARDS EXAMPLE

CATEGORY	PROCESS GROUP	
		SUGGESTED MINIMUM PROCESS STANDARD
1.0	**Develop Vision and Strategy**	
1.1	**Define the Business Concept and Long-Term Vision (10014)**	
1.1.1	**Assess the External Environment (10017)**	**Supply Chain Responsiveness** • Collaboration with key suppliers provides better visibility into supply-side processes. • Major supply chain risks are assessed. Informal process to plan for and manage risks is developed. • An ad-hoc review and assessment process is in place to identify supply chain related risk and sustainability. Process is typically reactive in nature, instead of proactive. • SWOT analysis is commonly used to assess external factors and internal responses.

PROCESS OR ACTIVITY
(X.X.X OR X.X.X.X)

Descriptions of Suggested Minimum Standard for the Process or Activity.

In some cases, specific metrics are presented in the Standards such as "two days" or "98%" to clarify uptime or accuracy. The metrics cited are typically well recognized as general "rules of thumb" across many industries. However, companies should recognize that these are general "rules of thumb," and are encouraged to seek out benchmark targets for their specific industry and organization. Since actual benchmark metrics are typically unique to particular industries, only general benchmark metric information applicable across many industries was included.

THE LINK TO APQC'S OSBC SURVEY AND METRICS

The Standards provide essential qualitative process data to perform assessment, analysis, and improvement efforts on core processes. However it is also important to review quantitative performance metrics for key processes as part of a comprehensive performance improvement effort.

To help achieve this goal, CSCMP chose to align the second edition of the Standards with the APQC Process Classification Framework[SM] (PCF) because it allows companies to access independent, cross-industry performance benchmark metrics. Built around the PCF, the APQC Open Standards Benchmarking Collaborative[SM] (OSBC) invites companies to participate in a performance survey that produces widely accepted performance metrics for their company, and comparative benchmark metrics for their industry.

The OSBC database contains hundreds of supply chain related measures and thousands of data points from over 7,000 organizations across the globe. Participation in the survey is free and confidential.

Each process in the Standards can be linked to key quantitative benchmarking metrics. Cross-reference tables linking OSBC metrics to PCF processes are available on www.APQC. org/measurematrix. APQC is continually renewing and expanding the depth and scope of the OSBC benchmarking database (www.APQC.org/osbc). All metrics are validated, normalized, and aggregated to ensure the data is relevant and accurate. The cost of the OSBC research program is underwritten by organizations that support the creation of common, open frameworks to measure business processes.

GLOSSARY OF TERMS

The second edition of the *Standards* include an exhaustive glossary of supply chain terms. This glossary can and should be referred to as a useful tool during a work-through of the *Minimum Supply Chain Benchmarking Standards*.

Operating Processes

		SUGGESTED MINIMUM PROCESS STANDARD
1.0	**Develop Vision and Strategy**	
1.1	**Define the Business Concept and Long-Term Vision (10014)**	
1.1.1	**Assess the External Environment (10017)**	**Supply Chain Responsiveness** • Collaborations with key suppliers provide better visibility into supply-side processes. • Major supply chain risks are assessed. Informal process to plan for and manage risks is developed. • An ad hoc review and assessment process is in place to identify supply chain related risk and sustainability. The process is typically reactive in nature, instead of proactive. • A SWOT analysis is commonly used to assess external factors and internal responses.
1.1.2	**Survey Market and Determine Customer Needs and Wants (10018)**	**Align Supply Chain with Customer Needs** • Structured market research is conducted to assess the supply chain needs of key customers. • Regional and key market and industry trends are gathered as part of the strategic planning process. The process is typically reactive to major market swings and is not proactive in nature. • Limited "what if" scenarios to market changes may be developed and used to model customer needs. • Marketing activities are linked to projected increased revenues, ROI, and other business results.
1.1.3	**Perform Internal Analysis (10019)**	**Analyze and Align Supply Chain with Strategy** • Budget/planning workflow processes are in place at the division and/or regional level. • Some planning/budgeting process flows have been automated, or utilize a well established process and analysis tools.
1.1.4	**Establish Strategic Vision (10020)**	**Disseminate Strategic Vision** • Documented supply chain strategy and vision are in place and communicated at senior management levels. The strategic vision is articulated in terms of external factors (suppliers, customers, competitors, and business environment), internal factors (core competencies and existing business portfolio), and the enterprise's values.
1.2	**Develop Business Strategy**	
1.2.1	**Develop Overall Mission Statement (10037)**	**Define Mission** • Management has a written vision, mission, and strategy. These statements have been communicated to the management team. • The enterprise has a formal business plan that defines what the firm will offer and how it will compete in the marketplace. • The formal business plan links external factors to internal competencies. • The mission statement describes what the enterprise does and which markets it serves. **Communicate Mission Statement** • Mission and vision statements exist, are generally communicated across the enterprise, and are used to drive planning and behavior.

		SUGGESTED MINIMUM PROCESS STANDARD
1.2.2	**Evaluate Strategic Options to Achieve the Objectives (10038)**	
1.2.2.1	**Define Strategic Options (10047)**	**Business Strategy** • The enterprise considers strategic options in developing an integrated business strategy. This includes elements of market strategy, financial strategy, supply chain strategy, sustainability strategy, global strategy, risk mitigation strategy, etc. **Supply Chain Strategy** • A high level supply chain strategy roadmap is in place. • The supply chain strategy is in sync with the overall business strategy and business plan.
1.2.2.2	**Assess and Analyze Impact of Each Option (10048)**	**Evaluate Strategy** • Supply chain strategy is re-evaluated as part of infrequent business reviews or driven by reaction to market conditions.
1.2.2.3	**Develop Sustainability Strategy (14189)**	**Sustainability** • Strategies are in the development stages, to build enterprise-wide sustainability awareness on energy conservation, environmental impacts, and carbon footprint. • A regional (or departmental) sustainability policy may be in a developmental or in early implementation phase. • Executive-level responsibility has been assigned for green supply chain planning and initiatives development. • Developing or implementing processes and tools to measure corporate sustainability initiatives. • There is awareness of regulations and reporting requirements in all operating geographies. • There is compliance with regulations on a regional basis. • A commercial rationale was established for the enterprise's sustainability strategy—i.e., does the firm make more money as a result or is the effort primarily for public relations? • Key suppliers are implementing sustainability measures and programs for their region. • Regulatory requirements such as Waste Electrical and Electronic Equipment (WEEE); Restriction of Hazardous Substances (RoHS); and Registration, Evaluation, Authorization, and Restriction of Chemical substances (REACH) are considered with respect to all geographies where production or distribution of goods may occur.
1.2.2.4	**Develop Global Support and Shared Services Strategy (14190)**	**Plan for Global Operations** • Workflows between operating locations and with suppliers/partners are understood and are coordinated by supplier and by region. • Executive owner(s) of corporate globalization strategy is (are) assigned. • An Enterprise Resource Planning (ERP) strategy is aligned with the globalization strategy, although it may not be fully implemented. • ERP implementations are well managed but regionalized versus global. • The enterprise is developing or implementing global standards for sustainability and environmental safety. Any current programs are managed regionally. **Plan for Shared Services** • Shared services may be used for some processes (typically financial support services).

		SUGGESTED MINIMUM PROCESS STANDARD
1.2.2.5	**Develop Risk Mitigation and Management Strategy (14191)**	**Risk Management Strategy** • Risk management policies are regionalized and regional teams develop, maintain, and control risk management policies and procedures. • There is an ongoing assessment of changing regulatory items that would materially affect the specific regional supply chain. • There is executive level commitment and ownership for risk management initiatives.
		Supply Chain Risk Management Strategy • Some collaboration with supply chain partners takes place to jointly identify supply chain risks. • Limited supply chain risk assessment metrics are in place. • Response and recovery plans (with potential backup carriers and suppliers) have been developed for high probability risks.
1.2.2.6	**Develop Continuous Improvement Strategy (14197)**	**Continuous Improvement Vision & Strategy** • The management team has accepted Lean as the primary methodology for continuous improvement—although it may not have taken full ownership in the vision of the Lean enterprise, but they are working on it.
		Management Commitment • Management is educated in Lean concepts and has made a decision to adopt the philosophy but has not set a formal process in place. • Lean is established in some parts (or regions) of the enterprise and is the preferred way the enterprise will conduct its business. • Management supports continuous improvement initiatives.
		Continuous Improvement Culture • Communication forums have been established to communicate lean concepts and to disseminate information on lean programs. • The need to change has been identified and communicated to the workforce. • A cultural change process has begun. • Floor level "change leaders" have been identified and are being educated on the need to change and how to effect change. • Six Sigma awareness is underway and at least one successful project has been completed. • A systematic approach for project identification has not been adopted. No formal program is in place.
		Continuous Improvement Infrastructure • The need to address infrastructure is recognized and has been communicated. • Infrastructure is under development to support lean initiatives. • Key personnel is identified both at the enterprise and process levels. • Champions have been identified.

		SUGGESTED MINIMUM PROCESS STANDARD
1.2.3	**Select Long-Term Business Strategy (10039)**	**Business Plan** • The business plan is consistent with the strategic objectives. To include market strategy, financial strategy, supply chain strategy, sustainability strategy, global strategy, risk mitigation strategy, etc. • A 3 to 5 year business plan is documented and is supported by key departmental and area plans.
1.2.4	**Coordinate and Align Functional and Process Strategies (10040)**	**Business Plan Alignment** • An annual, strategic plan is crafted using an informal process. • Management has a clear line of sight from vision to mission and from strategic initiatives to tactical objectives.
1.2.5	**Create Organizational Design (Structure, Governance, Reporting, etc.) (10041)**	**Organizational Design** • Methods exist (surveys, policies, etc.) for employees to provide feedback as to the effectiveness of the strategic plan and the effectiveness of management in this plan. • Management practices meet legal and ethical requirements.
1.2.6	**Develop and Set Organizational Goals (10042)**	**Set Organizational Goals** • Goals and objectives are performance oriented and revised as needed, based on events and plans.
1.2.7	**Formulate Business Unit Strategies (10043)**	**Business Unit Level Strategies** • Business unit strategies are developed within the framework of the strategic plan.
1.3	**Manage Strategic Initiatives**	
1.3.4	**Establish High-Level Measures (10060)**	**High-Level Metrics Alignment** • Critical success factors (CSF) are defined, performance is measured, and targets are set. • A top 10 list (or similar) drives functional behavior and enterprise goals. • Metrics are generally aligned to overall business strategy. • Key business processes are measured from a customer-facing orientation. • Progress toward the firm's overreaching strategic goals is monitored. **Balanced End-to-end Performance Measures** • A wide range of measures—crossing departmental and area boundaries—exist and are used by management to make informed decisions and track performance. • Process and results metrics are balanced to prevent sub-optimization. • Indexing or category measures are collected as needed. • Use of industry benchmarking takes place for selected KPIs and/or metrics.

		SUGGESTED MINIMUM PROCESS STANDARD
2.0	**Develop and Manage Products and Services (10003)**	
2.1	**Manage Product and Service Portfolio (10061)**	
2.1.2	**Define Product/ Service Development Requirements (10064)**	**Product/Service Improvement** • Product/service improvements are managed in the sales and operations planning processes. • There is ongoing evaluation and analysis of product/service versus the competition. • Performance metrics help drive product/service improvement priorities. • Regular forums are held to expose employees to product development information outside of their normal working environment. • There is some involvement with top tier suppliers, for development support of new products. **New Product Identification** • A long-range vision is in place for R&D and the enterprise. • There is clear R&D ownership of business results. • An effective design/configuration system is available to most client-facing employees. • Some customers and suppliers can access limited design/configuration data.
2.1.3	**Perform Discovery Research (10065)**	**Product Technology** • The current technology is generally sufficient to support current customer objectives. • Technology research is conducted during product development cycles, while leading edge or emerging technologies are infrequently implemented. • The enterprise uses a great degree of rigor in its new product development and research processes, and adheres to them thoroughly.
2.1.4	**Confirm Alignment of Product/Service Concepts with Business Strategy (10066)**	**Plan and Develop Products/Services** • There is little focus on sub-processes and cost to manufacture or support. • Product performance is the driver, but a focused effort is made to reduce time of development and overall cost. • New and existing products and services are designed or re-engineered in close partnership with customers, suppliers, and employees, with quality and safety being given appropriate weight with profitability. • Most customers perceive the enterprise to be proficient in configuration excellence. **Establish Development Product/Service Targets** • Design and overhead costs are generally allocated by product or service category. • New product/service ROI is calculated after initial start up and roll-out. • Target costs are routinely established for all new products or services. **Product/Service Offerings** • There is a range of modular products and services. • Some engineering is necessary to meet customer configuration requirements. • A full product/service menu is available to all clients, customers, and suppliers.
2.1.5	**Manage Product and Service Life-Cycle (10067)**	**Product/Service Life-Cycle Management** • Product/service life-cycle issues are managed in the sales and operations planning processes. • A plan for managing the various life-cycles of a product or service offering exists and is followed. • There is a multi-functional, coordinated approach to product launches and phase-outs.

