

PCA ELECTRONICS, INC.

Quality Manual

Conforms to ISO 9001:2015

(c) 2018 PCA Electronics, Inc.; all rights reserved. This document may contain proprietary information and may only be released to third parties with approval of management. Document is uncontrolled unless otherwise marked; uncontrolled documents are not subject to update notification.

TABLE OF CONTENTS

0.0	Revision History and Approval	3
1.0	Welcome to PCA Electronics, Inc.	4
2.0	About The PCA Quality Manual.....	4
3.0	Terms and Definitions	4
4.0	The Scope and Context of the PCA QMS.....	5
4.1	Determining Our Strategic Direction	5
4.2	Scope of the Management System.....	5
4.2.1	Scope Statement.....	5
4.2.2	Facilities Within the Scope.....	5
4.2.3	Permissible Exclusions	5
4.2.4	Scope of the Quality Manual.....	6
5.0	Quality Policy.....	6
6.0	Management System Processes.....	6
6.1	Process Identification	6
6.2	Process Controls & Objectives	7
6.3	Outsourced Processes	8
7.0	Documentation & Records	8
7.1	General.....	8
7.2	Control of Documents.....	8
7.3	Control of Records	8
8.0	Management & Leadership	9
8.1	Management Leadership and Commitment	9
8.2	Customer Focus.....	9
8.3	Quality Policy	9
8.4	Organizational Roles Responsibilities & Authorities	10
8.5	Internal Communication	10
8.6	Change Management.....	10
8.7	Risks and Opportunities	10
8.8	Management Review.....	11
9.0	Resources	11
9.1	Provision of Resources	11
9.2	Human Resources	11
9.3	Infrastructure.....	12
9.4	Work Environment.....	12
9.5	Organizational Knowledge.....	12
10.0	Operation.....	13
10.1	Operational Planning and Control.....	13
10.2	Customer-Related Activities	13
10.3	Customer Communication	13
10.4	Design and Development	14
10.5	Purchasing.....	14
10.6	Provision of services	14
10.6.1	Control of Provision of services.....	14
10.6.2	Identification and Traceability	15
10.6.3	Property Belonging to Third Parties	15
10.6.4	Preservation.....	15
10.6.5	Post-Delivery Activities	15
10.6.6	Process Change Control.....	15
10.6.7	Measurement and Release of products.....	16
10.6.8	Control of Nonconforming Outputs.....	16
11.0	Improvement.....	16

11.1	General.....	16
11.2	Customer Satisfaction	16
11.3	Internal Audit.....	17
11.4	Corrective and Preventive Action.....	17
Appendix A:	Overall Process Sequence & Interaction.....	18
Appendix B:	ISO 9001:2015 Cross Reference	19

0.0 Revision History and Approval

Rev.	Nature of changes	Approval	Date
Orig	Original release.	Ben Weinberg	10/31/16
A	Changed product processes to Customer Processes Pg 19	Ben Weinberg	1/9/18
B	Changed Special Processes to reflect QDP-004	Toni Essman	01/10/18
C	Added QPD references	Virgilio Untaran	1/22/18
D	Added 8.5.5 to Permissible Exclusions	Ben Weinberg	1/31/18
E	Changed products to services	Ben Weinberg	2/8/18
F	Revised 9.4 Work Environment	Ben Weinberg	2/12/18

1.0 Welcome to PCA Electronics, Inc.

PCA Electronics, Inc. manufactures a broad selection of electromagnetic components for computer, telecommunications and medical OEMS. Applications include computer networking equipment, high speed telecommunications, custom and standard power magnetics for aerospace, automotive, medical equipment and many other electronic systems.

2.0 About The PCA Quality Manual

This manual is prepared for the purpose of defining the company's interpretations of the ISO 9001:2015 international standard, as well as to demonstrate how the company complies with that standard.

This manual is not aligned with the clause numbering scheme of ISO 9001; instead, Appendix B provides a cross-reference table that shows where, in the manual, each ISO 9001 requirement is addressed.

This manual presents "Notes" which are used to define how PCA has tailored its management system to suit its purposes. These are intended to clarify implementation approaches and interpretations for concepts which are not otherwise clearly defined in ISO 9001:2015. *Notes appear in italics, with gray background.*

Where subordinate or supporting documentation is reference in this manual, these are indicated by **bold italics**.

