## CONTENTS

## 1- SCOPE

This document describes the organization and specific arrangements set up by RADIALL to ensure the quality of the products supplied to the Customers.
In particular, it defines the arrangements of the RADIALL Quality Assurance Plan based on the EN/AS 9100 standard.
This document is sent to all Customers from whom some specific requirements are requested but for which Radiall does not draw up a compliance matrix.

## 2- QUALITY MANAGEMENT SYSTEM APPROVAL

Radiall comprises several entities. All are ISO9001 certified. Those in North America and Europe, more dedicated to the Aerospace market, are EN/AS/JISQ 9100 certified.
The third-party certification body is Bureau Veritas which is accredited under the I.A.Q.G. Industry Controlled Other Party (ICOP) scheme.
Radiall is registered in the IAQG OASIS Database. Access to Radiall data under OASIS is possible upon request.
Radiall certifications are summarized hereunder.

| | RADIALL FACILITIES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | France | | | | USA | | Mexico | China* | India** |
| Certification | Paris<br>Headquarter | Central'p<br>CTA | Château-Renault<br>CHR | Isle D'Abeau<br>IDA | New Haven<br>NH | Tempe | Obregon<br>OBR | Shanghaï<br>SHG | Bengalore<br>BLG |
| ISO9001 2015 | Bureau Veritas | | | | | | | Bureau Veritas | Bureau Veritas |
| EN/AS/JISQ9100 2016/2018 | Bureau Veritas | | | | | | | | Bureau Veritas |
| ISO14001 2015 | | | | | | | | Bureau Veritas | Bureau Veritas |
| NADCAP | | | | | | | Chemical Processing | | |
| ISO/IEC 17025 2005 | | LCIE Bureau Veritas | | | | | | | |

*Radiall Electronics CO, Ltd

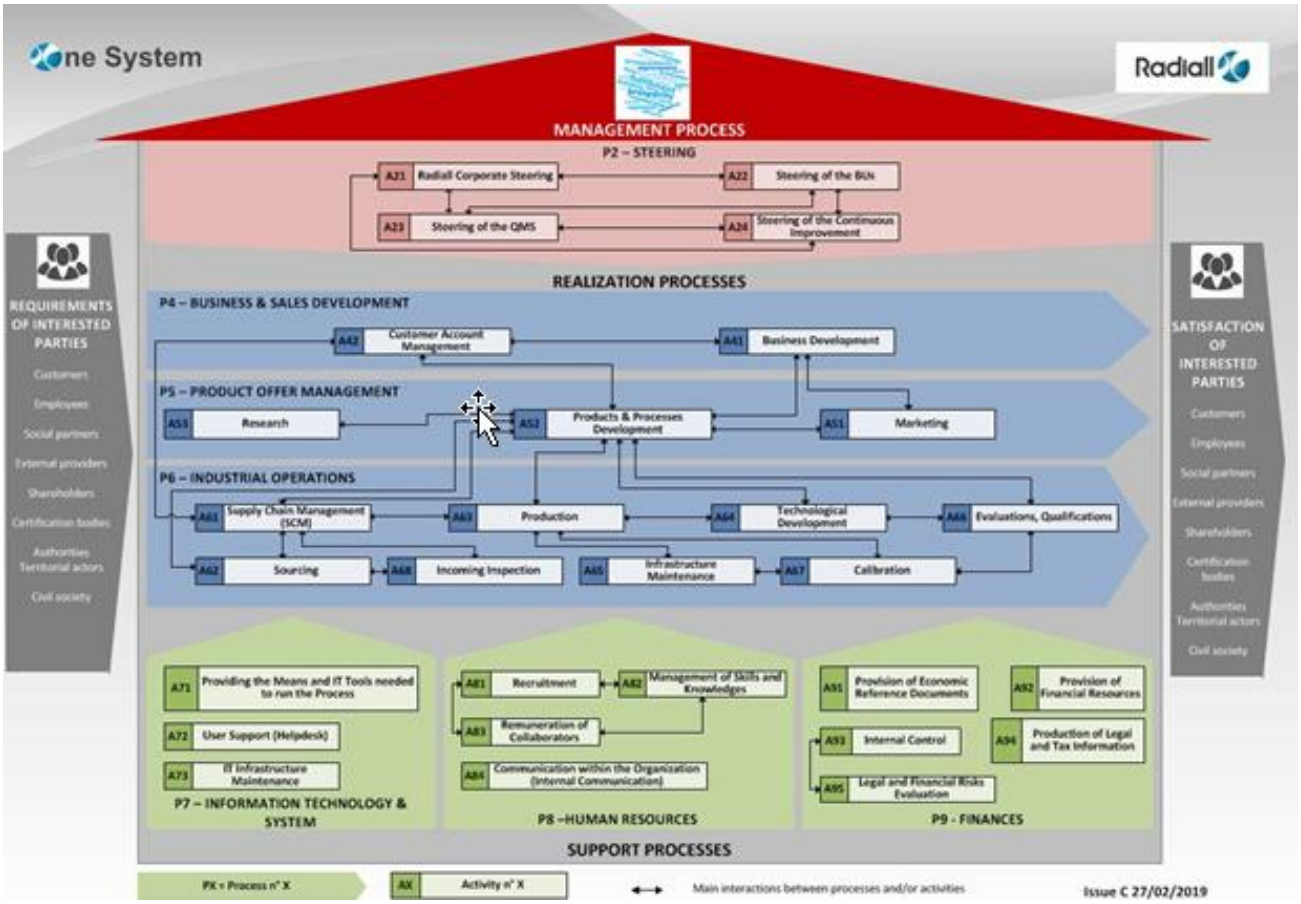
**Radiall India Private Ltd

## 3- TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions given in ISO 9000:2015 and complements given in ISO 9001:2016 apply.

## 4- QUALITY MANAGEMENT SYSTEM AND ITS PROCESSES

The Radiall Process Map is shown below. A process is a planned series of actions that is managed to transform inputs (resources) into outputs.
FDPs (Process Description Forms) describe the processes and their interactions.



## Radiall Standard/Quality Management System

The processes associated with the QMS documentation cover the EN/AS/JISQ 9100 requirements as follows:

| | | | | | P = Process owner | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chapter | Title | Sub Chapter | Sub Chapter | Sub Title | P2 | P4 | P5 | P6 | P7 | P8 | P9 |
| | | | | | STEERING | BUSINESS DEVELOPMENT & SALES | PRODUCT OFFER MANAGEMENT | INDUSTRIAL OPERATIONS | IT & SYSTEM | HUMAN RESOURCES | FINANCES |
| 4 | CONTEXT OF THE ORGANIZATION | 4 | | **Context of the organization** | | | | | | | |
| 4 | CONTEXT OF THE ORGANIZATION | 4.1 | | Understanding the organization and its context | P | | | | | | |
| 4 | CONTEXT OF THE ORGANIZATION | 4.2 | | Understanding the Needs and Expectations of Interested Parties | P | X | X | X | X | X | X |
| 4 | CONTEXT OF THE ORGANIZATION | 4.3 | | Determining the Scope of the Quality Management System | P | | | | | | |
| 4 | CONTEXT OF THE ORGANIZATION | 4.4 | | Quality Management System and its Processes | P | X | X | X | X | X | X |
| 5 | LEADERSHIP | 5.1 | | **Leadership and commitment** | | | | | | | |
| 5 | LEADERSHIP | 5.1 | 5.1.1 | General | P | X | X | X | X | X | X |
| 5 | LEADERSHIP | 5.1 | 5.1.2 | Customer Focus | P | X | X | X | X | X | X |
| 5 | LEADERSHIP | 5.2 | | **Policy** | | | | | | | |
| 5 | LEADERSHIP | 5.2 | 5.2.1 | Developping the Quality Policy | P | | | | | | |
| 5 | LEADERSHIP | 5.2 | 5.2.2 | Communicating the Quality Policy | P | | | | | | |
| 5 | LEADERSHIP | 5.3 | | Organizational roles, responsibilities and authorities | P | X | X | X | X | X | X |
| 6 | PLANNING | 6.1 | | Actions to address risks and opportunities | P | X | X | X | X | X | X |
| 6 | PLANNING | 6.2 | | Quality objectives and planning to achieve them | P | X | X | X | X | X | X |
| 6 | PLANNING | 6.3 | | Planning of changes | P | X | X | X | X | X | X |