		SUGGESTED MINIMUM PROCESS STANDARD
		New Product/Service Introduction • Some new products/services were introduced within the past 12 months. • Clear goals and measures exist for products and service introductions. • Models and prototypes are used to develop new products and services.
		Product/Service Management • The product/service offerings and range are well controlled. • There is a defined process used to update the range of products and services. • Contracts are created and managed based on accurate information about markets and costs. • Compliance standards are jointly created and communicated.
2.1.6	**Manage Product and Service Master Data (14192)**	**Product/Service Data** • Product/service availability data is fully available and integrated into an effective enterprise resource planning (ERP)/materials requirements planning (MRP) system. • A process exists to ensure data integrity and optimal availability. • Unique product identification exists at all packaging levels of the same physical product (e.g., pallet-quantity, shipping case, inner pack, and usage units). • There is use of industry standard product identification if it exists (e.g., Global Trade Identification Number or GTIN).
		Item Identification Standards • There is full use of the industry standards for item identification formats and numbers. • Industry standard item identification exists at all applicable packaging levels. • An "uniqueness management" function ensures that each item is uniquely identified and that item numbers are recycled appropriately. • Auto ID is used on all products shipped. All products are labeled with a machine readable, industry standard Auto ID scheme (1D barcode, 2D barcode, RFID, etc.). • Auto ID is used at all packaging levels.
2.2	**Develop Products and Services (10062)**	
2.2.1	**Design, Build, and Evaluate Products and Services (10080)**	**Product Engineering (Design)** • A formal product engineering process is in place. • A formal new product introduction (NPI) process is in place. • Feedback to the NPI process is at least minimally effective. • Mandatory and elective external reviews (legal, regulatory, standards, internal) are conducted. • Engineering and design processes are tightly and effectively integrated—even though they may employ different technology platforms across business units and/or external partners. • Product development has begun to form cross-functional development teams. • Most internal departments are represented, but customers and suppliers are not yet part of the team. • Most engineering personnel have been exposed to Lean, and costs and schedule adherence is becoming part of the key process metrics. • Individual departments cooperate as a cross-functional team, and fully communicate to design and introduce new products/services.

		SUGGESTED MINIMUM PROCESS STANDARD
		Design for Quality • Formal design processes are utilized. • Feedback loops are in place from manufacturing and customer service/support. • Quality defects are tracked and root-causes determinations are linked to product design and are reported to R&D.
		Collaborative Design • Product design processes exist with key suppliers. • Some supplier expertise is leveraged to design or refine products/services. • In some contract manufacturing relationships, the third party engineering team will drive new product development.
2.2.2	**Test Market for New or Revised Products and Services (10081)**	**Customer Partnership** • Customers are consulted about new products/services or requirements for current products/services. • Product concepts include customer specific packaging issues. • The first article inspection includes customer approval. • Customer feedback gained in customer satisfaction surveys is available to the design team. • End user feedback is used to close end-customer requirements gaps. • Focus groups used to understand/evaluate new and existing products. • Channel partner feedback is used to close end-distribution requirements gaps. • Minimal written agreement exists to identify risks, specify delivery and quality expectations, and protect both parties from inventory exposure.
		Identify Requirements Manage Design Changes • Considerations for packaging, distribution methods, and other unique requirements are created for each channel strategy.
2.2.3	**Prepare for Production (10082)**	**Design for Manufacture/Assembly (DFM/A)** • Customers and suppliers are involved in some designs—and some use of common manufacturing platforms. • Some supplier manufacturing partnerships are developed. • Assembly and manufacturing have limited input during the design process. • A feedback loop exists to the design team, to review manufacturing issues during production validation.

	SUGGESTED MINIMUM PROCESS STANDARD
3.0	**Market and Sell Products and Services (10004)**
3.2	**Develop Marketing Strategy (10102)**

3.2.3	**Define and Manage Channel Strategy (10122)**	**Marketing Strategy—Supply Chain Integration** • Marketing has a high degree of integration between product management and product planning. • Marketing strategy integrates with supply chain management, demand management, and sales/channel management—as well as participates in ongoing sales and operational planning activities. • Basic marketing is driven by the existing product strategy using techniques (such as segmentation), to drive customer communications strategy. • Reporting is available by segment and product family to determine successful penetration of these markets.
		Price/Profit Optimization • Formal pricing simulation is performed. • There is ongoing tracking of actual pricing-to-pricing plan, performance-to-plan, and analytics of variances for decision support.

3.3	**Develop Sales Strategy (10103)**

3.3.1	**Develop Sales Forecast (10129)**	**Sales Forecast** • Regular forecast reviews are performed with sales reps and line managers. • There is easy access to the sales forecast data, and the regionalized, or business unit level database. • Sales forecasts are in line with revenue forecasts. • Sales resource allocation may be based more on intuition than data or facts.
3.3.2	**Develop Sales Partner/Alliance Relationships (10130)**	**Manage Channel Partner** • A model of direct and indirect sales has been determined. • Product, price, customer, and inventory strategies have been determined for channel partners versus the enterprise. • The effective management of channel and partner programs takes place, for programs such as trade promotions and marketing events.
		Determine Structure and Strategy for Outbound Sales • The policy, process, and technology decisions necessary for the effective management of sales methods, technology, organizational structure, and partnerships have been made. • The channel sales strategy analysis reviews methods, process, locations, information sharing, best fit of product/service mix, what/when to outsource, how many channels to use, and what products to deploy through which channel. • There is minimal process support to manage outbound sales. Basic planning tools such as spreadsheets and contracts are used to manage processes and data.
		Manage Distribution Network • The sales plan is coordinated with outbound supply chain network planning and the creation of the distribution strategy—including a review of markets and customer/consumer models by geographic market sector. This drives the product family that should be the focus of a particular DC.

		SUGGESTED MINIMUM PROCESS STANDARD
3.5	**Develop and Manage Sales Plans (10105)**	

3.5.3	**Manage Customer Sales (10184)**	**Sales Process** • Marketing and sales have recognized the need for establishing customer service objectives and metrics in order to operate effectively. • Necessary relationships are pursued and developed with key customers. • Other enterprise departments are now considered an active part of the customer service organization. • Marketing and sales management is aware of the Lean movement and is interested.
		Managing Quotes and RFI/RFP • Formal processes are in place for managing routine customer quote requests. • Routine quotes are usually based on a cost-plus methodology. • Routine quotes incorporate supply availability within the enterprise—including manufacturing resources and materials. • Complex quotes and RFx response include the business owner (in addition to sales) at most levels of the new business acquisition process. • A profit and loss statement approach is structured for all new business. • Costs are based on standard estimates.
		Close the Sale • Profitability analysis always takes place before and during contract review and acceptance, using a structured process. • Profits for a segment/individual enterprise are the result of deducting direct labor, allocated support labor, and material costs from income, and are produced at least quarterly. • Implementation hand-offs from sales take place using an informal approach. • Project management is driven exclusively by business owners.
3.5.4	**Manage Sales Orders (10185)**	
3.5.4.1	**Accept and Validate Sales Orders (10194)**	**Order Receipt** • There is the capability to receive and process customer orders by phone, fax, e-mail, and electronic data interchange (EDI). • Customer service representatives (CSRs) have the language skills required to support selling geographies. • There is an export order check for denied parties.
		Order Validation • There is a manual or automated verification of credit against predetermined levels maintained in a common database. • The manual or automated verification of orders takes place against denied parties lists for export compliance. • Customer eligibility verification takes place for purchases of specified SKUs, with customer/SKU lists maintained in a common database. • Customer allocation is based on predefined business rules. • A pricing model is developed and applied to all products and services.

		SUGGESTED MINIMUM PROCESS STANDARD
3.5.4.2	**Collect and Maintain Customer Account Information (10195)**	**Customer Data Management** • Customer data is available from multiple systems/sources for integrated processing. • Analysis requires extraction from more than one system/source. • Any safeguards against corruption are largely manual. • The offline data management process ensures all customer data is current and accurate before processing. • Database errors found in customer data are corrected as they are found for future use. • Internal applications use common customer data, but may not be directly interfaced and may require extraction and "upload." • There is a simple customer master with fixed attribute allocation. • Data integrity is checked regularly. • The data management process ensures all data has been checked for accuracy before entry. **Application of Customer Data** • A common suite of reports is produced offline. • Specialists are required to create new or automated reports.
3.5.4.3	**Determine Stock Availability (10196)**	**Available to Promise (ATP)** • A manual check of product availability is based on a common inventory database. • A manual allocation of inventory is done against an order.
3.5.4.4	**Determine Logistics and Transportation (10197)**	**Transportation** • The transportation mode and carrier are selected based on service level requirements, routing guides (if applicable), and product characteristics. • Product installation is scheduled with engineering/CSRs if necessary.
3.5.4.5	**Enter Orders Into System and Identify/ Perform Cross-Sell/Up-Sell Activity (10198)**	**Order Entry** • Orders are entered into a single database for all operators at a given region (Europe, Asia Pacific, etc). • Price lists are updated regularly for manual price confirmation. • Web-based order entry is available for select trading partners. • All pertinent dates and times include local zone or GMT flags for processing center, shipping, and customer locations. • Employees are empowered to present customers with cross-sell and up-sell opportunities. **Customer Order Entry (e-Commerce)** • The e-Commerce offering is reliable and responsive to customer requirements. • A client or customer web interface is easy to find and use. • The web interface is usually available, with low downtime. • Although novice web users may need some help, experts manage web entry satisfactorily. **Order Processing** • All orders are entered into the system on the same day, if the order is received before 2pm local time (actual time is industry dependent).

		SUGGESTED MINIMUM PROCESS STANDARD
		Order Confirmation • Manual order confirmation is faxed or e-mailed to customer—within the same day of order receipt, if received before local time 2pm, or 10am next day if received after 2pm—confirming requested date or advising best possible date based on shipment and transportation standard (cutoff times for order receipt determined by industry norms). • Confirmation documents are generated in local languages as required.
3.5.4.6	**Process Back Orders and Updates (10199)**	**Backorders** • A process is in place to advise the customer on or before scheduled ship date if the ship date slips more than one day. • Customer teams have visibility into customer backlog, order status, scheduled shipments, customer segmentation, customer profitability, customer credit history, and current customer inventory positions. • The tracking and reporting of the actual ship date is against planned ship date and customer requested delivery date.
3.5.4.7	**Handle Order Inquiries Including Post-order Fulfillment Transactions (10200)**	**Order Monitoring** • All queries from customers receive an initial response within 2 hours, and closure within 24 hours. • Customer focused teams provide streamlined and dedicated response to major accounts for customer inquiries.

	SUGGESTED MINIMUM PROCESS STANDARD
4.0	**Deliver Products and Services**
4.1	**Plan for and Acquire Necessary Resources (Supply Chain Planning) (10215)**
4.1.1	**Develop Production and Materials Strategies (10221)**

4.1.1.1	**Define Manufacturing Goals (10229)**	**Manufacturing Strategy** • The enterprise has defined and implemented a production philosophy appropriate to their market(s) and products. • Market requirements are validated for financial feasibility and other metrics, such as market share by market. • Management understands the financial requirements and commitments in all functional areas. • Buffer requirements exist to support design, and build and go-to-market are understood.
4.1.1.2	**Define Labor and Materials Policies (10230)**	**Labor Policies** • Labor policies meet all local regulations (i.e., Fair Labor Standards Act of the United States, Employment Rights of Europe). • Labor policies are in line with corporate strategy.
		Material Policies • Materials management staff is educated in Lean concepts and has made a decision to adopt the philosophy. • Materials management stresses common material usage across product designs. • Standardized material handling equipment is used to move materials through the supply chain.
4.1.1.3	**Define Outsourcing Policies (10231)**	**Outsourcing Policies** • Outsourcing is utilized for non-strategic processes or activities, or with business processes where performance is subpar and non-core. • Key stakeholders are involved with outsourcing decisions before and after outsourcing. • Outsourcing contracts are initiated for any outsourced manufacturing/warehousing required to support peak demand cycles. • Outsourcing contracts allow for variable rates and service levels to support changes in volume.
4.1.1.4	**Define Manufacturing Capital Expense Policies (10232)**	**Manufacturing Capital Expense Policies** • A simple return on investment (ROI) calculation is utilized. • Typical payback occurs within a two- to three-year period. • Metrics used are net present value (NPV) and internal rate of return (IRR). • Strategically important projects are assessed using a lower hurdle rate than a tactical project that focuses on immediate savings opportunities.
4.1.1.5	**Define Capacities (10233)**	**Capacity** • There is a general understanding of maximum capacities by product/product family/process type at each facility or installation. • A standard process exists for examining new capacity requirements.

		SUGGESTED MINIMUM PROCESS STANDARD
4.1.1.6	**Define Production Network and Supply Constraints (10234)**	**Define Constraints** • Annual reviews use total cost of goods sold (COGS) for in-house manufactured items and total cost of acquisition for sourced items. • The margin contribution on make vs. buy is considered in the analysis.
4.1.1.7	**Define Production Process (14193)**	**Production Process** • All procedures/forms are documented and are available to all operators (posted or displayed as required). Paper forms are primarily used. • The work sequence is defined and routinely followed; however, detailed work instructions must be read to understand the sequence (no visual cues). • Some visual control techniques are utilized. Supervisors can tell when the work area is not running properly. • Support processes (HR, IT, legal, finance, etc.) operate independently, but effectively enable production and delivery. • Clear routine instructions are posted for workers. • Reliance is on supervision to monitor progress, and prioritize and manage exceptions. • Small batches tend to feature moderate work in progress (WIP). • Operators are directed to move to bottleneck areas. • Most jobs within the cell or work processes are adequately covered through multi-skilling. • The norm involves training for mastery of more than one job.
		Production Process Alignment • Internal processes are aligned for best results. • Internal and external processes are aligned to coordinate such issues as inbound receiving and manufacturing requirements (pull to point of use versus put-away, etc.). • Workplaces are clean and orderly. • Set-up time is consistently measured—with some internal and external separation occurring.
		Production Process Control • A certified operator or a similar program is in place. Self-verification by certified operators is not re-checked at a later time. • Statistical methods are widely used to track critical processes and performance trends.
		Production Change • Changeover methods are analyzed and understood. • All extraneous activities are completed during run time. • Most internal processes run smoothly. • Formal processes are in place to manage and implement engineering change orders (ECO)/engineering change notifications (ECN). • First article inspection ensures that product/service and service quality are consistently right the first time after changeovers.
		Cell/Shop Floor Performance Measures • Productivity metrics and KPIs are utilized. • Visible performance measures are published in the cell/shop floor with management triggering improvements. • There is some ownership of applicable measures. • Action plans are in place to correct deficiencies and improve performance with management triggering improvements.