3.0 Terms and Definitions

PCA adopts the following terms and definitions within its Quality Management System. Where no definition is provided, the company typically adopts the definitions provided in ***ISO 9000: Quality Management – Fundamentals and Vocabulary***. In some cases, specific procedures or documentation may provide a different definition to be used in the context of that document; in such cases, the definition will supersede those provided for in this Quality Manual or ISO 9000.

General Terminology

PCA – PCA Electronics, Inc.

Document – written information used to describe how an activity is done.

Record – captured evidence of an activity having been done.

Risk-Based Thinking Terminology

Risk – Negative effect of uncertainty

Opportunity – Positive effect of uncertainty

Uncertainty - A deficiency of information related to understanding or knowledge of an event, its consequence, or likelihood. (Not to be confused with measurement uncertainty.)

Nonconforming Product Terminology

Rework: Efforts to bring nonconforming product into conformance through additional operations that do not alter the original design of the product.

Repair: Efforts to bring nonconforming product into conformance through additional operations that alter the original design of the product; this may be through the addition of material not specified in the original design, or through altering pre-existing design features.

Scrap: The discard of nonconforming product in lieu of rework or repair.

4.0 The Scope and Context of the PCA QMS

4.1 Determining Our Strategic Direction

PCA has reviewed and analyzed key aspects of itself and its stakeholders to determine the strategic direction of the company. This involves:

- Understanding our core products, and scope of management system (see 4.2 below).
- Identifying “interested parties” (stakeholders) who receive our products, or who may be impacted by them, or those parties who may otherwise have a significant interest in our company. These parties are identified in the document **Context of the Organization**.
- Understanding internal and external issues that are of concern to PCA and its interested parties; also identified in the document **Context of the Organization**. Many such issues are identified through an analysis of risks facing either PCA or the interested parties. Such issues are monitored and updated as appropriate, and discussed as part of management reviews.

This information is then used by senior management to determine the company’s strategic direction. This is defined in records of management review, and periodically updated as conditions and situations change.

4.2 Scope of the Management System

4.2.1 Scope Statement

Based on an analysis of the above issues of concern, interests of stakeholders, and in consideration of its products, PCA has determined the scope of the management system as follows:

The provision of sales, technical, procurement and warehouse support services for the Magnetica Inc., Cavite Philippines and PCA Electronics, Shenzhen, China design and manufacturing sites.

4.2.2 Facilities Within the Scope

The quality system applies to all processes, activities and employees within the company’s facility located at:

16799 Schoenborn St.
North Hills CA 91343

Phone: 818 892-0761
Fax: 818 894-5791

Web: www.pca.com

4.2.3 Permissible Exclusions

The following clauses of ISO 9001 were determined to be not applicable to PCA.

- 8.3 Design and Development of Products and Services
- 8.5.1 Control of Production and Service provision
- 8.5.5 Post-Delivery Activities

4.2.4 Scope of the Quality Manual

This manual is prepared for the purpose of defining the company's interpretations of the ISO 9001:2015 international standard, as well as to demonstrate how the company complies with that standard.

This manual does not strictly follow the numbering structure of ISO 9001. Instead, Appendix B presents a cross reference between the sections of this manual and the clauses of ISO 9001:2015.

This manual presents "Notes" which are used to define how PCA has tailored its management system to suit its purposes. These are intended to clarify implementation approaches and interpretations for concepts which are not otherwise clearly defined in ISO 9001:2015. *Notes appear in italics, with gray background.*

Where subordinate or supporting documentation is reference in this manual, these are indicated by **bold italics**.

5.0 Quality Policy

The Quality Policy of PCA is as follows:

We will deliver products that comply with our customer's specifications, on time, and at the agreed price.

We will endeavor to increase total customer satisfaction.

We are committed to continually improving our products, processes and systems.

6.0 Management System Processes

6.1 Process Identification

PCA has adopted a process approach for its management system. By identifying the top-level processes within the company, and then managing each of these discretely, this reduces the potential for nonconforming products discovered during final processes or after delivery. Instead, nonconformities and risks are identified in real time, by actions taken within each of the top-level processes.

Note: not all activities are considered "processes" – the term "process" in this context indicates the activity has been elevated to a higher level of control and management oversight. The controls indicated herein are applicable only to the top-level processes identified.