| | | | | | P = Process owner | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chapter | Title | Sub Chapter | | | P2 | P4 | P5 | P6 | P7 | P8 | P9 |
| 7 | SUPPORT | 7.1 | 7.1.2 | People | P | | | | | X | X |
| 7 | SUPPORT | 7.1 | 7.1.3 | Infrastructure | P | | | X | X | | X |
| 7 | SUPPORT | 7.1 | 7.1.4 | Environment for the operation of processes | X | | | X | | P | |
| 7 | SUPPORT | 7.1 | 7.1.5 | **Monitoring and measuring resources** | | | | | | | |
| 7 | SUPPORT | 7.1 | 7.1.5.1 | General | X | | | P | | X | |
| 7 | SUPPORT | 7.1 | 7.1.5.2 | Measurement traceability | | | | P | X | | |
| 7 | SUPPORT | 7.1 | 7.1.6 | Organizational knowledge | X | X | X | X | X | P | X |
| 7 | SUPPORT | 7.2 | | Competence | X | X | X | X | X | P | X |
| 7 | SUPPORT | 7.3. | | Awareness | P | X | X | X | X | X | X |
| 7 | SUPPORT | 7.4 | | Communication | X | X | X | X | X | P | X |
| 7 | SUPPORT | 7.5 | | **Documented information** | | | | | | | |
| 7 | SUPPORT | 7.5 | 7.5.1 | General | P | | | | | | |
| 7 | SUPPORT | 7.5 | 7.5.2 | Creating and updating | P | X | X | X | X | X | X |
| 7 | SUPPORT | 7.5 | 7.5.3 | Control of documented information | P | X | X | X | X | X | X |
| 8 | OPERATION | 8.1 | | Operational planning and control | P | X | X | X | X | X | |
| 8 | OPERATION | 8.1 | 8.1.1 | Operation risk management | X | X | X | X | X | X | X |
| 8 | OPERATION | 8.1 | 8.1.2 | Configuration management | P | X | X | X | X | X | X |
| 8 | OPERATION | 8.1 | 8.1.3 | Product safety | | X | P | X | X | X | |
| 8 | OPERATION | 8.1 | 8.1.4 | Prevention of counterfeit products | X | X | X | X | X | X | X |

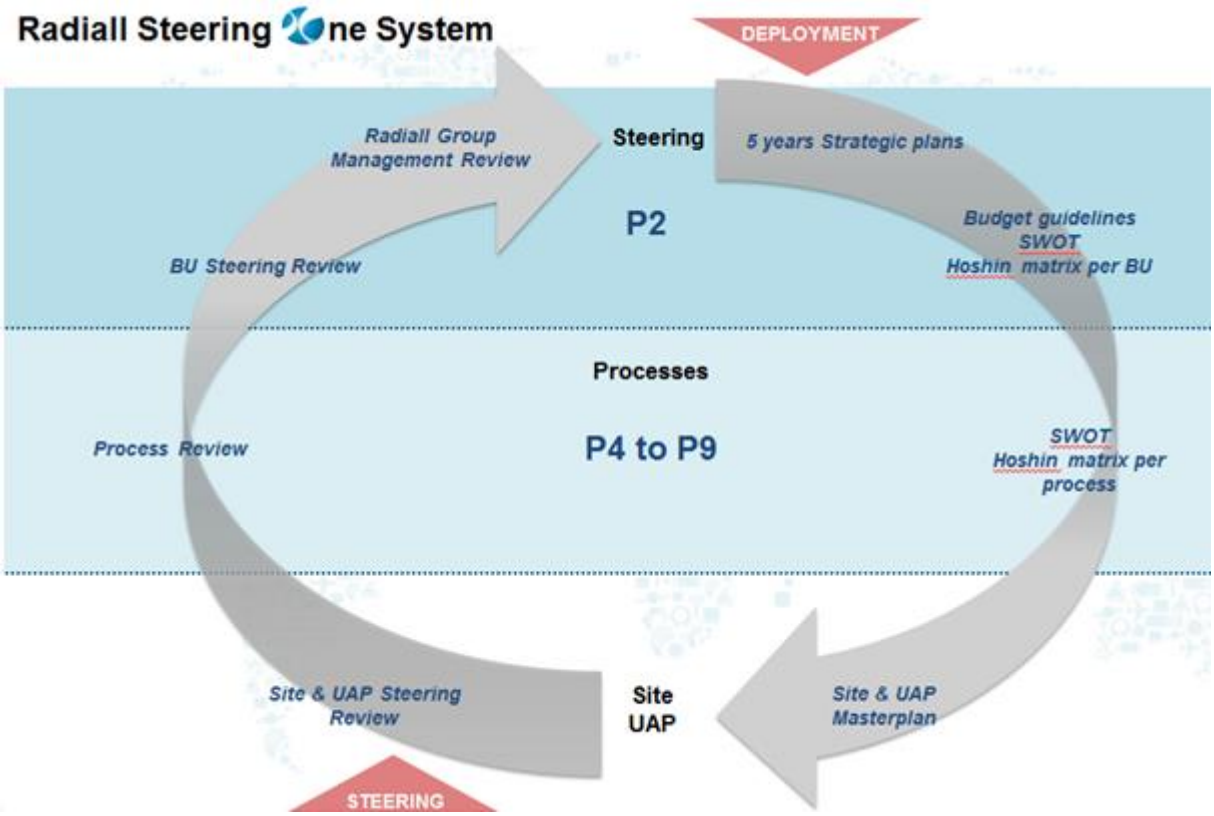
## Radiall Standard/Quality Management System