		SUGGESTED MINIMUM PROCESS STANDARD
4.1.1.8	**Define Production Workplace Layout and Infrastructure (14194)**	**Workplace Design** • Machines are arranged by families of product—but perhaps not in cellular fashion. • Customized work aids help reduce physical and workplace stress. • Safety teams evaluate work environments based on Occupational Safety and Health Administration (OSHA) standards, and lost time reports. • The design utilizes available space and capacity. • Manufacturing or service delivery layout is aligned to maximize product/service flow and process flow. • Workstations are integrated into process flow. • Material handling and distance traveled are minimized but not fully streamlined. • Some equipment has poka-yoke (mistake-proofing) devices installed with operators trained on functionality and corrective action. **Workplace Layout** • Standard work aids are employed to reduce physical demands (including physical, visible, and audible stress). • The layout is aligned with the process flow to minimize material travel time. • Workstations are integrated with the manufacturing flow. **Manufacturing Capability** • The enterprise is usually capable of supporting required configurations and designs. • A bill of material reduction efforts may be underway, but is typically incorporated after the design process. **Plan and Manage Customization and Postponement Operations** • Final assembly and packaging for low volume and build-to-order products are delayed until orders are received. • Products are designed for rapid configuration and assembly/build to order. • Parts are held in kits but not organized around order-of-use. • Common use items are stored in bins common to many work areas, with operators responsible for identifying/selecting the proper items from these common bins.
4.1.2	**Manage Demand for Products and Services (10222)**	
4.1.2.1	**Develop Baseline Forecasts (10235)**	**Forecasting Methodology** • Simple processes are used to modify historic demand. • Market intelligence is updated based on monthly reports from field personnel, customers, and suppliers. • Appropriate methods are used to develop forecasts at the lowest level product, component, or ingredient. • All data sources are evaluated for accuracy. • The ability exists to forecast based on attributes (volume, quantity, frequency, period, SKU, and geographic location). • Historical and other methods are used to evaluate approaches—forecast accuracy, use of proper patterns and algorithms, etc.

		SUGGESTED MINIMUM PROCESS STANDARD
		Demand Forecasting • Incremental technology changes are used to improve stable planning processes. • Specific responsibility is assigned for management of the forecasting process. • Robust market intelligence (rather than simple shipment data) is used to develop a long-term operational forecast. • Planned changes in products, services, pricing plans, and promotions are considered in the forecast. • A single demand forecast is created with inputs from multiple roles within the organization. • Structured market research is conducted incorporating the needs of potential new markets and customers. • Planned new products (including competitor products) are included in the market research studies.
4.1.2.2	**Collaborate with Customers (10236)**	**Market Forecast** • There is limited collaboration with channels and customer plans to move non-performing products. • The forecasting process is not given high priority in the business. • Sales volume for specific key customers or channels is considered in the forecasting process. • Trading partner inventories are estimated from available data, and considered during demand planning.
4.1.2.3	**Develop Consensus Forecast (10237)**	**Consensus Forecast Process** • The short-term portion of the forecast is reviewed at least weekly. • Methodologies used for consensus planning helps to reconcile conflicts between data sources. • Consistency is maintained between the financial budget, forecast, and operating plan.
4.1.2.4	**Allocate Available to Promise (10238)**	**Allocate ATP** • Accurate ATP product data is available within each business unit and is used to determine product availability for demand. • Determine share of scarce inventory to channels and customers.
4.1.2.5	**Monitor Activity Against Forecast and Revise Forecast (10239)**	**Forecast Revisions** • Forecast demand is offset/blended with actual demand, and used to drive operations. • The production/distribution schedule and staffing is updated weekly or daily with actual demand depending on volatility. • Market intelligence is processed, analyzed, and disseminated on a timely basis.
4.1.2.6	**Evaluate and Revise Forecasting Approach (10240)**	**Forecast Process Improvement** • Demand planning is utilized to maximize the percentage of orders complete and on time, with the least amount of inventory required. • The ability exists to assess consumption rates, mix, re-order, and safety stock levels within the forecast.
4.1.2.7	**Measure Forecast Accuracy (10241)**	**Measure Forecasting Accuracy** • Performance is measured against forecast (accuracy, skew, and stability). • A thorough history is maintained for comparison purposes. • Ability to measure forecast accuracy at the SKU level.

		SUGGESTED MINIMUM PROCESS STANDARD
4.1.3	**Create Materials Plan (10223)**	
4.1.3.1	**Create Unconstrained Plan (10242)**	**Unconstrained Forecasting Process** • There is a coordinated functional approach to satisfying market requirements. • The unconstrained forecast is agreed on through a consensus process—the financial forecast may be a variation on the operational forecast.
4.1.3.2	**Collaborate with Supplier and Contract Manufacturers (10243)**	**Supplier Collaboration** • A formal supplier relationship management (SRM) program is in place with designated supplier managers who communicate regularly with their suppliers. • A performance management program has been developed with input from the suppliers. • There is collaboration with tier 1 suppliers on short- and long-term item requirements and forecasts. • Supplier ratings tied to service level agreements include: availability, quality, and other criteria. • The financial condition of key suppliers is monitored.
4.1.3.3	**Identify Critical Materials and Supplier Capacity (10244)**	**Identify Capacity Constraints** • Formal monthly meetings are held to address business performance issues and link business strategy to operational capabilities.
4.1.3.4	**Monitor Material Specifications (10245)**	**Manage Material Specifications** • Standardized processes for releasing designs from engineering to procurement are in place. • There is a single source of information for detailed, material data with easy access for engineers and procurement, in order to find existing material specifications. • There is monitoring of material detail (content and activity) as it impacts regulatory, safety, and other key concerns. • There is rationalization of materials to a common set of specifications to reduce proliferation of SKUs. • There is reuse, when possible, of existing materials in new designs to improve quality and to speed time-to-market.
4.1.3.5	**Generate Constrained plan (10246)**	**Constrained Forecasting Process** • A single number operational forecast is agreed on by consensus process and drives all functional responses. • A plan exists to ensure that product and service flows remain uninterrupted in the event of unforeseen events. • Surge capacity partners exist in case of demand upsides, seasonal upside, etc.
4.1.3.6	**Define Production Balance and Control (14196)**	**Production Balance** • Cell or line bottlenecks are quickly addressed and resolved by management, while inventory buffers exist between tasks. • The work level is relatively smooth but may not match sales mix.

		SUGGESTED MINIMUM PROCESS STANDARD
4.1.4	**Create and Manage Master Production Schedule (10224)**	
4.1.4.1	**Generate Site Level Plan (10247)**	**Production Scheduling** • Proactive demand management balances high customer service and manufacturing efficiencies, while minimizing inventory costs. • Flexible manufacturing allows fast ramp-up and/or ramp-down to meet spikes and drops in demand. • Small batches and short lead times exist. • Production runs to within 20% of established Takt time.
4.1.4.2	**Manage Work-in-Progress Inventory (10248)**	**Work-in-Progress** • WIP targets are established for inventory turns and WIP levels. • WIP is monitored daily through system tools against targets and demand. • A cycle time reduction plan is implemented with specific, tracked goals.
4.1.4.3	**Collaborate with Suppliers (10249)**	**Supplier Support—Production Scheduling** • Demand plans are shared with suppliers on an agreed schedule or when upside or downside flexibility agreement is violated.
4.1.4.4	**Generate and Execute Site Schedule (10250)**	**Execute Production Schedule** • Production schedules are kept current and accurate. • Scaled business rules prevent the interruption or change of the production plan, unless approved by upper level management, and based on a hierarchy of the change cost/benefit impact.
4.1.5	**Plan Distribution Requirements (10225)**	**Manage Distribution Requirements** • Available inventory is allocated to customers based on committed forecasts. • In-transit inventories are shown in the system with expected arrival dates. • There is the ability to allocate in-transit inventories. • It is possible to view end-to-end inventory while providing available-to-promise. • There is a manual process and review which flags and notifies when the forecast consumption rate is higher or lower than the configured allowable rate. • Data required to manage distribution is maintained on the system of record. • The approach for managing transportation is defined, and outsourced or managed via in-house capability. There may be a combination of select outsourcing with some in-house. • There is a defined 3PL or carrier selection process based on cost, performance, quality, customer requirements, and business KPIs. **Reorder Execution** • Reorder is based on simple planning systems is effectively supported by appropriate control techniques. • MRP system requirements are based on minimum lead time, customer order, and forecast horizons. • MRP parameters are regularly reviewed and agreed to. • Reorder points are adjusted based on performance—at least 2 times per year.

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4.1.6	**Establish Distribution Planning Constraints (10226)**

4.1.6.1	**Establish Distribution Center Layout Constraints (10267)**	**Distribution Center Management** • Lot size and release cycles are optimized for storage space. • Cross-docking operations replace traditional warehousing where feasible. • Space lighting is activated only when space is in use.
4.1.6.2	**Establish Inventory Management Constraints (10268)**	**Inventory Management** • All inventory decisions are made with full knowledge of relevant costs and associated risk. • Inventory turns tracked for monthly review and adjustment. Inventory levels are set at least twice a year. • Excess and obsolete inventory is reviewed regularly at the part number level.
4.1.6.3	**Establish Transportation Management Constraints (10269)**	**Transportation Management** • Transportation spend is tracked and managed regionally. • The documented process (regional) to manage transportation includes inbound, outbound, and freight payment. • Routing guides consider total landed costs (by source, by lane, by product), service level requirements, carrier performance requirements, and carrier contract terms. • A process is in place to control inbound transportation based on the potential for economies of scale, carrier/3PL contract terms, and on the availability of systems to plan, monitor, and proactively manage inbound flow from suppliers. • Review and revise carrier contracts at least annually, or when major changes in the supply chain occur.
4.1.7	**Review Distribution Planning Policies (10227)**	**Distribution Network** • Basic network modeling is performed on an infrequent basis—typically as part of a larger cost savings initiative. • Network optimization is focused on transportation costs, labor costs, and overhead costs. • A project-based process is in place to capture transportation network cost data and route data (possibly through third party systems). **Deployment Policies** • There is regular exchange of supply chain information between supply chain members (i.e., e-mails, reports, calls). • Appropriateness of control techniques (make to stock, make to order) is reviewed regularly to reflect changes in demand patterns and capacity availability. • Delivery, lead time, and inventory levels are rationalized and optimized with parameters being regularly reviewed and updated. • Products are classified and managed in tiers according to volume and variability of ABC classification. • Demand management policies are established to help balance customer service and distribution system costs. • 3PL or other outsourced warehousing space is used for cyclical peak demand storage.

			SUGGESTED MINIMUM PROCESS STANDARD
4.1.8	**Assess Distribution Planning Performance (10228)**		**Distribution Planning Performance** • DC managers should have key metrics at their fingertips—such as units moved per man hour, orders unfulfilled on time, the age of unfulfilled orders, and costs per unit moved. • Data is collected and analyzed for better configuring of slotting, labor planning, etc. • Selected distribution center KPIs are benchmarked to industry exemplars. • Visibility into warehouse operation status, costs, inventory availability, and cycle times are accessible to order takers upstream to improve order promising and order profitability decisions.
			Distribution—Supplier Performance • Key suppliers are engaged to provide input on configuration of the distribution network. • Suppliers have incentives to forward ideas that might yield mutual benefits. • Joint improvement initiatives improve supply performance against targets for top tier suppliers. • Supplier performance is tracked and shared. • Collaborative targets are set with key suppliers.
4.1.9	**Develop Quality Standards and Procedures (10368)**		
4.1.9.1	**Establish Quality Targets (10371)**		**Quality Deployment** • Effective supplier quality assurance procedures are in place. • Performance metrics include quality, cost, time, and service. • Operations functions develop their own quality results. • The quality department is a resource. • Management is involved in major quality initiatives. • Metrics are reviewed and targets are challenged regularly.
4.1.9.2	**Develop Standard Testing Procedures (10372)**		**Testing** • Product/service quality is verified prior to shipping. • Service quality is monitored and controlled. • Quality process is owned by a quality assurance entity with authority to establish standards, verify compliance, and initiate corrective action. • Quality process/inspection existing from inbound receiving through the whole manufacturing process. • Work center performance is reviewed for waste, quality, etc. • Quality teams are utilized.
4.1.9.3	**Communicate Quality Specifications (10373)**		**Supplier Quality Specifications** • Each product has documented specifications and quality requirements. • Product management works with the supplier to establish product quality standards during the new product introduction cycle. • Some key suppliers are asked to assume responsibility for quality assurance before the product leaves the supplier's facility.