The following top-level processes have been identified for PCA:

- Sales and Customer Outreach (QPD-008)
- Customer Requirements (QPD-003)

-
- Raw materials Purchasing(QPD-106)
 - Raw Materials Shipping to Factories (QPD-107)
 - Customer Order Processing (QPD-002)
 - Factory Interface (QPD-004)
 - Quality Assurance (QPD-111)
 - Product Shipping(QPD-007)

Each process may be supported by other activities, such as tasks or sub-processes. Monitoring and control of top level processes ensures effective implementation and control of all subordinate tasks or sub-processes.

Each top-level process has a **Process Definition** document which defines:

- applicable inputs and outputs
- process owner(s)
- applicable responsibilities and authorities
- applicable risks and opportunities
- critical and supporting resources
- criteria and methods employed to ensure the effectiveness of the process

The sequence of interaction of these processes is illustrated in Appendix A.

Note: Appendix A represents the typical sequence of processes, and may be altered depending on customer or regulatory requirements at the job or contract level, as needed.

6.2 Process Controls & Objectives

Each process has at least one objective established for it; this is a statement of the intent of the process. Each objective is then supported by at least one “metric” or key performance indicator (KPI) which is then measured to determine the process’ ability to meet the quality objective.

Note: some processes have multiple objectives and multiple metrics. This is determined by the nature of the process, it’s impact on products, and associated risks.

Note: Whereas ISO 9001 discusses process measurements and “quality objectives” as separate concepts, PCA combines them; i.e., quality objectives are used to control the processes. Additional objectives for products may be assigned, but these will also be used to measure process effectiveness.

Throughout the year, metrics data is measured and gathered by process owners or other assigned managers, in order to present the data to Senior Management Team. The data is then analyzed by Senior Management Team in order that Senior Management Team may set goals and make adjustments for the purposes of long-term continual improvement.

The specific quality objectives for each process are defined in the minutes of Management Review, per section 8.8.

Metrics, along with current standings and goals for each objective, are recorded in records of management review.

When a process does not meet a goal, or an unexpected problem is encountered with a process, the

corrective and preventive action process is implemented to research and resolve the issue. In addition, opportunities for improvement are sought and implemented, for the identified processes.

6.3 Outsourced Processes

Any process performed by a third party is considered an “outsourced process” and must be controlled, as well. The company’s outsourced processes, and the control methods implemented for each, are defined in **Outsourced Processes**.

The type and extent of control to be applied to the outsourced process take into consideration:

- a) the potential impact of the outsourced process on the company’s capability to provide product that conforms to requirements,
- b) the degree to which the control for the process is shared,
- c) the capability of achieving the necessary control through the purchasing contract requirements.

7.0 Documentation & Records

7.1 General

The management system documentation includes both documents and records.

Note: the ISO 9001:2015 standard uses the term “documented information”; PCA does not use this term, but instead relies on the terms “document” and “record” to avoid confusion. In this context the terms are defined per section 3.0 above. Documents and records undergo different controls as defined herein.

The extent of the management system documentation has been developed based on the following:

- a) The size of PCA
- b) Complexity and interaction of the processes
- c) Risks and opportunities
- d) Competence of personnel

7.2 Control of Documents

Documents required for the management system are controlled in accordance with procedure **Control of Documents**. The purpose of document control is to ensure that staff have access to the latest, approved information, and to restrict the use of obsolete information.

All documented procedures are established, documented, implemented and maintained.

7.3 Control of Records

A documented procedure **Control of Records** has been established to define the controls needed for the identification, storage, retrieval, protection, retention time, and disposition of quality records. This procedure also defines the methods for controlling records that are created by and/or retained by suppliers.

These controls are applicable to those records which provide evidence of conformance to requirements; this may be evidence of product requirements, contractual requirements, procedural requirements, or statutory/regulatory compliance. In addition, quality records include any records which provide evidence of the effective operation of the management system.