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | OPERATION | 8.2 | | **Requirements for products and services** | | | | | | | | |
| 8 | OPERATION | 8.2 | 8.2.1 | Customer communication | | P | X | | | | |
| 8 | OPERATION | 8.2 | 8.2.2 | Determination of requirements related to products and services | | P | X | X | | | |
| 8 | OPERATION | 8.2 | 8.2.3 | Review of requirements related to products and services | | P | X | X | | | |
| 8 | OPERATION | 8.2 | 8.2.4 | Changes to requirements for products and services | | P | X | X | | | |
| 8 | OPERATION | 8.3 | | **Design and development of products and services** | | | | | | | |
| 8 | OPERATION | 8.3 | 8.3.1 | General | | | P | | | | |
| 8 | OPERATION | 8.3 | 8.3.2 | Design and development planning | | | P | | | | |
| 8 | OPERATION | 8.3 | 8.3.3 | Design and development inputs | | | P | | | | |
| 8 | OPERATION | 8.3 | 8.3.4 | Design and development controls | | | P | X | | | |
| 8 | OPERATION | 8.3 | 8.3.5 | Design and development outputs | | X | P | X | | | |
| 8 | OPERATION | 8.3 | 8.3.6 | Design and development changes | | | P | X | | | |
| 8 | OPERATION | 8.4 | | **Control of externally provided processes, products and services** | | | | | | | |
| 8 | OPERATION | 8.4 | 8.4.1 | General | | | | P | | | |
| 8 | OPERATION | 8.4 | 8.4.2 | Type and extent of control | | | | P | | | |
| 8 | OPERATION | 8.4 | 8.4.3 | Information for external providers | | | | P | | | |
| 8 | OPERATION | 8.5 | | **Production and service provision** | | | | | | | |
| 8 | OPERATION | 8.5 | 8.5.1 | Control of production and service provision | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.1.1 | Control of production equipment, tools and software programs | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.1.2 | Validation and control of special processes | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.1.3 | Production process verification | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.2 | Identification and traceability | | X | X | P | X | X | X |
| 8 | OPERATION | 8.5 | 8.5.3 | Property belonging to customers or external providers | | X | | P | | | |
| 8 | OPERATION | 8.5 | 8.5.4 | Preservation | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.5 | Post-delivery activities | | | X | P | | | |
| 8 | OPERATION | 8.5 | 8.5.6 | Control of changes | | | P | X | | | |
| 8 | OPERATION | 8.6 | | Release of products and services | | | X | P | | | |
| 8 | OPERATION | 8.7 | | Control of nonconforming outputs | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.1 | | **Monitoring, measurement, analysis and evaluation** | | | | | | | |
| 9 | PERFORMANCE EVALUATION | 9.1 | 9.1.1 | General | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.1 | 9.1.2 | Customer satisfaction | X | P | X | X | | | |
| 9 | PERFORMANCE EVALUATION | 9.1 | 9.1.3 | Analysis and evaluation | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.2 | | Internal audit | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.3 | | **Management review** | | | | | | | |
| 9 | PERFORMANCE EVALUATION | 9.3 | 9.3.1 | General | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.3 | 9.3.2 | Management review input | P | X | X | X | X | X | X |
| 9 | PERFORMANCE EVALUATION | 9.3 | 9.3.3 | Management review output | P | X | X | X | X | X | X |
| 10 | IMPROVEMENT | 10.1 | | General | P | X | X | X | X | X | X |
| 10 | IMPROVEMENT | 10.2 | | Nonconformity and corrective action | P | X | X | X | X | X | X |
| 10 | IMPROVEMENT | 10.3 | | Continual Improvement | P | X | X | X | X | X | X |

## 5- LEADERSHIP

### 5.1 Leadership and Commitment

The management reviews, the policy and associated quality objectives are defined and managed according to One System:




The customer documentation follows the rules of the Radiall procedure MPQ0508 “Management of Customer documentation.”
The technical documentation managed by the engineering departments is classified into an overall technical database and the generic documentation managed by the Corporate Quality department is listed, classified and accessible in Google Drive.

The On Time Delivery (OTD) and the quality results (ppm) are measured and recorded. Actions are taken if the Radiall targets are not reached, in accordance with the rules defined in instruction FIQ RAD 076 “Customer Satisfaction Measurement.”

## 5.2 Policies

The Quality Policy, the Safety & Environment Policy, the counterfeit policy and the code of conduct written by the top management define the Radiall key objectives and the organization to achieve them.

# RADIALL QUALITY POLICY


Radiall strategy is based on three key objectives:

- Customer satisfaction, to exist
- Employees fulfillment, to build
- Business prosperity, to last

The Quality Management System should mobilize the entire staff to achieve these objectives, through:

- An efficient steering of the processes to serve internal and external customers
- A continuous improvement approach sailing toward operational excellence in order to maintain Radiall quality image at the highest level.
- The implementation of the 4 Radiall values:
  - Dare to be audacious in order to an develop entrepreneurial and innovative culture
  - Make it simple to be more agile and aim to always be the First
  - Be genuine in order to know how to question and adapt ourselves to change
  - Grow together to allow self-fulfillment and contribute to a better world
- Compliance with applicable laws and regulations (social, ethical, environment, safety…)

D. BUTTIN
*Group's Chief Operating Officer*

P. SIVADE
*Corporate Quality Manager*

Radiall

## Radiall Standard/Quality Management System

# Environmental, Safety and Health

January 2016

*Environmental*

*Safety*

*Health*

At Radiall, we are dedicated to listening and satisfying the needs of all stakeholders by giving priority to environmental protection, human health and safety.

In accordance with all applicable regulations and requirements, Radiall is committed to:

- Ensuring compliance of our activities with applicable regulations
- Reducing the risks and impacts of our operations, aiming for "0 accidents" in terms of safety and environment by:
  - *Conducting a structured analysis of the risks and impacts*
  - *Mastering and reducing industrial emissions and discharges (into air, water and soil)*
  - *Controlling and optimizing consumption of natural resources (energy and raw materials)*
  - *Taking safety and environmental concerns into account right from the product design stage*
- Implementing health, safety and environmental 'best practices' across the Radiall group
- Promoting the adoption of health, safety and environmental principles from suppliers and service providers

**D. BUTTIN** | *Chief Operating Officer, Radiall Group*

## Radiall Standard/Quality Management System

# RADIALL COUNTERFEIT POLICY


**Products offered for sale by Radiall must be authentic. The sale of counterfeit products is strictly prohibited. It is Radiall and Radiall's suppliers responsibility to source, sell, and fulfill only authentic products.**

Radiall has implemented a documented procedure via our AS9100 quality system and has designed its requirements, practices, and methods related to parts management, supplier management, procurement, and code of conduit of personnel to adhere to the intent of counterfeit electronics parts standard SAE AS5553.

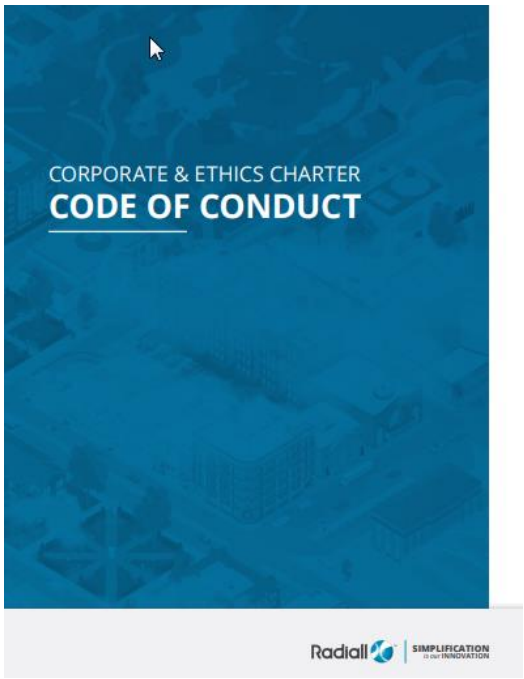
We work with manufacturers, rights holders, vendors and sellers to improve the ways we detect and prevent inauthentic products from reaching our customers. As a result, we remove suspect listings based on our own review of products.

We encourage customers who have product authenticity concerns to notify us. We will promptly investigate and take all appropriate actions to protect them.