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4.2	**Procure Materials and Services (10216)**
4.2.1	**Develop Sourcing Strategies (10277)**

4.2.1.1	**Develop Procurement Plan (10281)**	**Procurement Strategy** • Minimum requirements are defined for procurement consistent with the enterprise's strategy. • Current spend by individual category is understood and tracked. • There is an assigned owner for each material category based on use and knowledge. • Potential suppliers for a category may include current providers and new providers. • The fundamental financial viability of all suppliers is regularly assessed. • The enterprise leverages buys by reducing the number of suppliers (selective use of single-supplier solutions). • The enterprise centralizes electronic procurement systems at the regional or business unit level. • Purchasing strategies may be centralized at the regional or business unit level. • Benchmarks are used when setting sourcing strategy. • Suppliers are notified about Lean, changes that are going to take place, and the probable impact to current supplier relationships. **Procurement Execution** • Group buying agreements are in place for high value/strategic materials. • Multiple facilities/organizations pool commodity purchases internally to gain leverage. • Outsourcing is utilized for non-strategic applications. **Supplier Consolidation Plan** • Sole source (or primary source) provision of components/items are enforced but only to the limit of a supplier's capacity. • Backup source(s) for components/items identified (may or may not be pre-qualified) and volumes quantified. • Supplier metrics are visible and used in supplier selection and buying decisions, volumes are consolidated with top performing suppliers.
4.2.1.2	**Clarify Purchasing Requirements (10282)**	**Purchasing Function Effectiveness** • A balanced scorecard approach to supplier management is used.
4.2.1.3	**Develop Inventory Strategy (10283)**	**Inventory Strategy** • Stock levels are set according to planned, buffered analysis techniques and reviewed frequently against forecasts. • Stock levels are based on customer service requirements (e.g., ABC classifications and statistical safety stock-setting rather than nominal weeks of supply). • Stock levels are reviewed frequently against forecasts. • Service levels are measured, and stock levels adjusted to compensate if necessary. • Service levels are set taking into account the costs and implications of stock outs. • There is the ability to determine safety stock targets for inventory at critical nodes in the supply chain. • The ability exists to replenish inventory into distribution buffers based on customer demand. • Inventory is managed by product and product groups. • Supplier and buyer partners are involved in the coordination of inventory in the supply chain.

		SUGGESTED MINIMUM PROCESS STANDARD
4.2.1.4	**Match Needs to Supply Capabilities (10284)**	**Supplier Capability** • There is a clear understanding of supplier capacity reflected in lead time and volume constraints within the buying system.
4.2.1.5	**Analyze Company's Spend Profile (10285)**	**Spend Analysis** • Quality and price are considered the key components of cost, but other variables—such as lead time variability, on-time delivery, assured source of supply, damage avoidance, etc.—are also considered. • Analysis of price includes logistics costs including inventory carrying cost over the life of the product (especially for major equipment).
4.2.1.6	**Seek Opportunities to Improve Efficiency and Value (10286)**	**Supplier Improvement** • Supplier scorecards that identify the total cost of acquiring, using, and disposing of suppliers' products are used to identify top and marginal performing suppliers. • Cost breakdowns are shared with suppliers to identify cost reduction opportunities. • Justifiable price increases are applied to only the appropriate portion (material, labor, logistics, etc.) of cost. A cost benefit analysis of the changes is performed. • Processes and applications are shared with suppliers to leverage their expertise. • Quality and process expertise is applied as problems occur. • Joint service agreements with suppliers include key metrics on which supplier will be judged.
4.2.1.7	**Collaborate with Suppliers to Identify Sourcing Opportunities (10287)**	**Supplier Involvement** • Suppliers are a valued source of information when investigating new or alternate sources of supply and services. • Positive relationships with suppliers are maintained using a "win-win" philosophy. • Supplier relationships are differentiated based on strategic value. • Contact exists at all levels with regular visits to the enterprise and supplier factories. • Annual supplier conferences recognize performance and share corporate goals and objectives.
4.2.2	**Select Suppliers and Develop/Maintain Contracts (10278)**	
4.2.2.1	**Select Suppliers (10288)**	**Supplier Selection Criteria and Process** • Selection criteria are defined prior to the RFI/RFP process. • The supplier selection process for key suppliers considers establishing long-term partnerships to secure supplies at low cost, short lead time, and flexible supply. • A supplier capacity analysis of specific areas of capability is performed. • Supplier evaluation includes a full review of the financial condition and stability of the supplier. • Cross-functional teams are involved in sourcing decisions, with the buyer negotiating contracts. • Buyers have the responsibility for re-assessing sources of supply.
4.2.2.2	**Certify and Validate Suppliers (10289)**	**Supplier Certification and Audit Process** • Supplier certification programs are used and enforced. • Supplier capacity and capability are regularly evaluated to ensure a good match to requirements. • Supplier financial strength, (i.e., Dun & Bradstreet rating) is regularly evaluated to ensure supplier viability. • The supplier is evaluated on its ability to meet appropriate industry/federally required standards (may or may not require registrations).

		SUGGESTED MINIMUM PROCESS STANDARD
4.2.2.3	**Negotiate Contracts (10290)**	**Contract Negotiation** • Contracts with long term suppliers are based on total cost of acquisition. • An established, regular contract review process is used to update the contract with changing technology and/or changes in regulation. • Contracts mandate cost improvements and service level improvements (balance cost and value received), over time using "continuous improvement" language.
4.2.2.4	**Manage Contracts (10291)**	**Contract Management** • Long-term agreements in place allow for annual or multi-year contract pricing and purchase orders, allowing the enterprise to reduce the total cost of ordering. • There are clearly defined key contract support drivers with established KPIs. • Standardized contracts are in use across enterprises and categories to ensure consistency and increase speed of contracting.
4.2.3	**Order Materials and Services (10279)**	
4.2.3.1	**Process/Review Requisitions (10292)**	**Process Requisitions** • System generated purchase orders (PO) bypass the requirement to generate and review purchase requisitions. • Simplified procurement requisition processes are in place to free up buyers to make strategic buys. • A standardized requisition review functions across the entire purchasing organization. • A MRP system is used to gain better visibility of purchasing requirements. • A well-documented procurement policy is in place.
4.2.3.2	**Approve Requisitions (10293)**	**Authorization of Discrete Purchases** • Procedures are defined to allow purchases to be authorized by individuals, buyers, or management depending on cost. • Purchase authorization is based on a formal set of business rules.
4.2.3.3	**Solicit/Track Vendor Quotes (10294)**	**Manage Quotes** • Auctions are used (where practical) for indirect material and commodity items. • There is a formal process to solicit, track, and review commodity quotes from the existing supply base (approved supplier list). • A formal policy defines procurement ethics and behavior with suppliers.
4.2.3.4	**Create/Distribute Purchase Orders (10295)**	**Manage Purchase Orders** • Blanket purchase orders cover period requirements. • Call-off orders against blanket PO are generated automatically based on periodic demand. • A clear understanding of supplier capacity is reflected in lead time and volume constraints at time of order placement. • Buyer has responsibility for administration of POs.
4.2.3.5	**Expedite Orders and Satisfy Inquiries (10296)**	**Purchase Order Expediting** • Expediting processes are in place. • Schedule and/or forecast changes drive the expediting (and de-expediting) process. • Reasons for PO expediting are tracked and corrective/preventative action is taken to address the cause, in order to reduce a reoccurrence.

		SUGGESTED MINIMUM PROCESS STANDARD
4.2.3.6	**Record Receipt of Goods (10297)**	**Goods Receipt** • Accounting principles are followed (for the regions/geographies where business is performed). • Balances are reconciled to the supporting documentation at month end close. • Post goods receipts are reconciled on a monthly basis.
4.2.3.7	**Research/Resolve Exceptions (10298)**	**Exceptions Management** • Supplier compliance procedures have been adopted and enforced within the enterprise. Suppliers follow compliance processes. • Compliance procedures have been adopted and are enforced to address internal issues and exceptions. • Receiving errors are tracked and corrective actions are initiated with suppliers and internal personnel.
4.2.4	**Appraise and Develop Suppliers (10280)**	
4.2.4.1	**Monitor/ Manage Supplier Information (10299)**	**Supplier Information Management** • Supplier data integrity is checked regularly. • The supplier data management process ensures all data has been checked for accuracy before entry. • Errors found in supplier data are corrected, as found. • Safeguards against data corruption are largely manual, through periodic review projects and data correction projects. • A standard statement of work (SOW) is used for major suppliers, but not for all. • A locally-created statement of work is normally used.
4.2.4.2	**Prepare/Analyze Procurement and Vendor Performance (10300)**	**Supplier Performance Evaluation** • There is a regular forum (such as a quarterly business review) for performance evaluation using jointly determined criteria of cost and service. • Reporting requirements are established and understood by all parties. • A range of performance metrics are set, tracked, and communicated. • Suppliers are recognized and rewarded for achievement. • Suppliers are measured against published performance targets. • Suppliers are benchmarked to evaluate process waste and leverage opportunities. • Supplier ratings are tied to service level agreements which include: availability, accuracy, timeliness, quality, and other criteria. • Simple supplier scorecards are used to evaluate supplier performance (reviewed quarterly or annually). Scorecards are constructed to minimize "gaming" by either party. **Supplier Audit** • The quality (or supplier quality) department facilitates regularly scheduled supplier audits for key or critical suppliers. • Supplier performance is audited by parties who are not a part of the supplier negotiation and approval process. • Problems encountered during the audit process are usually addressed and fixed quickly. **Procurement Performance Evaluation** • Procurement key performance indicators (KPIs) are in place and tracked.

		SUGGESTED MINIMUM PROCESS STANDARD
4.2.4.3	**Support Inventory and Production Processes (10301)**	**Inventory Replenishment** • Inventory replenishment promises are standardized across the enterprise. • Factory floor data is collected and used in collaboration with suppliers.
4.2.4.4	**Monitor Quality of Product Delivered (10302)**	**Product Quality** • A fully documented supplier audit process exists and is supported by effective training, measurement, reporting, and action processes. • A "one size fits all" supplier audit system is used with standardized audit questions and techniques. • Third party auditors are used to supplement the audit staff and suggest improvements. • On time delivery and quality of supplier supplied parts and services is tracked and data is used in supplier reviews. • Late or incomplete shipments and/or shipments with defects are within established parameters. • Product management works with the supplier to establish root causes for defects and to determine an appropriate solution to reduce/eliminate the problem, preventing a reoccurrence.
4.3	**Produce/Manufacture/Deliver Product (10217)**	
4.3.1	**Schedule Production (10303)**	**Production Scheduling** • Cycle times are known and work is being performed toward establishing standard work and cycle time targets. • Demand has been synchronized with manufacturing execution. • MRP systems support production scheduling. **Production Release** • Lot size and order cycle have been optimized for capacity and materials availability. • Lot sizing policies such as fixed order quantity (FOQ), lot-for-lot (LFL) and period order quantity (POQ) are regularly used. • Automated WIP limiting tools are utilized.
4.3.2	**Produce Product (10304)**	
4.3.2.1	**Manage Raw Material Inventory (10310)**	**Manage Raw Material** • Pull/Kanban systems are used in the manufacturing processes to improve inventory and to reduce order cycle time.
4.3.2.2	**Execute Detailed Line Schedule (10311)**	**Execute Production Schedule** • Employees self-sequence their work activities. • Management regularly reviews progress against schedules. • Alerts or alarms exist to warn of potential to miss deadlines. • Employees typically rely on supervisors to manage exceptions. • Schedule changes are communicated appropriately. • Enterprise resource planning systems are in use to support scheduling.

		SUGGESTED MINIMUM PROCESS STANDARD
4.3.2.3	**Rerun Defective Items (10313)**	**Manage Defective Material** • Defective materials discovered during the manufacturing process can be tracked to the supplier and supplier PO. • Defective materials are returned to the supplier and product costs are recovered. • Defective materials are returned within the supplier warranty/returns agreement so that the full value of defective materials is recovered. • Total Quality Management techniques are applied to reduce defects and costs related to scrap and rework.
4.3.2.4	**Assess Production Performance (10314)**	**Production Performance Measurement** • Production performance measures are published with supervision, generating most improvements. • Data collection and analysis occurs at the front line and on a timely and regular basis. • Production performance data is generally used to detect substandard performance or variances in certified processes or practices. • Quality circles or work cell teams work under management supervision on process upgrades based on customer performance goals and the enterprise's goals (e.g., setup times, various manufacturing costs). **Production Process Control** • Basic metrics exist and are used to analyze process events or issues. • Kaizen methods are used to reduce scrap and rework. • Certified processes and practices are used to establish consistency in production output.
4.3.3	**Schedule and Perform Maintenance (10305)**	
4.3.3.1	**Determine Process for Preventive (Planned) Maintenance (Preventive Maintenance Orders) (10315)**	**Preventative Maintenance Process** • A formal maintenance program is in place to support overall equipment efficiency and performance. • Standardized processes are used for maintenance and reliability across the enterprise. • Breakdowns are infrequent. • Breakdowns are tracked and uptime or downtime measured to maintain mean time between failure (MTBF) metrics.
4.3.3.2	**Determine Process for Requested (Unplanned) Maintenance (Work Order Cycle) (10316)**	**Manage Unplanned Maintenance** • Problems are fixed as they occur.
4.3.3.3	**Execute Maintenance (10317)**	**Maintenance Activities** • Daily cleanings are performed (sort, straighten, shine, safety), causes of dirt and contamination are identified, and solutions are developed. • Employees follow the cleaning/setup procedure. • Thorough cleanings are scheduled and performed. • Machines and equipment are routinely inspected and serviced at regular pre-determined intervals—all relevant maintenance history is collected for future use. • All breakdowns and the root cause of the problem are identified and tracked.