8.0 Management & Leadership

8.1 Management Leadership and Commitment

Senior Management Team of PCA provides evidence of its leadership and commitment to the development and implementation of the management system and continually improving its effectiveness by:

- a) taking accountability of the effectiveness of the management system;
- b) ensuring that the **Quality Policy** and quality objectives are established for the management system and are compatible with the strategic direction and the context of the organization;
- c) ensuring that the quality policy is communicated, understood and applied within the organization;
- d) ensuring the integration of the management system requirements into the organization's other business processes, as deemed appropriate (see note);
- e) promoting awareness of the process approach;
- f) ensuring that the resources needed for the management system are available;
- g) communicating the importance of effective quality management and of conforming to the management system requirements;
- h) ensuring that the management system achieves its intended results;
- i) engaging, directing and supporting persons to contribute to the effectiveness of the management system;
- j) promoting continual improvement;
- k) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

Note: "business processes" such as accounting, employee benefits management and legal activities are out of scope of the QMS.

8.2 Customer Focus

Senior Management Team of PCA adopts a customer-first approach which ensures that customer needs and expectations are determined, converted into requirements and are met with the aim of enhancing customer satisfaction.

This is accomplished by assuring:

- a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;
- b) the risks and opportunities that can affect conformity of product and the ability to enhance customer satisfaction are determined and addressed;
- c) the focus on enhancing customer satisfaction is maintained.

8.3 Quality Policy

Senior Management Team has developed the **Quality Policy (QAF-014)**, defined in section 5.0 above, that governs day-to-day operations to ensure quality.

The **Quality Policy** is released as a standalone document and is communicated and implemented throughout the organization.

8.4 Organizational Roles Responsibilities & Authorities

Senior Management Team has assigned responsibilities and authorities for all relevant roles in the company. These are communicated through the combination of the **Organizational Chart** (QAF-015) and Position Descriptions.

The Senior Management Team accepts responsibility and authority for:

- a) ensuring that the management system conforms to applicable standards;
- b) ensuring that the processes are delivering their intended outputs;
- c) reporting on the performance of the management system;
- d) providing opportunities for improvement for the management system;
- e) ensuring the promotion of customer focus throughout the organization;
- f) ensuring that the integrity of the management system is maintained when changes are planned and implemented.

8.5 Internal Communication

Senior Management Team of PCA ensures internal communication takes place regarding the effectiveness of the management system. Internal communication methods include:

- a) use of corrective and preventive action processes to report nonconformities or suggestions for improvement
- b) use of the results of analysis of data
- c) meetings (periodic, scheduled and/or unscheduled) to discuss aspects of the QMS
- d) use of the results of the internal audit process
- e) regular company meetings with all employees
- f) internal emails
- g) memos to employees
- h) PCA's "open door" policy which allows any employee access to Senior Management Team for discussions on improving the quality system

8.6 Change Management

When PCA determines the need for changes to the management system or its processes, these changes planned, implemented, and then verified for effectiveness; see the document **Change Management (QSP-004)**.

Documents are changed in accordance with procedure **Control of Documents**.

8.7 Risks and Opportunities

Note: PCA deviates slightly from the approach towards risk and opportunity presented in ISO 9001. Instead, PCA views "uncertainty" as neutral, but defines "risk" as a negative effect of uncertainty, and "opportunity" as a positive effect of uncertainty.

PCA has elected to manage risks and opportunities separately, except where they may overlap. Formal risk management may not be utilized in all instances; instead, the level of risk assessment, analysis, treatment and recordkeeping will be performed to the level deemed appropriate for each circumstance or application.

PCA considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products. Risks and opportunities are identified as part of the “Context of the Organization Exercise” defined in **Context of the Organization (QSP-002)**, as well as throughout all other activities of the QMS.

Risks and opportunities are managed in accordance with the document **Risk and Opportunity Management (QSP-005)**. This procedure defines how risks are managed in order to minimize their likelihood and impact, and how opportunities are managed to improve their likelihood and benefit.

8.8 Management Review

The Senior Management Team reviews the management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. The review includes assessing opportunities for improvement, and the need for changes to the management system, including the **Quality Policy** and quality objectives.

Management review frequency, agenda (inputs), outputs, required members, actions taken and other review requirements are defined in the documented procedure **Management Review (QSP-003)**.

Records from management reviews are maintained.

9.0 Resources

9.1 Provision of Resources

PCA determines and provides the resources needed:

- a) to implement and maintain the management system and continually improve its effectiveness
- b) to enhance customer satisfaction by meeting customer requirements

Resource allocation is done with consideration of the capability and constraints on existing internal resources, as well as needs related to supplier expectations.

Resources and resource allocation are assessed during management reviews.

9.2 Human Resources

Senior management ensures that it provides sufficient staffing for the effective operation of the management system, as well its identified processes.