Radiall performs random checks of the supply chain to ensure this policy is being followed.
Radiall reports all occurrences of counterfeit parts, as appropriate, to customers, government reporting organizations (e.g., GIDEP, FGCPPP), industry supported reporting programs (e.g., ERAI), and criminal investigative authorities.

D. BUTTIN
Group's Chief Operating Officer

P. SIVADE
Corporate Quality Director




Radiall requires all of its employees to comply with its Code of Conduct which is published on www.radiall.com. As it is not possible to ensure that its employees (or other persons) comply with other codes of conduct (i.e Code of Conduct from Customers), Radiall cannot undertake to comply with them.

## Radiall Standard/Quality Management System

# CONFLICT MINERALS CORPORATE POLICY

RADIALL is deploying its best efforts to follow Section 1502 of the US Dodd-Frank Act regarding Conflict Minerals (Tin, Gold, Tantalum, or Tungsten, the 3TG(1)). Radiall's suppliers acquire and use conflict minerals from multiple sources worldwide. As part of Radiall's commitment, it is our goal to use tantalum, tin ,tungsten and gold in our products that do not directly or indirectly finance or benefit armed groups in the DRC(2) or adjoining countries.

RADIALL does not directly source its gold and tin from mines, smelters or refiners. Therefore, RADIALL relies on the information provided by our direct suppliers, which rely themselves upon their own suppliers, direct and indirect. RADIALL's supply chain being highly scalable, a tracking of the 3TG sources Part Number by Part Number is not possible at this stage. Hence RADIALL chose to complete the Conflict Minerals Reporting Template at corporate level (based on the CFSI Standard Smelters List).

In support to this policy, Radiall will :

- Collaborate with our supply chain partners to take reasonable steps to ensure Radiall's compliance with the law and regulations and to strive towards sourcing parts and materials which are considered "3TG conflict free(3)".
- If a "3TG conflict free" status cannot be determined by a supplier, supplier agrees to cooperate with Radiall, including disclosing from whom supplier purchased the mineral and urging others to disclose such information, so that the original source of minerals can be accurately determined and reported. If needed, Radiall will execute remediation steps to evaluate and procure, as necessary, alternate parts and materials.
- Expect our suppliers to flow down this policy to their suppliers or establish a conflict minerals policy consistent to Radiall's conflict minerals policy
- Improve our knowledge of the origin of the 3TG present in our range of products throughout our supply chain to ultimately, supply 3TG product that is "3TG Conflict free"

(1) 3 TG : Tin, Gold, Tantalum, or Tungsten
(2) DRC : Democratic Republic of the Congo
(3) Conflict free means that the product, or part does not contain conflict minerals that indirectly finance or benefit armed groups as defined SEC Rule 13p-1 under the Securities Exchange Act of 1934

**S LEFLOCH DUBOIS**
*Environmental compliance*

**P SIVADE**
*Corporate Quality Manager*

## HAZARDOUS SUBSTANCES CORPORATE POLICY

As a manufacturer of interconnect components and solutions serving the telecommunication, aerospace, defense, instrumentation, industrial and medical markets, RADIALL is committed to protecting the planet and the health of its residents. Therefore, not only RADIALL complies with the environmental laws and regulations, but also works to improve its products and its process in anticipation.

In support of this approach,

- RADIALL invests in innovation to anticipate environmental obsolescence of its products or its process.
- RADIALL collaborates with its suppliers to meet current environmental regulations.
- RADIALL deploys its best efforts to fulfill its customers' environmental requests.
- RADIALL keeps itself informed of the evolution of the regulations in its operating countries.
- RADIALL develops tools to facilitate substance tracking in its products.

More specifically, RADIALL complies with the requirements of the European Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH"). And although RADIALL's products are not directly subject to the requirements of the European Directive 2011/65/EU concerning the restriction of hazardous substances (RoHS2), RADIALL has implemented such Directive for a large range of its products.

For non-legally binding chemical substances, please contact us.

S LEFLOCH DUBOIS
*Environmental compliance*

P SIVADE
*Corporate Quality Manager*

### 5.3 Organizational Roles, Responsibilities and Authorities

Managed by Human Resources using dedicated software.

## 6- PLANNING

### 6.1 Actions to Address Risks and Opportunities

All data coming from internal or external reviews constitute inputs for the elaboration of:

- The 5-year strategic plan and the annual budget
- The annual roadmap
- Process and management reviews
- The training program
- The recruitment program
- Weekly steering reviews of workload/capacity

### 6.2 Objectives and Planning to Achieve Them

The Quality objectives defined according to the Customer requirements and the level of maturity of the processes are measurable, monitored, communicated, at minimum monthly.
In order to meet objectives treating claims, a meeting is held daily at each production facility.

### 6.3 Planning of Changes

When the organization determines the need for changes to the quality management system, these changes shall be carried out as defined in Radiall procedure MPQ0206 "Major Industrial Change Management."

## 7- SUPPORT

### 7.1 Human Resources

One of RADIALL's missions is to empower our employees by providing a work environment which favors initiative taking, accountability, integrity, and employee fulfillment.
In France, employee skills are managed using a skill matrix and software. RADIALL regularly evaluates skills through a progress evaluation interview.
In addition, RADIALL has a system for developing and deploying objectives at all management levels.

A training program to develop the skills of the personnel is established and launched each year (refer to MPA 1801 "Training").

### 7.2 Infrastructure

All requests for premises, equipment and support services shall be expressed during one of the reviews defined in One System and in accordance with the investment program defined in the yearly budget.
The Radiall Authority Table determines to which level in Radiall Management requests are referred for approval or disapproval.

Process for maintaining buildings and equipment:

The maintenance process is designed to keep the work tool functioning well. Maintenance is integrated in each production workshop for best response. Curative, corrective and preventive maintenance is managed through a CMMS (Computerized Maintenance Management Software)

Moreover, Radiall uses external services for:

- Cleaning of buildings
- Local computer maintenance
- Calibration/checking the measuring and test devices. Some measuring and test devices are calibrated internally.

These services are defined by contract.

### 7.3 Work Environment

RADIALL manages Hygiene, Safety and Environment in accordance with local regulations and follows the rules of the Standard ISO 14001. The Radiall sites in Asia are certified ISO 14001.
Also, there are action plans at each of its facilities to ensure the wellbeing of the personnel and the environment.

The infrastructures and installations are protected by:

- Guardians for the buildings
- An internal safety team to deal with first aid and emergencies (fire, personal injuries, etc)
- External organizations for ensuring that the installations and equipment comply with the regulations in force

Instructions are available at the workstations.
At the initiative of the process owners, RADIALL assesses the risks associated with the environment on the quality of the product.

### 7.4 Monitoring and Measuring Resources

- For Equipment:

Application of the Radiall procedure MPP 0903 “Reception, Installation, Use and Maintenance of Production Equipment”

- For Devices:

Application of the Radiall procedure MPQ 1103 "Calibration and Verification of Measuring, Inspection and Test Equipment".
This procedure refers to ISO10012-1.

### 7.5 Documentation Requirements

The documentation requirements are managed according to the following Radiall procedures:

- MPQ 0501 “Document Control”: This procedure states the rules applicable to the drafting, modification, coding, approval, implementation, release and filing of all quality/environmental documents, as well as documents associated with SME/SMQ and external documents

- MPQ 0507 “Control of Standards”: This procedure states the rules for the supply and distribution of Standards

- MPQ 0508 “Management of Customer Documentation”: This procedure defines the rules and regulations governing the receipt, distribution, analysis and filing of customer documents.