		SUGGESTED MINIMUM PROCESS STANDARD
4.3.3.4	**Calibrate Test Equipment (10318)**	**Equipment Calibration** • Test and measurement equipment is certified by the relevant test agency and meets standards. • Test equipment is calibrated on a schedule recommended by the equipment manufacturer. • All test equipment (including lease and rental equipment) is listed in an equipment database. • Engineering and production test equipment are managed under a single calibration policy.
4.3.3.5	**Report Maintenance Issues (10319)**	**Maintenance Reporting and Tracking** • A record of equipment complaints, problems, or issues exists and is used to prevent problem recurrences. • A basic root cause analysis is performed at the first level (first detectable fix). • Causes of excessive dirt and contamination are identified and root causes investigated.
4.3.4	**Perform Quality Testing (10369)**	**Production Testing** • Non-conforming product is fully segregated and a process exists to release or dispose of it properly. • Damage and waste metrics are low for the organization's industry and the processes employed.
4.3.5	**Maintain Production Records and Manage Lot Traceability (10370)**	**Production Traceability** • The system enables batch lots of products and services to be accurately traced up to point of shipment. • Components/ingredients can be traced to supplier's raw material lots. • Traceability exists through supplier's manufacturing plant, production time, and specific hour of production. • There are clear lot management processes and lot definitions to allow for proper lot tracing. • Product traceability is built into the production process. • Data collection from the plant floor is semi-automated or fully automated.
4.4	**Deliver Service to Customer (10218)**	
4.4.1	**Confirm Specific Service Requirements for Individual Customer (10320)**	**Manage Service Customer Segmentation** • Customer segments are quantified by the value of each segment based on its size, its potential revenues, and cost-to-serve. • All enterprises within each segment are treated essentially the same. • Services are selected and targeted on cost/value basis. • Customers are segmented by service needs for higher operating margins. • Field service employees build strong relationships with customers and thoroughly understand customer needs. • Customer service reps are trained to identify opportunities to sell additional services and/or products. • A customer service survey is used to gather customer requirements.

		SUGGESTED MINIMUM PROCESS STANDARD
		Monitoring Change of Market Requirements • Market research focuses on competitor activities. • Customer input is used to identify future service requirements. • Annual internal reviews of service offering take place and help drive marketing decisions.
4.4.2	**Identify and Schedule Resources to Meet Service Requirements (10321)**	**Schedule Service Resources** • Weekly schedules are in place for critical working centers. • Technical services are tracked for each critical working center.
4.4.3	**Provide the Service to Specific Customers (10322)**	**Provide Service** • A culture of service excellence increases customer satisfaction and loyalty. • Field technicians "own" their accounts to increase service focus and profitability. • Regular service monitoring is conducted by management. • Service parts inventory is visible to service representatives.
4.4.4	**Ensure Quality of Service (10323)**	**Customer Focus** • Focus is on customer satisfaction and loyalty. • Primarily react to specific customer feedback. There are some targeted improvement efforts in place to proactively address cross-customer service level issues. • Local or regional management is focused on a short list of key customers to improve service levels. • CSRs are fully trained to ensure a high quality experience for customers. • Customer service and support expectations are tracked (at least annually). • CPFR® and other techniques are in place for supporting the quality of service focus. **Customer Delivery Feedback** • Complaints analysis is used to highlight and resolve internal problems. • Periodic audits are conducted on a customer-by-customer basis to identify internal improvements and to document service levels. • Customer scorecards are in place with many top customers being measured monthly. • A scorecard of service measures provides an overall view of the customer experience. • An active customer satisfaction and loyalty program is in place. Many employees are aware of their role in customer satisfaction. • The enterprise conducts customer surveys approximately once a year. **Processing Customer Feedback** • The organization's systems meet the needs of the users, and enable support for the customer at agreed current minimum standards. • Appropriate technology development is planned in parallel with the business plan. • A process is in place to inform customers about the enterprise's ability to respond to their needs (i.e. visits, reports, collaborative routines).

4.5	**Manage Logistics and Warehousing (10219)**
4.5.1	**Define Logistics Strategy (10338)**

| 4.5.1.1 | **Translate Customer Service Requirements Into Logistics Requirements (10343)** | **Customer Focused Logistics Requirements**
• A set of overall performance metrics are adopted based on customer, corporate, and social values that are the basis of requirements.
• Delivery and service level promises are based on an understanding of customer requirements, internal operational performance, and logistics network performance.
• Logistics processes are aligned with other departments (e.g., customer service) to create efficiencies.
• Logistics processes are documented and mapped to customer service requirements.
• There are shared logistics strategic planning sessions with customers to determine the future impact of changes or improvements to logistics strategies.
• Connectivity is in place with carriers, logistics service providers, and suppliers for periodic visibility into shipments and orders in transit.
• A continuous improvement program is designed to reduce waste, cost, and energy consumption in facilities and transportation.
• Service level agreements are in place with key customers and are used in developing the logistics strategy.

Social Responsibility Strategy
• There is an understanding of and adherence to Environmental Protection Agency, Department of Energy, and local (other state, international, and community) standards and regulations.
• There is understanding of customer compliance standards and adherence to those standards.
• A risk assessment of corporate, employee, and environmental issues is conducted with results feeding a corporate plan for improvement.
• An ROI-based plan to reduce cost/waste and address environment, labor, and quality concerns is included in the enterprise's annual plan.
• Communication of plans for employees and suppliers is conducted.

Carbon Footprint/Energy Consumption
• Minimum processes are in place to reflect a constant reassessment of transportation routes, and reduction in energy consumption on those routes. This can include network design, delivery time options, and more effective use of carrier/containment.
• There are review plans to update/replace equipment based on ROI data.
• There is a reassessment of transportation delivery methods to maximize the value of each load.
• Product design, footprint, and packing are regularly assessed.

Packaging
• There is an assessment of opportunities to reduce the cost and space requirements of packaging, as well as more effective use of pallets (sustainable materials and long lasting materials versus wood), and the reuse or recycling of materials (these techniques are required in trade in the European Union). |

		SUGGESTED MINIMUM PROCESS STANDARD
		Building/Warehouse • Understand and ensure local environmental and community standards are met. • Understand evolving building codes and best practices. • OSHA and regional safety standards are fully complied with. • Understand consumption and disposal of water, energy, solid waste, air quality, and emissions. • Conduct energy assessment to evaluate whether building codes are met, as well as ensure maximum use of insulations and energy consumption reduction techniques.
		Business Conduct and Emergency Response Plan • There is adherence to local and internal trade and labor relationships standards. • Safety and cleanliness are ensured within facilities. • Proper product protection techniques are in place to maintain product quality and freshness, as well as reduce theft and fraud. • An emergency response plan has been created with the assistance of local authorities (policy, fire, and other services) and it is communicated to employees and required support elements.
4.5.1.2	**Design Logistics Network (10344)**	**Network Design Process** • Inventory processes and service level/reorder point data is included in the network design to determine the best inventory strategy for the markets served. • The use of network modeling tools to design the supply chain typically occurs at the national or regional level. Irregular use is typically based on "optimization projects" and limited to specific segments, lanes, or regions. Network modeling is typically outsourced to third parties due to the skills/investment required for in-house tools.
		Network Optimization • Supply chain network design process (either in-house or contracted) models are used. Outputs from the modeling will help make recommendations for warehousing, distribution locations and volumes, inventory and transportation strategies, and waste reduction strategies—including scenario costing and service level tradeoffs. • Analysis and optimization of a segment of the supply chain are performed using commercially available technology or professional level expertise (either in-house or contracted).
4.5.1.3	**Communicate Outsourcing Needs (10345)**	**3PL Support** • The overall logistics outsourcing strategy is based on the context of long-term supply chain goals and assessment of the enterprise's core competencies and resource utilization. • Tight partnerships with forwarders and carriers include the ability to tender electronically with carriers, receive electronic messages from carriers, and provide outbound carrier schedules to the warehouse. • Logistics service providers (LSP) are selected based on visibility, codes of conduct and connectivity—as well as experience, services, and cost. • Formal SOPs are in place for managing 3PLs.
4.5.1.4	**Develop and Maintain Delivery Service Policy (10346)**	**Logistics Service Level Policy** • Logistics processes are communicated and interactions with logistics providers are aligned. • Policies are in place to manage service quality. • Logistics processes are customer focused.

		SUGGESTED MINIMUM PROCESS STANDARD
4.5.1.5	**Optimize Transportation Schedules and Costs (10347)**	**Transportation Planning** • Routing guides and rates should be assessed frequently and/or automated routing and scheduling technology solutions used to determine transport mode, carrier, and service levels for both inbound and outbound transportation. • Transportation planners create consolidated shipments, mode shifts, multi-stop truckloads, and intermodal assignments—using manual skills or automated technology depending on size, variability, and complexity of the freight shipping environment. • Consolidations and round trips/backhauls are created whenever possible. • A continuous improvement program is provided as part of ongoing logistics services. • Flexible contracts should be negotiated to assess performance. • Detailed records are kept online of actual shipments to assess performance by each customer.
		Transportation Planning Support • Suppliers are provided copies of routing guides or selected carriers as the enterprise requirements. • Standardized transportation management procedures are in place. • Carrier compliance checking is completed post payment. • A TMS is utilized for transportation planning (industry dependant). • Integration with carriers confirms on time pick-ups and deliveries.
4.5.1.6	**Define Key Performance Measures (10348)**	**Establish Logistics KPIs** • Business reviews are used to seek cost and service improvements. • Results are communicated to the customer. • Collaboration with stakeholders is used to improve key process indicators (KPIs). • There are fewer than 10 departmental KPIs. KPIs are based on triple bottom line goals—customer, profit, and social goals.
4.5.2	**Plan Inbound Material Flow (10339)**	
4.5.2.1	**Plan Inbound Material Receipts (10349)**	**Inbound Material Notice** • Inbound carriers primarily call (e-mail or fax) to schedule delivery appointments. • Limited advanced ship notification exists for a few key suppliers. It is mainly automated via purpose-built single supplier interfaces. • Industry standards interchange formats are used for ASN. • There is a weekly schedule in place for inbound planning (using manual or semi-automated "tools").
		Inbound Transportation Planning • Scheduled delivery date information is utilized for high level capacity and labor planning. • A formal transportation planning process is in place (site level or regional), and planning is performed on a regular basis. • Suppliers are directed to use a specific carrier or set of carriers for a given lane of traffic. Typically web-based routing or other tracking information is provided on the supplier PO.

		SUGGESTED MINIMUM PROCESS STANDARD
4.5.2.2	**Manage Inbound Material Flow (10350)**	**Manage Inbound Schedules** • Delivery to cross-dock facility is on a scheduled basis and at a predetermined time (as appropriate). • Direct-to-line delivery is at the end of the shift prior to use. • The supplier delivers according to agreed time, lot size and packaging, terms of sale, appropriate mode of transportation and compliant carrier. • Systems are integrated to tender freight and optimize inbound logistics. • A container management process is in place—managing containers and the orders and lines they contain. • A trailer drop process (manual or system supported) is in place to optimize through-put and reduce demurrage charges. • There is appropriate use of standardized packaging and in standardized case and master packs quantities (as directed). • There is appropriate use of rental pallets and reusable and/or recycled pallets from the supplier. **Warehouse Management System** • Formal WMS exists with mixed manual and computerized records by SKU. • Inventory control and reconciliation practices verify inventory accuracy according to policy or local procedure. • WMS addresses receiving, put-away, inventory, and slotting. • Slotting and picks are controlled by a locator system. • A location grid is created to manage warehouse layout, efficient put-away, pick, and inventory cycle counting. • Visibility is enhanced by the integration of order management, manufacturing, and financial systems. • The WMS provides reporting to support chosen KPIs.
4.5.2.3	**Monitor Inbound Delivery Performance (10351)**	**Monitor Inbound Performance** • A process is in place to continuously assess and improve distribution center productivity and space utilization at the site or local level, and at the transportation lane level. • A formal process is in place to track inbound on time performance and shipment damage. • Volume and performance data are leveraged for review. • Inbound shipment data is available from carrier systems in the form of online inquires, or monthly or ad hoc reports.
4.5.2.4	**Manage Flow of Returned Products (10352)**	**Plan for Returns** • Returns are planned based on knowledge of product and customer actions. • Product life-cycle and support (repairs) requirements are considered. • Processes are clearly documented and monitored. • Returns are treated as an outbound material. • Inventory turns of returned product are known. • The cost of each return activity is known. Product can be in the field and not sent back through the returns system if the cost exceeds the product recovery value. • Logistics, marketing, manufacturing, and customer service have developed policies and processes to decrease/eliminate "controllable returns" from customers.