Staff members performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience. The documented procedure **Hiring and Training** defines these activities in detail.

Training and subsequent communication ensure that staff are aware of:

- a) the quality policy;
- b) relevant quality objectives;
- c) their contribution to the effectiveness of the management system, including the benefits of improved performance;

-
- d) the implications of not conforming with the management system requirements.

Note: the management system does not include other aspects of Human Resources management, such as payroll, benefits, insurance, labor relations or disciplinary actions.

9.3 Infrastructure

PCA determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable:

- a) buildings, workspace and associated facilities (QSP-012)
- b) process equipment, hardware and software
- c) supporting services such as transport
- d) information and communication technology

Equipment is validated per the procedure **Validation of Equipment (QSP-009)** and maintained per the procedure **Preventive Maintenance (QSP-010)**

Where equipment is used for critical measurement activities, such as inspection and testing, these shall be subject to control and either calibration or verification; see the procedure **Calibration of Equipment (QSP-908)**.

Note: Calibration and measurement traceability is not employed for all measurement devices. Instead, PCA determines which devices will be subject to calibration based on its processes, products and services, or in order to comply with specifications or requirements. These decisions are also based on the importance of a measurement, and considerations of risk.

9.4 Work Environment

PCA provides all new hires with an Orientation Guide which details PCA Electronics, Inc. policies that directly affect employment policies and practices.

Human factors are considered to the extent that they directly impact the employee and the quality of the products.

PCA provides a clean, safe and friendly working environment. The Senior Management Team of PCA manages the work environment needed to achieve conformity to employee needs and product requirements. Specific environmental requirements for products are determined during quality planning and are documented in subordinate procedures, work instructions, or job documentation. Where special work environments have been implemented, these shall also be maintained per 9.3 above.

9.5 Organizational Knowledge

PCA also determines the knowledge necessary for the operation of its processes and to achieve conformity of products. This may include knowledge and information obtained from:

- a) internal sources, such as lessons learned, feedback from subject matter experts, and/or intellectual property;
- b) external sources such as standards, academia, conferences, and/or information gathered from customers or suppliers.

This knowledge shall be maintained and made available to the extent necessary.

When addressing changing needs and trends, PCA shall consider its current knowledge and determine how to acquire or access the necessary additional knowledge.

10.0 Operation

10.1 Operational Planning and Control

PCA plans and develops the processes needed for product and service realization. Planning of product and service realization is consistent with the requirements of the other processes of the management system. Such planning considers the information related to the context of the organization (see section 4.0 above), current resources and capabilities, as well as product and service requirements.

Processes required for business are reviewed by Leadership or Management to ensure that they are monitored to achieve the intended results.

Changes to operational processes are done in accordance with the document ***Change Management (QSP-004)***.

10.2 Customer-Related Activities

During the intake of new business PCA captures:

- a) requirements specified by the customer, including the requirements for delivery and post-delivery activities;
- b) requirements not stated by the customer but necessary for specified or intended use, where known
- c) statutory and regulatory requirements related to the product;
- d) any additional requirements determined by PCA.

Once requirements are captured, PCA reviews the requirements prior to its commitment to supply the product. This review ensures that:

- a) product requirements are defined,
- b) contract or order requirements differing from those previously expressed are resolved,
- c) the organization has the ability to meet the defined requirements, and/or the claims for the products it offers, and
- d) risks have been identified and considered.

These activities are defined in greater detail in the procedure: ***Customer Service Procedures (QSP-101)***

10.3 Customer Communication

PCA has implemented effective communication with customers in relation to:

- a) providing information relating to products;
- b) handling enquiries, contracts or orders, including changes;
- c) obtaining customer feedback relating to products, including customer complaints;
- d) handling or controlling customer property;
- e) establishing specific requirements for contingency actions, when relevant.

10.4 Design and Development (Performed at factory)

For new designs and for significant design changes, PCA ensures the translation of customer needs and requirements into detailed design outputs. These address performance, reliability, maintainability, testability, and safety issues, as well as regulatory and statutory requirements.

This process ensures:

- a) Design planning is conducted
- b) Design inputs (requirements) are captured
- c) Design outputs are created under controlled conditions
- d) Design reviews, verification and validation are conducted
- e) Design changes are made in a controlled manner.