## 8- OPERATION

### 8.1 Operational Planning and Control

The organization is the one that defined through the Process Mapping of Radiall (See §4)

8.1.1 Operational Risk Management
Activities of the FDP form P2 “Steering”

8.1.2 Configuration Management

Managed by ERP system, Audros (industrial folder for all technical information) and the document database

8.1.3 Product Safety
This is one of the inputs of the Design activities. See §8.3

8.1.4 Prevention of Counterfeit Parts
Radiall has written a counterfeit policy, see §5.2 and defines its requirements concerning the identification of counterfeit products in procedure MPQ0601 RAD01 "Counterfeit parts control plan". These requirements are based on the standardized practices outlined in AS5553: Counterfeit Electronic Parts, Avoidance, Detection, Mitigation, and Disposition.

## 8.2 Requirements for Products and Services

8.2.1 Customer Request Analysis

The “business development” process identifies requirements concerning the new product at the tendering stage using a Workflow. This process involves sales, marketing and the “product and process development” procedures.
Differences compared with the product requirements, and any risks (new technology, reduced delivery schedules) are dealt with during the analysis of the tender. The reference document are the MPV 0301 “Processing tenders and customers’ orders” or the MPV0301 RUS 01 “quotations and orders process”

When the customer provides a product specification, a compliance matrix is established to ensure compliance with the customer’s requirements.
For any differences in the product, technology, schedule, etc., negotiation is started with the parties involved (customer, engineering, sales / marketing) in order to eliminate divergences.
→ Implementation of instruction FIE RAD 020 “Customer specification management (product/ process)”

8.2.2 Changes to Requirements for Products and Services

Modifications to requirements concerning an existing product generate a request for a technical change according to the procedure MPE0401 RAD 01 “Change process for a product or a process”. The modifications applied are described and recorded via a technical development notice.

Depending on the classification (minor or major- state the applicable case) and the customer’s specifications, the modification is sent to the customer for information only or approval (see MPQ0206 Major Industrial Change Management). The following rules apply:

Only changes to product part-numbers that are (i) listed in a valid contract signed between Radiall and its Customer or (ii) the subject of an order in progress, are submitted to the Customer for information or approval, under the following conditions:
Only changes (in a product or process) that may lead to a major change in the product are submitted to the Customer for information.

Only changes (in a product) that may lead to a major change in a product designed in accordance with the Customer's sole specifications are submitted to the Customer for approval or information.

When Radiall sends a modification approval request to a customer, that modification will be considered as accepted by the customer after a certain period of time has elapsed without an objection being raised. This period of time is defined conjointly with the customer.

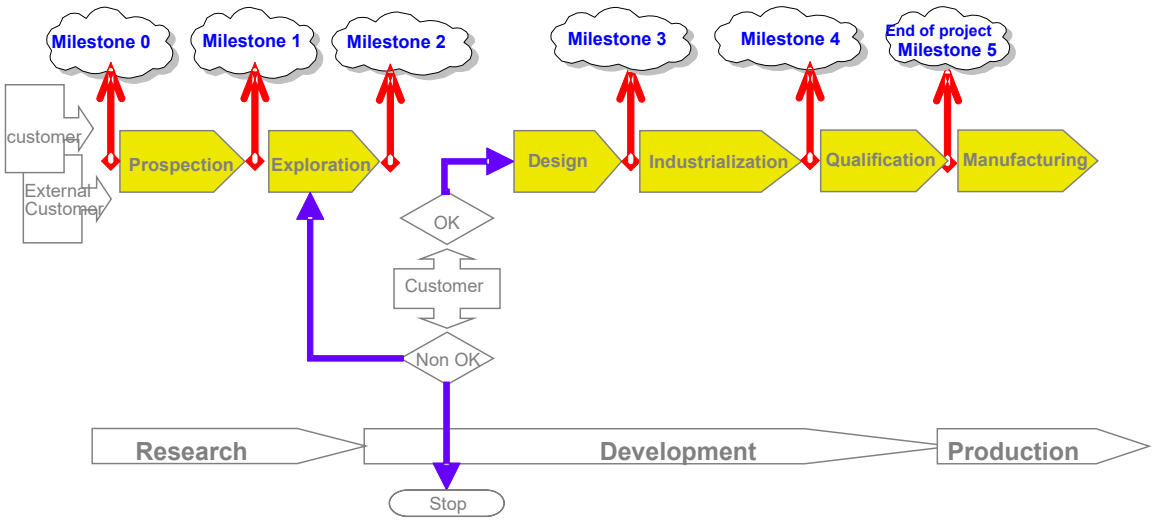
This modification is recorded in a communication document created with the customer. This document is usually specific to Radiall - FEP (Product Development Notice).

## 8.3 Design and Development

The document applicable to this paragraph is the procedure MPE 0401"new products and processes development"
The development procedure integrates a project risk analysis, which takes into account Environmental requirements. A database lists all the materials used in our products and their conformity status with respect to the notice. This procedure forms an integral part of the HSE policy of RADIALL.

The development process is made of project phases as below:
- Prospecting
- Exploration
- Definition
- Development of Industrial Process/ Process development/Manufacturing Process development/manufacturing engineering
- Qualification
- Series life

Each phase takes place according to a series of activities and is delimited by two milestones. A milestone is a decision-making meeting allowing moving to the next step.
The mandatory members and signatories of each milestone are identified in the procedure MPE0401