		SUGGESTED MINIMUM PROCESS STANDARD
		Systems Integration—Returns • Order management and returns processes are integrated using common systems to capture orders, shipments, and return authorizations/information.
4.5.3	**Operate Warehousing (10340)**	
4.5.3.1	**Track Inventory Deployment (10353)**	**Inventory Deployment Plan** • Inventory locations are balanced at least annually and preferably quarterly, to keep high turn items closer to the staging area and products which typically ship together in proximity. • There is a process in place to identify inventory/material flow bottlenecks as part of an overall continuous improvement initiative. • There is full barcode scanning of all warehouse locations and product codes. If master carton labeling does not include a barcode, cartons are labeled at receiving before put-away. • Participate in industry based labeling and package standards for marking, labeling and tracking products in warehouse and for later picking labeling, shipping, and information management requirements and standard accounting.
4.5.3.2	**Receive, Inspect, and Store Inbound Deliveries (10354)**	**Receiving** • The receiving process is well documented and understood. The procedure defines the process to manage/sign/review carrier documents, and issues escalation path and transaction steps. • The receiving area is clearly laid out into unloading, staging, and holding areas. All products in the receiving area are properly marked as to the status in the receiving process. • Receiving appointments are manually tendered. • Performance metrics/standards are clearly posted. • Manual scheduling of trailer receipts takes place. • Inbound shipment data is available from carrier and/or 3PL systems in the form of online inquiries or monthly and/or ad hoc reports. • Reduction of trailer switch times is accomplished by pre-planning all trailer moves and yard staging of trailers. • Timely unloading avoids detention/demurrage • All receipts (e.g., received by 2pm) are processed and posted as available inventory on the same day. • Wireless technology and automation are used to help efficient put-away, track/manage inventory, and increase picking efficiency. • Pallets are labeled with appropriate "tracking license plates" prior to put-away. **Inspection** • There is sufficient inspection to identify non-conforming product—which is then quarantined to prevent use. • Non-conforming product is referred to suppliers within a prescribed timeframe. • Receiving errors, shipping errors, damage levels, and over and shortage levels are at or below agreed requirements. • A nonconforming report is created, analyzed, and shared with the supplier and employees for corrective action.

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Cross-Docking
- Products received which are destined for immediate shipment (cross-docking) must be properly identified.
- Cross-docking or immediate replenishment of requirements is manual.
- Cross-docking of in-transit product is utilized (where applicable) to reduce inventory levels in the DC.

Material Handling
- Efficient material handling is characterized by well ordered staging areas, clear aisles, and clearly marked locations.
- There is appropriate use of material handling equipment in storage and pick areas.
- Good housekeeping translates into aisles and work areas that are clear of debris, goods that are neatly stacked, and no evidence of excess moisture or dirt.
- Products which are destined for immediate shipment (cross-docking) are handled appropriately.
- Performance metrics/standards are clearly posted.

Storage
- Basic product cube data is available but not held within the system.
- Storage locations are reviewed annually to assure best access and proper sizing.
- Storage locations for high volume SKUs are contiguous, and "first in, first out" (FIFO) or "first expired, first out" (FEFO) rules (in some industries) assure proper lot control.
- Caged and controlled access exists for all high value, highly pilfered, hazmat, regulated, and quarantined items.
- Items with odor transfer, fire risk, or temperature control requirements must also be segregated and stored in special areas.
- Space is efficiently utilized.
- Storage locations are adequately marked for identification at the shelf/bin level.
- A good manual or automated system exists to inspect, track, assign space, pick, and protect products.

Slotting
- A slotting strategy is employed to assign products to locations based on product velocity and physical characteristics.
- Fast-moving items are located at the most ergonomic levels, while balancing the volume across aisles reduces traffic and labor congestion.
- Slotting assignments are static and are reviewed quarterly.
- A process is in place to manage damaged or unsalable products found in a location. Unsalable product is removed from available inventory immediately.

4.5.3.3	**Track Product Availability (10355)**	**Product Availability** - The ability to perform order promising is available for finished goods inventory (ATP). - There is the ability to flexibly schedule and reschedule orders based on due dates. - It is possible to provide a single view of inventory across multiple facilities.

		SUGGESTED MINIMUM PROCESS STANDARD
4.5.3.4	**Pick, Pack, and Ship Product for Delivery (10356)**	**Picking & Packing** • The warehouse picking document is generated based on slotting assignments. • Shift or individual productivity performance is measured. • A record of weekly activity by major task and manning levels is displayed on warehouse shop floor. • Barcoding is used to create effective put-away and picking. • Enabling technologies, such as APS and WMS, are used to improve order fill rates and cycle time. • The design of the warehouse allows for effective pick, pack, and ship—including assessment, definition, and marking locations for system and employee reference. This minimal data can be used for data capture systems. • All pick locations and product codes are clearly marked and visible to workers during normal picking activity without dismounting from material handling equipment. • All packing materials consumed by warehouse operations are on automatic replenishment programs (e.g., Kanban, Min/Max, etc.). • A master BOL is used for multi-stop shipments with a sub-bill for each of the individual stops and its respective sequence.
		Scheduling—Pick & Pack • Shipments are scheduled daily according to customer's requested delivery date. • Orders are shown as "shipped" in system of record as soon as the vehicle leaves dock. • The shipping department has forward visibility in the system to anticipate surges in load. • Load optimization and consolidation analysis is performed.
		Shipping • The shipping process is well documented and understood. Procedure defines the process to complete/sign/review carrier documents (weigh bills, manifest, hazmat declarations, etc), issues the escalation path, and delineates the transaction steps. • The shipping area is clearly laid out into staging, holding, and loading areas. All products in the shipping area are properly marked as to status in the shipping process. • There are customer and export (Customs) compliant shipping documents and labeling for all shipments (e.g., retailer specific labeling). • Full compliance to customer labeling requirements—includes AutoID labels/tags. • ASNs are available for all customers by EDI, fax, or e-mail. Although not all customers may want ASNs, they should still be made available. • The automated shipment manifesting system features tracking. • Appropriate hazardous materials documents are generated as necessary.
		Export Compliance • There is full compliance with C-TPAT and 10+2 guidelines, as well as any international guidelines or requirements. • Compliance requirements are considered to be the domain of export partners and may require products to be re-packaged or relabeled. • Compliance is maintained with a 24 hour manifest rule. • Appropriate international documents are generated as necessary. • Export records are archived as required by regulation, policy, or audit requirements. • A pre-determination is made of all export/Customs duties, fees, and settlement processes.

		SUGGESTED MINIMUM PROCESS STANDARD
		Consolidation/Loading • Each load is built in stop sequence (i.e. first truck destination loaded last, etc). • A process is in place to combine all open orders for single ship-to within the time window agreed to by the customer/client. • Any load consolidation with break-bulk is processed at remote terminals. • A strategy is in place to "strap" or over package small parcel shipments and take advantage of lower rates based on parcel aggregation.

4.5.3.5	**Track Inventory Accuracy (10357)**	**Inventory Accuracy**
		• Stock locations are specified in the system.
		• Cycle counting is done with the minimum parameters.
		  – "A" SKUs (high volume) are counted weekly.
		  – "B" SKUs (moderate volume) are counted monthly.
		  – "C" SKUs (low volume) are counted quarterly.
		• Special categories (high value, perishable, etc.) allow for flexible count frequency.
		• Pick discrepancies trigger a daily cycle count.
		• The system requires a "zero location balance" confirmation as part of the normal transaction activity.
		• Inventory is controlled at the 99% level or better.

4.5.3.6	**Track Third Party Logistics Storage and Shipping Performance (10358)**	**3PL Performance—Shipping** • The KPI dashboard is built and monitored jointly, by the third party and the customer. • Regular meetings help to review performance. • A formal process is in place to track outbound on time delivery performance and shipment damage based on carrier reporting. • Outbound shipment data is available via the carrier's system, as online inquiries and/or monthly reports.
4.5.3.7	**Manage Physical Finished Goods Inventory (10359)**	**Manage Finished Goods Inventory** • Inventory control and reconciliation practices verify finished goods inventory (FGI) accuracy. • Integration with order management and manufacturing systems provide visibility into FGI transactions and balances. • WMS provides reporting to support KPIs.
4.5.4	**Operate Outbound Transportation (10341)**	
4.5.4.1	**Plan, Transport, and Deliver Outbound Product (10360)**	**Transportation Planning** • There are regionally standardized business rules and carrier relationships. • Periodic reviews are conducted with key internal leaders in customer support, finance, and purchasing to determine what shipping processes and information would best support their initiatives. • 3PL experience is leveraged by outsourcing outbound transportation (if appropriate) based on analysis of corporate strategy, core competencies, and resources. • Distribution strategies are in alignment with sales and channel plans. • There is an integrated harmonized code database. • There is a global tax and trade strategy. • The type of service each facility provides (e.g., warehouse, merge-in-transit) is clearly defined. • In transit cross-docking operations are part of multimodal distribution planning and strategy. Goods can be cross-docked when needed, to eliminate additional handling in distribution centers or intermediate warehouses.

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Small Parcel Transport Management
- The carrier's web tool is used to tender and track all parcels, or a multi-carrier solution is used. Common information is held in the database to eliminate the rekeying of data.
- A quarterly review of shipping rates includes all accessorial fees and performance costs by carrier to insure least cost per shipment. This is based on analytics information provided by carriers or third parties.
- Unique shipping requirements are addressed with the carrier and included in the carrier's customer profile.
- The carrier website provides tracking, rate information, documentation, and pickup information.

Common Carrier Management
- Routing guides are used and compliance to preferred carriers is tracked and reported.
- There are good carrier relationships with a mix of local, regional, and global partners.
- On time performance, pickup, and delivery are monitored, reported, analyzed, and used to alter carrier behavior.
- Periodic updates to carrier contracts are performed via a well-defined RFP process supported by technology to track responses, quotes, and awards.
- Unique shipping requirements and service level requirements are addressed with the carrier and included in the carrier's customer profile.
- There is system based carrier manifesting and EDI (or carrier web based) updates including transit times.
- Service level agreements (SLAs) are in place and are reviewed periodically.

Transportation Management—Freight Modes
- A process is in place to manage the freight mode as required to support shipments (multi-modal, small parcel, less than truckload, full truck, flatbed, special equipment service, rail, air, ocean, etc).
- Mode and provider are selected by least total cost per shipment and rate using actual rates prior to the release to billing (at order entry prior to the release to the warehouse).
- There is a process in place to select carriers, service providers, external warehouses, etc. (criteria are well documented and revises periodically).

Transportation Management Process
- Routing guides provide direction regarding shipment mode, shipping lanes, and carriers to be used.
- Thorough workflow (in accordance with business processes) is defined, documented and accessible to all personnel responsible for shipping freight.
- The capability exists to plan centrally and execute shipping orders from decentralized locations.
- Freight rates and charges are audited to include accessorial charges to agreements. Discrepancies are submitted to carriers for subsequent review and settlement.
- Automated tender capability exists via manual selection, cascade, or broadcast tendering.
- There are automated tender communications with carriers
- Carrier acceptance workflow is defined, executed, and monitored for compliance.
- All automated shipment status updates are in accordance with contract terms.
- There is a full audit trail of all shipment status and changes from dock to dock.
- Supplier (for inbound) and carrier performance are monitored and reported.
- Electronic invoices are obtained from carriers.
- Invoices are automatically matched to rated shipments.

		SUGGESTED MINIMUM PROCESS STANDARD
		Transportation Management System • The automated import of orders for shipment from ERP, OMS, or WMS takes place as appropriate for the enterprise workflow.
4.5.4.2	**Track Carrier Delivery Performance (10361)**	**Carrier Performance—Outbound** • Daily records of performance are maintained. • Complaints are responded to within 24 hours. • Carrier compliance is measured to contract by on-time delivery (carrier reported). • Routing guides are in place and include expected service levels. • Specific carrier service level agreements are in place and specific lanes/routes or customer requirements may be specified. • Regular (minimum annual) reviews are held with carriers. • A performance management program is applied equally across all modes of transportation (e.g., rail, barge, air, etc.). • Carriers have (as required/contracted) vehicle telemetric systems in place, to track driver and vehicle performance and to provide a higher level of security.
4.5.4.3	**Manage Transportation Fleet (10362)**	**Fleet Management** • Owned or hired vehicles are fully utilized in a single shift, with limited double shifting. • There are weekly measures of driver, tractor, and trailer utilization. • There is inbound/outbound flow coordination (e.g., backhauls). • It is possible to automatically determine the optimal stops to include in a dynamic routing environment. • The optimal sequence and directional routing of stops are determined. • There is in-truck communication with dispatch. • Demand spikes and idle time are filled through cooperative agreements.
4.5.4.4	**Process and Audit Carrier Invoices and Documents (10363)**	**Proof of Delivery/In Transit Visibility** • Proof of delivery is available from the carrier, if requested. • CRs can access offline confirmation of shipment location and delivery status.
		Freight Payment/Audit • Freight bill matching is performed on bill of lading location and date to prevent duplicate payment. • Batch-approved shipments and schedule for payment exist. • Freight payment audit systems exist to validate ratings and eliminate multiple payments. • Carrier compliance is measured to contract by invoice accuracy. • There is tracking of total freight cost. • There is a streamlined and automated freight settlement process. • There is an assessment of cost trade off of utilizing internal or external transportation procurement and payment.