10.5 Purchasing

PCA ensures that purchased products or services conform to specified purchase requirements. The type and extent of control applied to the supplier and the purchased products or services is dependent on the effect on subsequent product or the final product.

PCA evaluates and selects suppliers based on their ability to supply product and service in accordance with the organization's requirements. Criteria for selection, evaluation and re-evaluation are established.

Purchases are made via the release of formal purchase orders and/or contracts which clearly describe what is being purchased. Received products or services are then verified against requirements to ensure satisfaction of requirements. Suppliers who do not providing conforming products or services may be requested to conduct formal corrective action.

These activities are further defined in the documents ***Purchasing Raw Materials (QSP-401)***, ***Receiving (QSP-405)***, and ***Raw Materials & Equipment Shipping to Factories QSP-404***.

10.6 Provision of services

10.6.1 Control of Provision of services

To control its provision of products, PCA considers, as applicable, the following:

- a) the availability of documents or records that define the characteristics of the products as well as the results to be achieved;
- b) the availability and use of suitable monitoring and measuring resources;
- c) the implementation of monitoring and measurement activities;
- d) the use of suitable infrastructure and environment;
- e) the appointment of competent persons, including any required qualifications;
- f) the implementation of actions to prevent human error;
- g) the implementation of release, delivery and post-delivery activities.

PCA utilizes some "special processes" where the result of the process cannot be verified by subsequent monitoring or measurement. The special processes in use and the methods of validation of each are

defined in the document **QPD-004**.

10.6.2 Identification and Traceability

Where appropriate, PCA identifies its product or other critical process outputs by suitable means. Such identification includes the status of the product with respect to monitoring and measurement requirements. Unless otherwise indicated as nonconforming, pending inspection or disposition, or some other similar identifier, all product shall be considered conforming and suitable for use.

If unique traceability is required by contract, regulatory, or other established requirement, PCA controls and records the unique identification of the product.

The documented procedure **Identification and Traceability (QSP-008)** defines these methods in detail.

10.6.3 Property Belonging to Third Parties

PCA exercises care with customer or supplier property while it is under the organization's control or being used by the organization. Upon receipt, such property is identified, verified, protected and safeguarded. If any such property is lost, damaged or otherwise found to be unsuitable for use, this is reported to the customer or supplier and records maintained.

For customer intellectual property, including customer furnished data used for design, production and / or inspection, this is identified by customer and maintained and preserved to prevent accidental loss, damage or inappropriate use.

This activity is defined in greater detail in the document **Control of Third-Party Property (QSP-909)**.

10.6.4 Preservation

PCA preserves conformity of product or other process outputs during internal processing and delivery. This preservation includes identification, handling, packaging, storage, and protection. Preservation also applies to the constituent parts of a product.

The documented procedure **Preservation of Product (QSP-910)** defines the methods for preservation of product.

10.6.5 Post-Delivery Activities

As applicable, PCA conducts the following activities which are considered "post-delivery activities":

- None

Post-delivery activities are conducted in compliance with the management system defined herein.

10.6.6 Process Change Control

PCA reviews and controls both planned and unplanned changes to processes to the extent necessary to ensure continuing conformity with all requirements.

Process change management is defined in the document **Change Management (QSP-004)**.

10.6.7 Measurement and Release of products

Acceptance criteria for products are defined in appropriate subordinate documentation. Reviews, inspections and tests are conducted at appropriate stages to verify that the product requirements have been met. This is done before products are released or delivered.

Each process utilizes different methods for measuring and releasing products. These methods are defined in **Process Definitions**.

10.6.8 Control of Nonconforming Outputs

PCA ensures that products or other process outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

The controls for such nonconformances are defined in **Control of Nonconforming Product (QSP-007) and Control of Nonconforming Output (QSP-013)**.

11.0 Improvement

11.1 General

PCA uses the management system to improve its processes, products and services. Such improvements aim to address the needs and expectations of customers as well as other interested parties, to the extent possible.

Improvement shall be driven by an analysis of data related to:

- a) Sales backlog
- b) Monthly sales and shipping
- c) On-time shipments (early and late invoice count)
- d) Customer RMAs
- e) Internal RMAs

The results of analysis shall be used to evaluate:

- a) conformity of products;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the management system;
- d) the effectiveness of planning;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) other improvements to the management system.