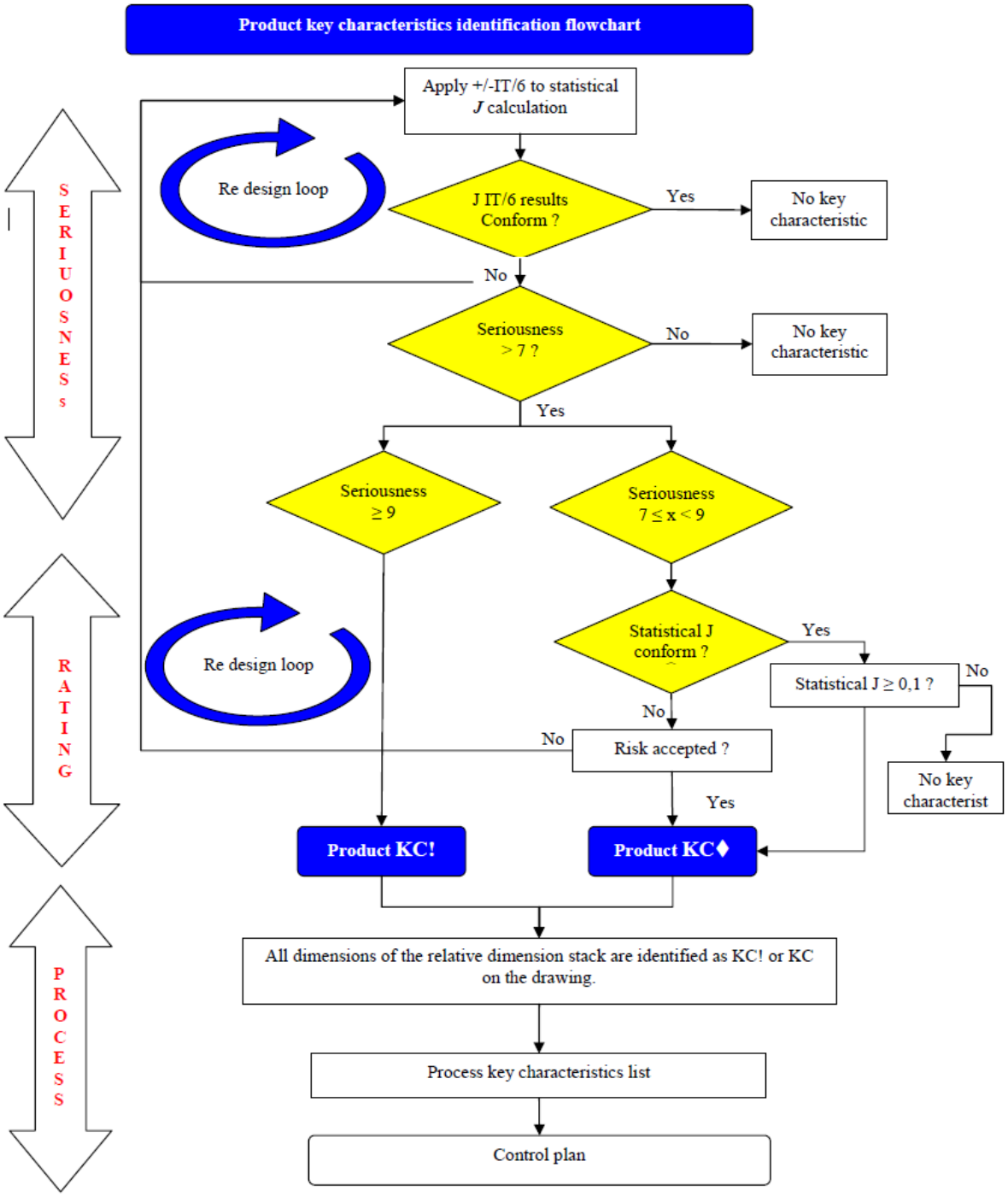


## Radiall Standard/Quality Management System

The project design engineering team is multi-disciplined and includes input from the persons involved in the downstream processes as early as possible in the product development in order to capitalize on experience, launch preventive actions, prepare the acceptance of a new product or process, and provide training and information.

The DFMEA and PFMEA are performed for every new project, according to MPE 0401. Two best practices describe how these FMEA are performed throughout the project.

During the development of a new product, and depending on its complexity, key characteristics are defined, drawn from DFMEA and procedure for defining Key characteristics described in a Radiall instruction. (FIE RAD 017 “Selection and Monitoring of key characteristics”)



## 8.4 Control of Externally Provided Processes, Products and Services

8.4.1 Subcontractor/Supplier Selection and Management

The following points are taken into account in the selection of our suppliers:
Risk analysis is conducted by the buyer (mainly for strategic suppliers). Depending on the results, the buyer takes needed actions to mitigate or eliminate risks.

After the pre-selection phase, based on supplier's certifications, logistic and quality performances, quality system and continuous improvement system, an audit is carried out in order to finalize the selection. This audit is performed by the Supplier Performance Improvement (SPI) person.

Supplier quality and logistic performances are managed through databases available in the Radiall intranet. They are communicated to suppliers in real time through our web portal (AGILE) to those who are connected, and when visiting them for the others. Out-of-target performance triggers a visit to the supplier.

When a supplier doesn't reach the level of performance expected, he is asked to provide a recovery plan. This recovery plan is recorded in a database. SPI can decide to work with the supplier, help them to identify actions needed and support them in the action plan follow up.

A Radiall representative must be present with the Buyer during a potential visit to a relevant sub-tier's facility.

8.4.2 Cascade of Requirements to the Subcontractors

The sole requirements Radiall imposes on its subcontractors are Radiall's own requirements, which it applies through the generic purchasing conditions and the FIQ RAD 020 "Quality requirements for Radiall suppliers".

The subcontractor shall at all times be responsible for compliance with the FIQ RAD 020 and General Conditions of Purchase (GCP).

8.4.3 Subcontractor Monitoring

An annual assessment is carried out, including OTD, lead-times, quality performance, buyer and SPI impression, and the objectives are reviewed and redefined each year.

## 8.5 Production and Service

On completion of the design of a new product, RADIALL establishes a manufacturing file. Among others, this file contains drawings, product tests and route sheets. These route sheets state the assembly, production and test equipment, production and test tools and the instruction notices detailing the operations at the workstations.

At the end of production, before storage, a final inspection is performed according to defined acceptance criteria and then the product is released in the ERP.

The production tools and equipment are accepted according to procedure MPP 0903 (Receiving, starting up and maintenance of production equipment).
The production equipment and tools are periodically validated and maintained by the maintenance department.
To facilitate the management of the production equipment and tools, a code is assigned to each one.

The workload in the workshops is managed by:

- The workshop coordinator each day in order to comply with the assigned load
- The SCM department in the medium term and long term

8.5.1 Control of monitoring and measuring devices

All the instruments used for measuring the product are listed, labeled and periodically checked. The history and frequency of checks on each instrument are managed through a software package. The arrangements for calibration are described in procedure MPQ 1103 “calibration and verification of measuring, inspection and test equipment." This procedure refers to ISO10012-1.

8.5.2 Control of Software Programs

The acceptance and qualification: Programs and their modifications are created and approved by Methods engineers or adjusters. They are recorded on the network server by the engineer in charge of creation or modification.
Back up: The backup is done on the network server by the Methods technician who created the program file. Each update or change to the file is immediately saved. Furthermore, each network server is backed up every day.

8.5.3 Validation and Control of Special Processes

Special processes are qualified according to the procedure Radiall MPP 0904 RAD01 "Process qualification"; no specific agreement is requested from our customer.
Radiall maintains a list of its internal special processes through the instruction FIQ RAD 041 'list of special processes."
A list of the special processes implemented and qualified at external providers is managed by the purchasing department

8.5.4 Identification and Traceability

The procedure applicable to this paragraph is: MPP 0801”Identification and traceability”

Identification of products (piece part, sub assembly and final product)

The products are marked according to the instructions given on the overall drawing or on an instruction notice for the drawing or route sheet. Because of their small dimensions, certain products cannot be marked, so their reference appears on their packaging. The marking procedure is stated on the product drawing or route sheet.

The majority of Radiall products are not concerned by a limited shelf life. If any are, they shall be mentioned on the package.

Identification of products in stock (piece part, sub assembly and final product)
In the storeroom, the finished products are identified by the part number marked on the packaging or the containers.

Traceability
Traceability of spare parts, subassemblies and finished products is based on the concept of a batch number attributed by the ERP when the Manufacturing Order is launched.
Then a Date Code of the type YEAR/WEEK is assigned (e.g.: 1924 = year 2019, 24th week).
The batch number and/or Date Code appear on the product identification marking and on the records of the inspection and test results.
Product identification and traceability are maintained throughout the manufacturing process. Traceability is recorded in our ERP; it allows both an upward and downward search.

The ERP generates a batch number from the moment of reception of parts from a supplier. This batch number is linked to the purchase order. From the purchase order, our suppliers have to link it to their work order and therefore their system of traceability. This requirement is part of the FIQ RAD 0020, GPC (General Purchase Conditions)

Acceptance Authority Media -AAM
The procedure Radiall MPQ 1201 “Inspection and Test Status”, especially in the chapter of Inspection Markings, defines the rules for AAM.