	SUGGESTED MINIMUM PROCESS STANDARD

4.5.5	**Manage Returns: Manage Reverse Logistics (10342)**

4.5.5.1	**Authorize and Process Returns (10364)**	**RMA Authorization and Entry** • There is a formal policy for handling returns. • A return merchandise authorization (RMA) system is utilized. • Standard operating procedures have been established for processing returns by type, value, channel, etc. • Item identification is accomplished through product labeling and the use of barcode labels. • A process is in place to accommodate product return without pre-approval. Process includes approval loop and customer service notification. • The data is manually entered into the order entry to process credit. • The WMS system fully supports the return process. • There is a dedicated call center operation for processing returns, and first level technical support and problem analysis. • A website can be used to track the full return process from shipment to disposition.
		End User Returns Management • The customer receives return instructions in the product package. • The customer is directed to contact the call center for RMA to provide user education and prevent unnecessary returns.
		Channel Returns Management • Rule based returns are agreed on in the customer contract (e.g., time based requirements, % of returns to sales requirements, etc). • The customer can receive an RMA via call center or the Internet. • The customer can receive an RMA and schedule a carrier pickup in the same transaction. • The customer can track the status on the customer interface on the web.
		Returns Inspection/Analysis • Returns are processed according to standard receiving processes including the use of Advanced Ship Notice (ASN) when appropriate. • Incoming returns are given a damage assessment and coded for return reason. • There is a designated returns processing area. • Returns are inspected and quarantined or refused due to spoilage, infestation, hazmat, and other aspects that may create unsafe and/or unsanitary conditions in the receiving facility (as appropriate). • Return inventory is aligned with cycle count process.
4.5.5.2	**Perform Reverse Logistics (10365)**	**Returns Logistics** • Products and components subject to "track and trace" requirements are handled appropriately. • The credit memo process awaits full inspection of returned products. • The website provides return shipment tracking. • Returns are directed to a specific dock or limited to specific time windows (when possible) to minimize errors and to improve utilization of dock workers.
		End User Returns Logistics • The customer receives a return merchandise authorization (RMA) label and call tag with clear instructions to call for pick-up.

		SUGGESTED MINIMUM PROCESS STANDARD
		Channel Returns Logistics • RMA shipping labels are included with original shipments. • The RMA label tracking number is captured during the shipping process for use in identifying returns.
4.5.5.3	**Perform Salvage Activities (10366)**	**Returns Quarantine** • Returns are moved to a secure area where there is sufficient and secure space to support the disposition process. • Items tagged for identification feature product identifiers with status/control numbers.
		Returns Disposition • Returns are classified on a timely basis and either resold, refurbished, or destroyed. • Defective components are returned to suppliers for analysis. • Records are maintained manually and presented periodically as necessary. • Non defective products are returned to finished goods. • Environmentally sound practices are employed for all items being destroyed or disposed of. Procedures are in place to manage items that may create unsafe, hazardous, and/or unsanitary conditions in the facility and are properly quarantined/secured. • Adjustments to inventory are completed as an integral part of the returns process. • The disposition for credit memo occurs within 5 working days of receipt. Finance adjustments are completed in a timely manner and are initiated by the returns disposition notification. • Dispositions are performed according to the local regulatory environment.
4.5.5.4	**Manage and Process Warranty Claims (10367)**	**Warranty Claims** • Warranties are well documented and clear to all employees processing returns. • Product warranty and customer claims are tracked and used in product development cycles. • Product returns are linked to supplier warranty and the supplier is charged for any warranty related repairs as allowed in contracts. • A warranty analysis of defective components is developed with suppliers.
4.5.5.5	**Manage Repair/ Refurbishment and Return to Customer/Stock (14195)**	**Repair—Return to Customer** • Items being repaired are properly identified and tagged to ensure return to the correct customer. • Products and components subject to "track and trace" requirements are appropriately identified. • An individual "repair order" is assigned to each specific unit being repaired. • The customer is notified and authorization obtained prior to completion of repairs—typically via telephone, fax, or e-mail. • Any additional "warranty" or government mandated repairs specific to the unit being serviced are addressed. • Accurate repair orders promised date and order status information is available. • Customers are advised of goods that are near the end of service/shelf life, and authorization is requested prior to repair. • The customers are notified of available upgrades and/or revisions prior to repair. • The customer is notified and authorization is obtained if the product is not repairable. Service/replacement options are offered at the time of notification.

SUGGESTED MINIMUM PROCESS STANDARD

Repair/Refurbish—Return to Stock

- A close visual, electronic, or hydraulic inspection of all the components ensures the quality of refurbished products.
- Products and components subject to "track and trace" requirements are appropriately identified.
- Rebuild consumes any used parts stock prior to using new parts, according to "first expiry, first out" (FEFO) rule.
- Completed, refurbished products pass same quality inspection as new.
- Refurbished products are properly identified as such—including revision levels. Products are relabeled as required.
- Refurbished products are kept physically separate in defined storage areas, apart from new products or virtually separate using specific model/SKU numbering.
- Inventory management considers refurbish stock.

Disassembly/Used Parts to Service Stock

- Close visual, electronic, or hydraulic inspection takes place of all components which are to be placed in inventory.
- Components subject to "track and trace" requirements are appropriately identified.
- Used components are kept physically separate in defined storage areas apart from new components, or virtually separate using specific SKU numbering and component markings.

		SUGGESTED MINIMUM PROCESS STANDARD
5.0	**Manage Customer Service (10006)**	
5.1	**Develop Customer Care/Customer Service Strategy (10378)**	
5.1.1	**Develop Customer Service Segmentation/ Prioritization (e.g., tiers) (10381)**	**Customer Segmentation** • Favorable trading terms are primarily used to prevent customer defection. • Well-defined segments are targeted with varying service levels. • Customer segmentation is used to deliver a branded customer experience.
		Measuring Customer Profitability • Individual customer profitability is the result of deducting direct labor, allocated support labor, and allocated material costs from income. • Reports are produced quarterly. • Customer profitability is shared internally across the business and used for decision making.
5.1.2	**Define Customer Service Policies and Procedures (10382)**	**Customer Service Policy** • First contact resolution is achieved for most requests. • Training is provided for customer-facing employees. • Customer self-service options include order inquiry, credit/financial inquiry, product inquiry, and account status. • The web is used as a customer service vehicle and to "up sell" services. • The appropriate technology supports customer service processes.
5.1.3	**Establish Service Levels for Customers (10383)**	**Establish Customer Service Requirements** • Processes for establishing customer requirements focus on product and service reliability. • Performance metrics are set and measured.
		Communicating Customer Service Requirements • All customer service requirements are clearly understood by the key managers within the organization. • Service levels are established for key customer segments to improve satisfaction. • The majority of the requirements are understood by all customer-facing personnel. • Service levels are consistent with the organization's objectives. • Appropriate technology development is planned in parallel to the business plan and current customer requirements.
		Customer Requirement Documentation • A standard statement of work is used for major customers, but the format can vary by customer. • Processes for establishing customer requirements focus on product and service reliability. • The role of the business owner as key customer contact and interface is clearly evident to all personnel.
		Customer Business Reviews • Business reviews (BRs) take place with the top 75% of customers, at least quarterly. • BRs are well structured and usually include preparation with customer involvement.

	SUGGESTED MINIMUM PROCESS STANDARD

5.2	**Plan and Manage Customer Service Operations (10379)**	
5.2.1	**Plan and Manage Customer Service Workforce (10387)**	**Scheduling Customer Service** • First tier support is available 24x7 (may not be applicable to all industries). • Second tier support is available during business hours only and usually by return call. • There are written job descriptions and expectations.
		Measuring Customer Service • Complaints analysis used to highlight and resolve internal problems with CSR or customer service processes. • Audits conducted on customer service activate the internal improvements identification process. • Key indicators (data points) are captured regarding call volume, resolutions, and escalations. • Customer service representative performance is reviewed internally on a quarterly basis. • If managed by third party, customer service representative performance metrics are in place and reported as part of contract requirements.
5.2.2	**Manage Customer Service Requests/Inquiries (10388)**	
5.2.2.1	**Receive Customer Requests/Inquiries (10394)**	**Customer Request/Inquiry** • Informal software (e.g., multiple formats such as Word, Excel, or Access) or a customer relationship management (CRM) system provides customer tracking and input to CSRs, to keep the customer informed. • Provide CSRs well-defined support functions for inquiry management. • Logging of all customer inquiries takes place to ensure a correct response and that all inquiries are answered (closed). • The customer can receive support via call center • CSRs have the necessary language skills to support selling geographies.
5.2.2.2	**Route Customer Requests/Inquiries (10395)**	**Customer Request/Inquiry Process** • The process for resolving the most common inquiries is defined. • Escalation path for non-routine inquiries is known to initial contact personnel. • Escalation is defined for issues that cannot be resolved on the phone.
5.2.2.3	**Respond to Customer Requests/Inquiries (10396)**	**Customer Request/Inquiry Response** • CSR has visibility into customer account and order information to support customer inquiries. • Employees are empowered to act on customer inquiries to improve brand image. • Formal processes are in place to close the loop on inquires, and requests are tracked through to resolution (including response/deliverables from outside of the organization). • There is resolution of >80% of all inquires during the initial call. • A defined escalation path exists for those technical inquires that cannot be resolved over the phone. • The process for resolving most common inquiries is defined and is part of the system knowledge base. • The escalation path for non-routine inquiries is known to initial contact personnel. The path is clear and documented with contact information.

		SUGGESTED MINIMUM PROCESS STANDARD
5.2.3	**Manage Customer Complaints (10389)**	
5.2.3.1	**Receive Customer Complaints (10397)**	**Customer Complaints** • A customer can receive tech support via call center. • Service parts orders are given priority (e.g., emergency parts orders). • The process for resolving the most common complaints and technical inquires is defined and is part of the system knowledge base.
5.2.3.2	**Route Customer Complaints (10398)**	**Customer Complaint Process** • There is a defined escalation process for technical issues that cannot be resolved on the phone. • The escalation path for non-routine complaints is known to initial contact personnel.
5.2.3.3	**Resolve Customer Complaints (10399)**	**Customer Complaint Resolution** • 80% of all technical issues are resolved during the initial call. • All technical issues are resolved within 4 hours, and with a maximum of one call back. • Formal processes are in place to close the loop on issues and increase customer satisfaction.
5.2.3.4	**Respond to Customer Complaints (10400)**	**Customer Complaint Response** • The source of complaint is recorded to track trends. • Fast resolution of customer complaints leads to higher customer satisfaction—which is periodically measured. • Customer complaint tracking and reporting meets applicable regulatory (e.g., GMP/GDP, consumer product safety) and reporting requirements. • A formal process is in place that links customer complaints with corrective and preventive action teams.
5.3	**Measure and Evaluate Customer Service Operations (10380)**	
5.3.1	**Measure Customer Satisfaction with Customer Requests/ Inquiries Handling (10401)**	**Measuring Customer Service** • The complaints analysis is used to highlight and resolve internal problems. • Audits are conducted on customer-by-customer basis to identify internal improvements. • The sources of customer service complaints are recorded to track trends. **Customer Satisfaction Reporting** • The performance to customer inquiries is reviewed internally on a quarterly basis. • Customer satisfaction is measured or otherwise determined. • Major complaints are tracked and categorized • Action is taken as management sees fit, based on "noise" level.
5.3.2	**Measure Customer Satisfaction Customer Complaint Handling and Resolution (10402)**	**Customer Satisfaction–Complaint Resolution** • Complaint handling performance is reviewed internally on a quarterly basis to a set of KPIs.

		SUGGESTED MINIMUM PROCESS STANDARD
5.3.3	**Measure Customer Satisfaction with Products and Services (10403)**	**Customer Satisfaction—Products and Services** • The source of product complaint is recorded to track trends. • A periodic survey of product and service satisfaction takes place. • Customer satisfaction with products and services is measured in various ways, and the results are used to drive improvement. • Information from product returns is used to reduce cost and recurrence. • A third party may be used to conduct customer satisfaction audits. • Data from problem reporting is used to avoid repeating past product problems or defects. • Some functional "silos" may still exist between customer service and product engineering or marketing with no formal feedback loop in place.

Management and Support Processes

		SUGGESTED MINIMUM PROCESS STANDARD
6.0	**Develop and Manage Human Capital (10007)**	
6.3	**Develop and Counsel Employees (10411)**	
6.3.2	**Manage Employee Performance (10470)**	**Employee Performance** • Meaningful measures are used to assess the effectiveness of the performance measurement system. • The employee performance review infrastructure enables managers and their reports to communicate performance measurement information. • Employee feedback and development of second tier employees becomes an important part of the talent development strategy. • Technology is used to automate and streamline employee development and performance management processes.
6.3.4	**Manage Employee Development (10472)**	**Employee Development** • Learning management systems are in place (customization is minimized). • Development of internal employees to meet talent demand of the enterprise is routine. • Leaders take an active role in developing employees and making employees feel valued by the organization. • Technology is used in the integration process of talent management. • A formal process is in place to manage talent and to identify and develop successful employees.
6.3.5	**Develop and Train Employees (10473)**	**Training Plan** • Formalized training plans and programs exist by function/role. • Training curriculums are routinely updated and are linked to strategic objectives. • Focus is on the training and support of first level managers. • Access to training and training information is widespread. • Train-the-trainer is the preferred mode of teaching.
		Training Program • Appropriate workplace standards exist on safety, affirmative action, etc., and are part of new hire training. • Safety teams exist and train co-workers. • There is a formalized training program by function/role. • Training and processes are tied to key performance indicators. • Most jobs have a cross-training plan used to develop multi-skilled employees. • A large percentage of employees are cross-trained to perform additional jobs—but not with equal skill. • Teams are beginning to be a part of the operational philosophy within the organization. • Self-directed work teams are currently being adopted within manufacturing and other functional areas.