11.2 Customer Satisfaction

As one of the measurements of the performance of the management system, PCA monitors information relating to customer perception as to whether the organization has met customer requirements. The methods for obtaining and using this information include:

- recording customer complaints
- product rejections or returns
- repeat orders for product
- changing volume of orders for product
- trends in on-time delivery
- obtain customer scorecards from certain customers
- submittal of customer satisfaction surveys

The corrective and preventive action system shall be used to develop and implement plans for customer satisfaction improvement that address deficiencies identified by these evaluations, and assess the effectiveness of the results.

11.3 Internal Audit

PCA conducts internal audits at planned intervals to determine whether the management system conforms to contractual and regulatory requirements to the requirements of ISO 9001, and to management system requirements. Audits also seek to ensure that the management system has been effectively implemented and is maintained.

These activities are defined in the document ***Internal Audits***.

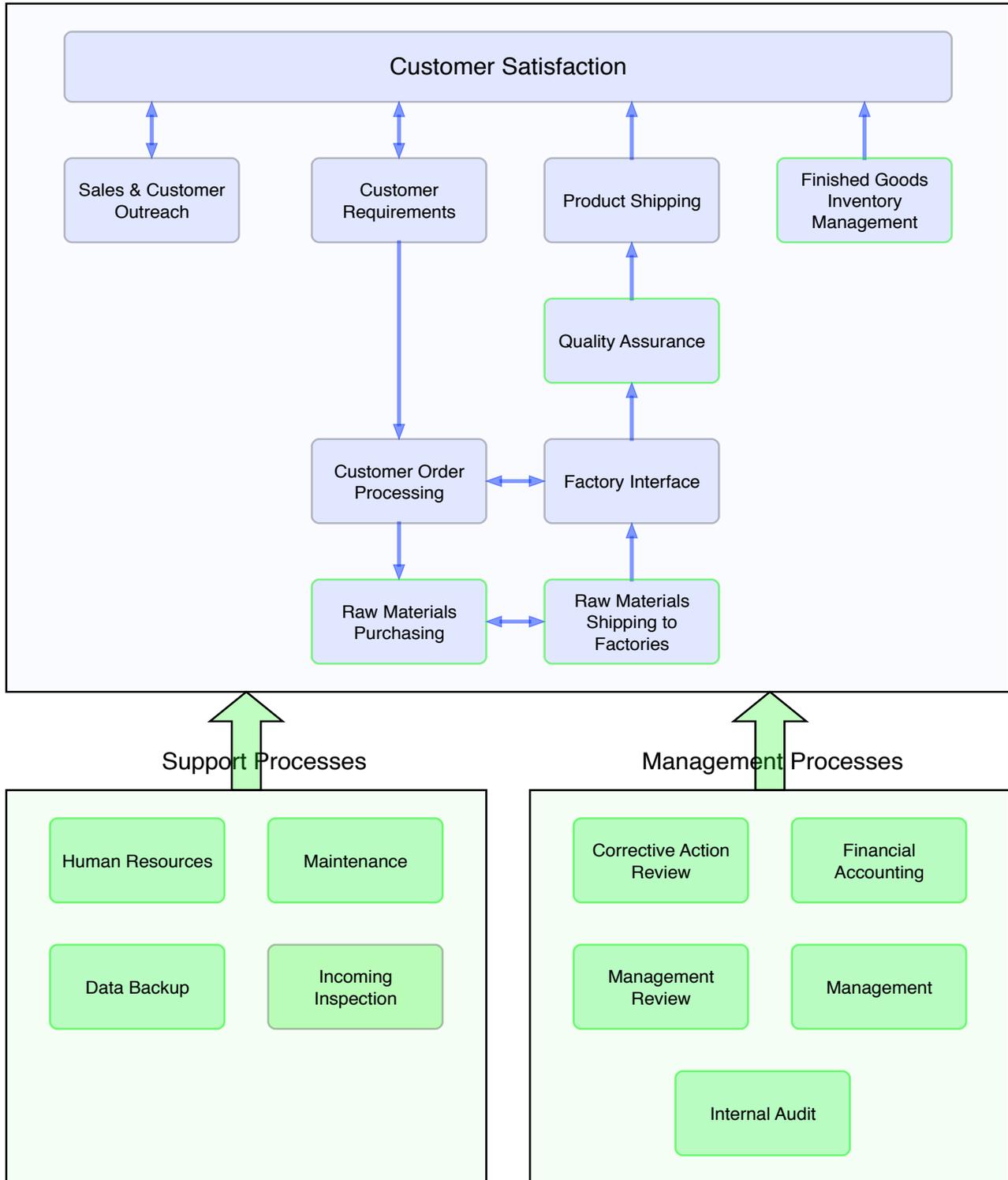
11.4 Corrective and Preventive Action

PCA takes corrective action to eliminate the cause of nonconformity in order to prevent *recurrence*. Likewise, the company takes preventive action to eliminate the causes of potential nonconformities in order to prevent their *occurrence*.