8.5.5 Property Belonging to Customers and External Providers

Except for documents (specifications, drawing….) for which the management is compliant with procedure MPQ0508 “Management of Customer documents”, this section is not applicable.

8.5.6 Preservation

Radiall procedure MPP 1501 “Handling, Storage, Packaging and Delivery” describes the regulations for the handling, storage, packaging and delivery of all products manufactured by RADIALL, products provided by its suppliers, raw materials and perishable and dangerous products used during production. It also specifies the safety regulations to be applied during operations.

8.5.7 Post-Delivery Activities

All requirements on products and services after delivery are managed according to the procedure MPQ 1402 “Customer Claim – Warranty- Product return”.

The Product Warranty according to Radiall's Terms & Conditions of sales applies exclusively, except if a valid long-term agreement contract signed by both the customer and Radiall gives different conditions of Warranty. In this latter case the contract takes precedence over the Product Warranty according to Radiall's Terms & Conditions of sales.

8.5.8 Control of Changes

Only changes to product part-numbers that are (i) listed in a valid contract signed between Radiall and its Customer or (ii) the subject of an order in progress, are submitted to the Customer for information or approval, and then under the following conditions:

Only changes (in a product or process) that may lead to a major change in the product are submitted to the Customer for information.

Only changes (in a product) that may lead to a major change in a product designed in accordance with the Customer's sole specifications are submitted to the Customer for approval or information.

Radiall applies the modification processes as described in its internal procedures (MPQ 0206 and MPE 0401 RAD 01)

## 8.6 Release of Products

Products are monitored as follows:

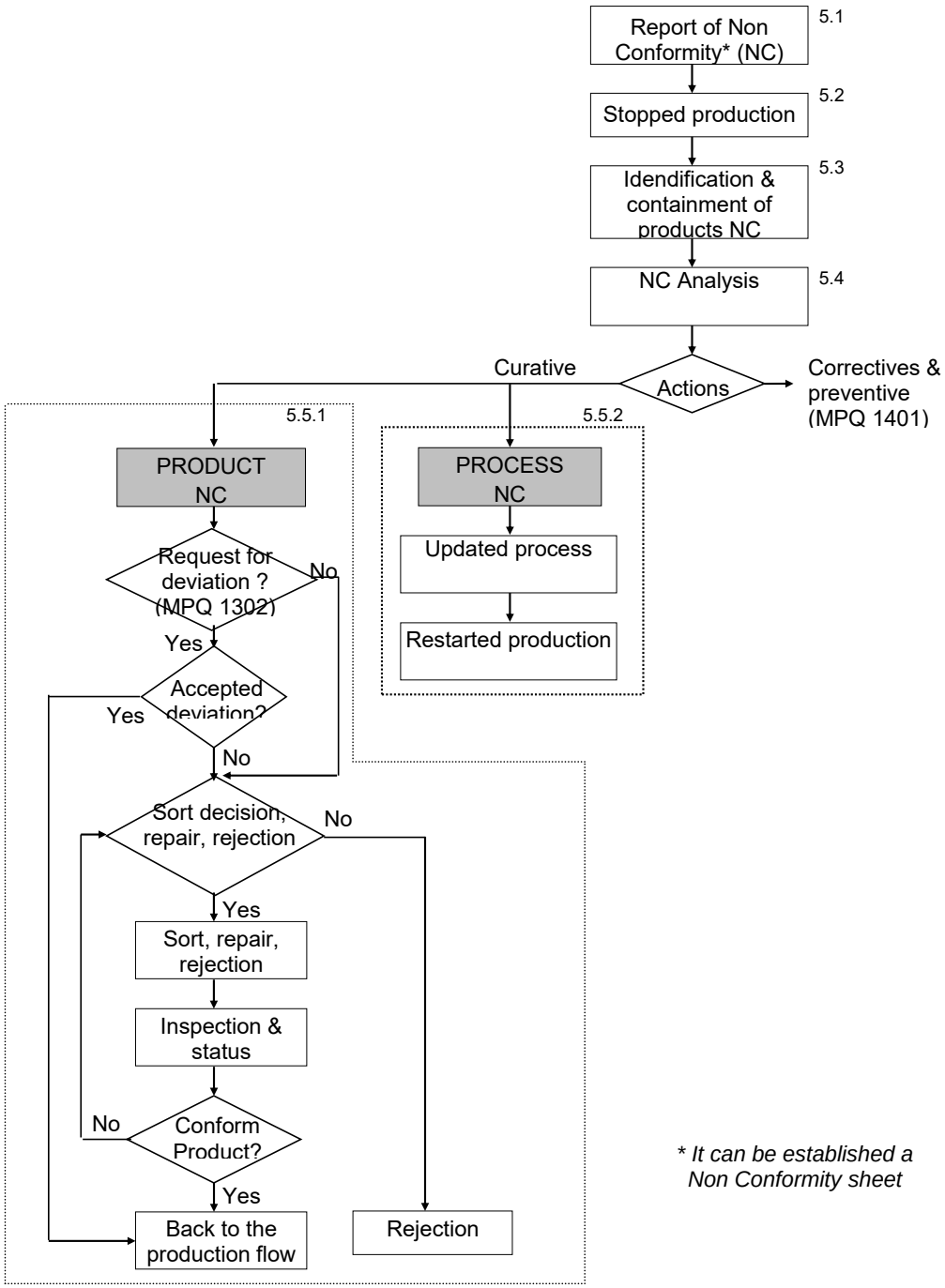
- For bought products: on the supplier's premises according to the degree of confidence or during their acceptance phase (see purchasing process)
- Throughout manufacture as stipulated on the route sheets and instruction notices
- During the review of the first article for every new component and as part of the creation of a new article (finished product) or resulting from any significant change.