		SUGGESTED MINIMUM PROCESS STANDARD
		Employee Communication • An ad hoc communication system helps ensure that all employees receive all of the information, news, and requirements they need to perform their duties. • Open communication systems are being developed and deployed. • Employees generally feel they are getting the full picture, but there may be a hesitation to open up about "real issues" for fear of reprisal.
		Training of Customer Facing Employees • A formal training program and manual for CSRs is supported by a minimum of one week's training. • CSRs receive basic training before an active assignment, and complete all required training within 60 days. • Specifications are in place to govern the minimum number of hours or days of training required. • Training certification is managed by the department head. • Full (100%) product/service training requirements are defined for CSRs. • Key stakeholders have reviewed and approved training materials for all customer facing roles. • Training materials are always accessible and up to date.
		Lean Training • Leaders from major departments (finance, HR, IT, sales, marketing, manufacturing, distribution, etc.) are aware of the concept of Lean. • Management and supervisory level employees have begun the educational and operational transition to the philosophy of Lean and are supportive of the plan, but are not yet completely aware of the their role. • Operating departments have developed a Lean training plan and include training targets in the performance metrics.
6.4.1	**Develop and Manage Reward, Recognition, and Motivation Programs (10494)**	**Rewards and Recognition** • A formal program is in place for employees to participate in communities of practice. • The overall recognition program includes rewards for innovativeness.
6.6	**Manage Employee Information (10414)**	
6.6.5	**Develop and Manage Employee Metrics (10526)**	**Employee Metrics** • A demonstrated accountability for employee measures and measurement systems exists. • Employee metrics are reviewed periodically to balance long-term strategic priorities with short-term issues.

		SUGGESTED MINIMUM PROCESS STANDARD
7.0	**Manage Information Technology (10008)**	
7.1	**Manage the Business of Information Technology (10563)**	
7.1.1	**Develop the Enterprise IT Strategy (10570)**	**IT System Strategy** • The software has been substantially aligned with key business processes. • Appropriate process changes are made during systems implementation. • Effective IT governance is in place resulting in better decision making, reduced technology costs, and increased profitability. • A combination of legacy and best-of-breed technology is applied throughout the organization.
		Systems Integration • Different systems and/or databases are combined (using batched processes) to meet current needs. • Differing systems exist at multiple sites but are aligned to support the business. • Critical data is updated and backed up daily. • Systems are moderately scalable. • Inter-systems data integration is accomplished through batch EDI processing for order and shipment transactions (or other enterprise-wide data). • IT systems integrate operations and support financial, operational, sales, and marketing decisions.
		Data Management Standards • The enterprise is a member of trade associations and/or other industry bodies that are active in standards making efforts. • There is some use and support of industry standard formats and standards (EDI, XML, etc.) for the electronic exchange of primary business documents (order, invoice, etc.). • Data accuracy exceeds 96% across all systems. • A continuous improvement process is in place to increase data accuracy. • Financial data accuracy complies with requirements of Sarbanes-Oxley Public Accounting & Investor Protection Act.
		IT Systems Support • Good systems support results in infrequent disruptions. • The system is supported 24/7/365 with onsite personnel during business hours and on-call personnel outside of business hours. • Employees are well trained in current system functionality. • The system is backed up daily at an offsite location. • The system is secure.
7.3	**Manage Business Resiliency and Risk (11216)**	
7.3.1	**Develop and Manage Business Resilience (11217)**	**Business Continuity Planning** • There is an outline available for an effective crisis reaction approach. • Scenario plans are developed for alternative situations.
		Disaster Recovery • Documented system disaster recovery plan is in place and communicated. • Data files are backed up daily and kept in secure offsite storage.

		SUGGESTED MINIMUM PROCESS STANDARD
7.3.4	**Develop and Implement Security, Privacy, and Data Protection Controls (11220)**	**Security and Data Protection** • All system access is controlled by username and password. • Customers and suppliers cannot access data which supports other customers or suppliers. • Internal systems are not directly accessible from the Internet. • Normal industry practices are in place to support transaction security. **Privacy Control** • A privacy strategy and program is in place for the enterprise. • The privacy program is published and describes actionable procedures for stakeholders. • User and operator classifications have been developed for sensitive information (roles) including supply chain partners. • Sensitive information is protected with physical, technical, and procedural safeguards.
7.4	**Manage Enterprise Information (10565)**	
7.4.1	**Develop Information and Content Management Strategies (10583)**	**Master Data Management** • Master data management success depends upon data stewards made up of cross-functional teams to enact quality standards. • The senior management team understands and supports data management and commits personnel and resources as required. • Executive level management sees data management as a strategic asset (to some extent). • Data management goals are shifting from problem management to problem prevention and may be viewed at an enterprise level. • Business rules are standardized and enforced at the department level. There are some enterprise-wide business rules. • Business rules capture documented processes. **Data Quality** • Data quality processes are focused on near real-time activities and preventative data quality rules. • Ongoing data monitoring is conducted. • Tools are in place to audit and analyze data. • A defined profiling process is in place. **Data Accuracy Management Measures** • Data metrics are captured and compared to historical values and targets. Metrics may be compared to industry standards. • Metrics are captured and used for improvement. • Data accuracy exceeds 96% across all systems.

	SUGGESTED MINIMUM PROCESS STANDARD	
8.0	**Manage Financial Resources (10009)**	
8.2	**Perform Revenue Accounting (10729)**	
8.2.1	**Process Customer Credit (10742)**	**Customer Credit Processing** • Customers are billed accurately and on time (as appropriate). • Financial incentives and performance goals support collaboration between sales and credit functions. • Credit management software is used to reduce time and expense of credit processing. • Credit memos are issued in a timely manner after full inspection of returned products.
8.2.3	**Process Accounts Receivable (AR) (10744)**	**Payment Processing** • There is the capability to receive payment by check, wire transfer, or electronic funds transfer (EFT). • Payments are applied to accounts within one business day. • All payment and transaction information is kept secure and confidential.
8.6	**Process Accounts Payable and Expense Reimbursements (10733)**	
8.6.1	**Process Accounts Payable (AP) (10756)**	**Accounts Payable Process** • Monthly consolidated invoicing is against blanket orders. • There is pay on receipt and self billing for a selected number of high transaction suppliers. • Accounts payable (AP) systems are integrated with other systems. • Standardized systems and policies are in place providing one face to the customer.

SUGGESTED MINIMUM PROCESS STANDARD		
10.0	**Manage Environmental Health and Safety (EHS) (11179)**	
10.2	**Develop and Execute Health, Safety, and Environmental Program (11181)**	
10.2.4	**Record and Manage EHS Events (11191)**	**Security** • Normal security precautions are effective in protecting customer and enterprise materials and intellectual property. • Employees are reasonably safe and secure in the workplace. • No significant security issues or events exist. • Reasonable steps are taken to ensure that employee, customer, and supplier material and property are protected. • Use of video surveillance in critical areas, to include live monitoring and recording.
		Safety • Safety is integrated into most aspects of the business, and most employees recognize the importance of safety in the workplace. • The level of OSHA reportable accidents is 3-5 and lost workday index is .3-.5. • A safety committee exists at the corporate level, but may not be widely supported at the department level. • Annual fire and safety drills occur.
		Risk Management • Normal business risks are anticipated and addressed. • The enterprise is compliant in all local and regional regulations and reporting.
10.5	**Ensure Compliance with Regulations (11184)**	
10.5.3	**Comply with Regulatory Stakeholders Requirements (11200)**	**Environmental Compliance** • Environmental controls are integrated into most aspects of the business and most employees recognize the importance of control or elimination of hazardous waste in the workplace. • Actions are underway to become ISO 14001-2004 compliant and to implement new controls to minimize the opportunity for an EPA listed incident. • No EPA listed incidents have occurred/been reported in the past two years.

		SUGGESTED MINIMUM PROCESS STANDARD
12.0	**Manage Knowledge, Improvement, and Change (10013)**	
12.1	**Create and Manage Organizational Performance Strategy (11071)**	
12.1.1	**Create Enterprise Measurement Systems Model (11075)**	**Measurement Model** • All stakeholders are involved in the development of corporate performance measures to achieve buy-in. • A measurement system is developed with accuracy and "ease of use" as primary objectives. • Measures that are used can be collected easily and are understood by all stakeholders. • The measurement system is embedded into daily operations. • Employees are trained to understand the linkage between outcome measures and the work they do daily. • The enterprise measures what matters. • The number of measures tracked is limited to the higher levels and to the essential few. • The performance measurement system is linked to other programs, such as compensation, rewards, and recognition. • The importance of the measurement system is effectively communicated throughout the organization. • Executive level support for the measurement system demonstrates its importance to the enterprise. • A balanced scorecard approach is used to measure progress against the strategic plan.
12.1.2	**Measure Process Productivity (11076)**	**Process Metrics** • Basic productivity and customer metrics are taken and used to improve products and services. • Measures are only collected when the results are used to drive improvement. • Employees control the results of their measures. • Data is converted to information, following analysis of trends and unusual variation. Effects are tied to causes. • Action is taken to remove or avoid chronic problems. • Metrics are used by key employees and managers to drive the business. • Technology appropriate to the enterprise and the task is used to collect, analyze, and report metric data.
12.2	**Benchmark Performance (11072)**	
12.2.1	**Conduct Performance Assessments (11083)**	**Audits and Assessment** • The quality department facilitates regularly scheduled internal audits using cross-functional teams with varying degrees of auditing expertise.

		SUGGESTED MINIMUM PROCESS STANDARD
12.2.3	**Conduct Process Benchmarking (11085)**	**Benchmarking Process** • Senior management supports benchmarking. • The scope and objectives of the benchmarking effort are clearly defined. • The enterprise has a good foundation of data in the areas to be benchmarked and the team understands historic performance. • The communication process is regular and frequent. • Benchmarking teams have adequate resources. • Recommendations are developed broadly, with all operating processes involved.
		Process Benchmarking • The enterprise recognizes internal process best practice—some sharing across enterprise—although the methodology for sharing may not be formalized. • There is a defined process to gather external process benchmark data. • Internal best in class processes are turned into standard work instructions used to turn tacit knowledge into institutional knowledge.
12.2.4	**Conduct Competitive Benchmarking (11086)**	**Competitive Product Benchmarking** • There is a defined process to identify competitors. • Competitor capabilities are well understood and considered during the new product design and introduction process. • Current products are clearly positioned relative to the competition. • The enterprise uses benchmarking data from industry groups. • Senior management understands the enterprise's performance in terms of their competitors' performance. • The enterprise looks outside of their industry for examples of world class performance at the process level. • The enterprise participates "anonymously" to support industry level benchmarking.
		Customer Benchmarking • Enterprise performance is benchmarked to customer expectations. • Customers may participate in the benchmarking process. • Performance gaps are identified and closed.
12.3	**Develop Enterprise-Wide Knowledge Management (KM) Capability (11073)**	
12.3.5	**Manage the KM Project Life-Cycle (11099)**	**Procedures** • All key processes and subordinate work instructions are fully documented. • ISO 9001:2008 or other suitable standards form the basis of the process viability. • A well-defined, documented, and followed escalation path is in place for all functions. • All regulatory standards are met or exceeded. • Process documentation and recordkeeping complies with requirements of Sarbanes-Oxley Public Accounting & Investor Protection Act.

		SUGGESTED MINIMUM PROCESS STANDARD
		Process Control • A robust system for the use of a variety of process control tools by operations and the quality organization is in place. • Data drives the continuous improvement effort. • Processes are fully documented. • Process documents and ancillary illustrations or flowcharts are actively used to direct delivery of products and services. • A good system exists for ensuring that only the most recent document versions are available. • Records are generally accessible, but are not always efficiently and quickly located. • The system used to manage the process has version control functionality.
		Process Validation • Cross-functional teams have the freedom and tools to identify, prioritize, and solve critical problems. • Data integrity is established and an effort is made to ensure that the right things are being done in the right ways.
12.4	**Manage Change**	
12.4.3	**Implement Change (11136)**	
12.4.4	**Sustain Improvement (11137)**	**Quality Manual** • A comprehensive quality manual is controlled and updated regularly, and is readily available to all employees. • The quality manual is tied to business processes and work documentation. • The quality manual is frequently used in orientation, training, and to direct work.
		Quality Policy • A strong quality policy has been cooperatively developed and prominently displayed. • The quality policy focuses on meeting and/or exceeding customer requirements and needs. • The quality policy engages everyone—most employees can express the policy in their own words.
		Quality Planning • A comprehensive, measured, cross-functionally developed quality plan is in place covering critical aspects of product, service, and operations.
		Quality Deployment • The quality function manages formal cross-functional teams with all areas represented and participating. • Formal criteria are in place for the escalation of problems. • The quality function has authority to direct, access, and manage all quality related functions—including quality systems, quality processes, measurement, regulatory compliance, ISO, and process quality engineering. • Resistance is moderate.

SUGGESTED MINIMUM PROCESS STANDARD

Quality Training
- A formal system of quality training has been defined for at least upper level managers and employees.
- Detailed training records are current and available.
- Required skills for each position are documented and employees are required to certify competence against these skills.

Communication—Quality
- A formal (but not necessarily extensive) communication process is used to reach customers, suppliers, employees, and the community.
- Employee feedback mechanisms exist.

Corrective Action
- A corrective action reporting system exists for tracking problems.
- Actions are taken on major recurring issues.

Preventive Action
- Focus is on learning from mistakes and on preventing past problems from recurring.

Continuous Improvement
- Ad hoc teams attack chronic problems or focus on fixing individual processes.

LIST OF CONTRIBUTORS

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