These activities are done using the formal Corrective Action (CAR) system and are defined in the document ***Corrective and Preventive Action (QSP-701 & QSP-703)***.

Appendix A: Overall Process Sequence & Interaction

Customer Processes



Appendix B: ISO 9001:2015 Cross Reference

ISO 9001:2015 Clause	Section in Manual
4.0 Context of the Organization (all)	
4.1 Understanding the Organization & Its Context	4.1 Determining Our Strategic Direction
4.2 Understanding the needs & expectations of interested parties	4.1 Determining Our Strategic Direction
4.3 Determining the scope of the QMS	4.2 Scope of the Management System
4.4 Management system and its processes	6.0 Management System Processes
5.0 Leadership	
5.1 Leadership & Commitment	8.1 Management Leadership and Commitment
5.1.1 General	8.1 Management Leadership and Commitment
5.1.2 Customer focus	8.2 Customer Focus
5.2 Policy	5.0 Quality Policy 8.3 Quality Policy
5.3 Organizational Roles Responsibilities and Authorities	8.4 Organizational Roles and Responsibilities and Authorities
6.0 Planning	
6.1 Actions to address risks and opportunities	8.7 Risks and Opportunities
6.2 Quality objectives and planning to achieve them	6.2 Process Controls & Objectives
6.3 Planning of changes	8.6 Change Management
7.0 Support	
7.1 Resources	
7.1.1 General	9.1 Provision of Resources
7.1.2 People	9.2 Human Resources
7.1.3 Infrastructure	9.3 Infrastructure
7.1.4 Environment for the operation of processes	9.4 Work Environment
7.1.5 Monitoring and measuring resources	9.3 Infrastructure
7.1.6 Organizational knowledge	9.5 Organizational Knowledge
7.2 Competence	9.2 Human Resources
7.3 Awareness	9.2 Human Resources
7.4 Communication	8.5 Internal Communication
7.5 Documented information	7.0 Documentation & Records
8.0 Operation	
8.1 Operational planning and control	10.1 Operational Planning and Control
8.2 Requirements for products and services	
8.2.1 Customer communication	10.3 Customer Communication
8.2.2 Determining the requirements related to products & services	10.2 Customer Related Activities
8.2.3 Review of requirements related to products & services	10.2 Customer Related Activities
8.2.4 Changes to requirements for products and services	10.2 Customer Related Activities
8.3 Design and development of products and services	10.4 Design and Development
8.4 Control of externally provided processes, products & services	10.5 Purchasing
8.5 Production and service provision	

ISO 9001:2015 Clause	Section in Manual
8.5.1 Control of production and service provision	10.6.1 Control of Provision of products
8.5.2 Identification and traceability	10.6.2 Identification and Traceability
8.5.3 Property belonging to customers or external providers	10.6.3 Property Belonging to Third Parties
8.5.4 Preservation	10.6.4 Preservation
8.5.5 Post-delivery activities	10.6.5 Post-Delivery Activities
8.5.6 Control of changes	10.6.6 Process Change Control
8.6 Release of products and services	10.6.7 Measurement and Release of products
8.7 Control of nonconforming outputs	10.6.8 Control of Nonconforming Outputs
9.0 Performance evaluation	
9.1 Monitoring, measurement, analysis and evaluation	
9.1.1 General	11.1 Improvement: General
9.1.2 Customer satisfaction	11.2 Customer Satisfaction
9.1.3 Analysis and evaluation	11.1 Improvement: General
9.2 Internal audit	11.3 Internal Audit
9.3 Management review	8.8 Management Review
10.0 Improvement	
10.1 General	11.1 Improvement: General
10.2 Nonconformity and corrective action	11.4 Corrective and Preventive Action
10.3 Continual improvement	11.1 Improvement: General