Any products are released if the requirements defined are not reached

## 8.7 Control of Nonconforming Outputs

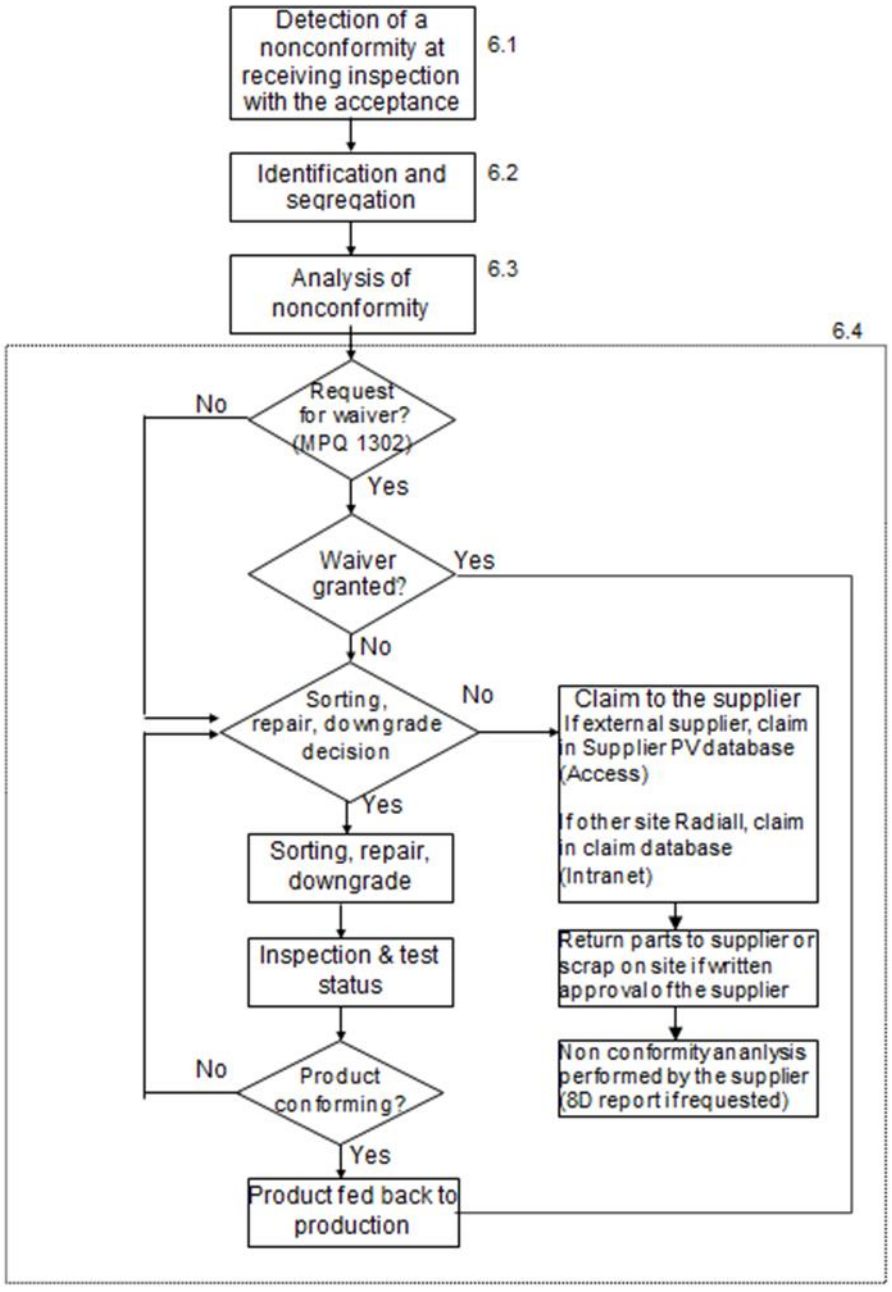
Our processes for dealing with nonconforming products detected in production, during the acceptance inspection and / or detected in stock are described in the following diagrams resulting from procedure MPQ 1301 "Control of Nonconforming Products".

NONCONFORMING PRODUCT DETECTED IN PRODUCTION

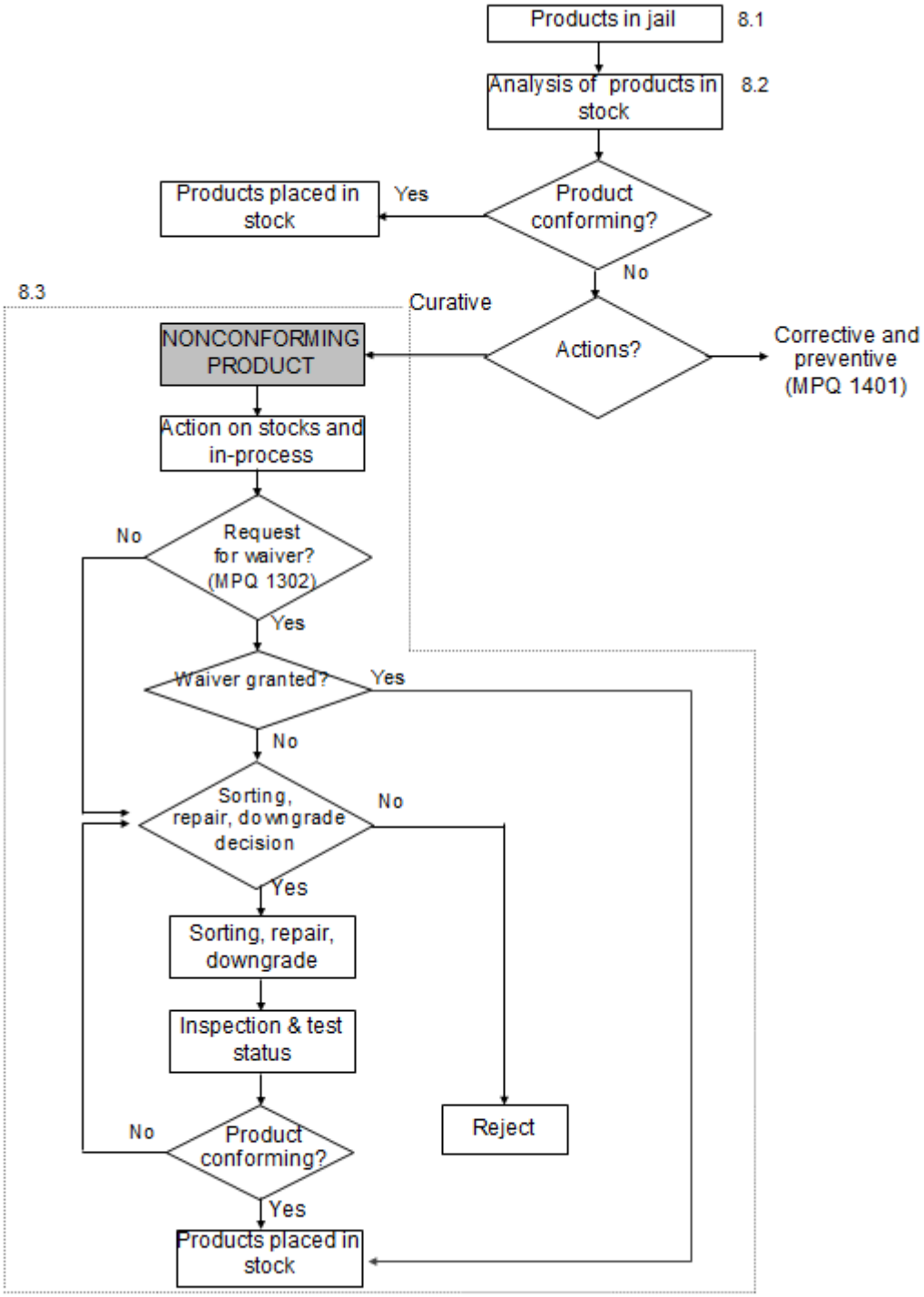



** It can be established a Non Conformity sheet*

NONCONFORMING PRODUCT DETECTED DURING THE ACCEPTANCE INSPECTION



## NONCONFORMING PRODUCT DETECTED IN STOCK



For the nonconforming product detected by the customer:

Product Warranty according to Radiall's Terms & Conditions of sale, will apply exclusively, except if a valid long term agreement contract signed by both the customer and Radiall, gives different conditions of Warranty. In this latter case, the contract takes precedence over the Product Warranty according to Radiall's Terms & Conditions of sales.

Issues are treated by implementing the procedure MPQ1402 "Customer Claim – Warranty – product return". An 8D report, in accordance with the Radiall instructions, is provided if the root cause is imputable to Radiall.
No fee will be charged without a prior written agreement from Radiall.

## 9- PERFORMANCE EVALUATION

### 9.1 Monitoring, Measurement, Analysis and Evaluation

CUSTOMER SATISFACTION
Radiall monitors customer satisfaction using:

- Internal indicators (level of service, level of quality, etc.)
- Information feedback from sales and marketing
- Customer scorecard, grading, prizes awarded to Radiall and the confidence testified by certain customers through the constant development of its share of the market throughout the world

This data is recorded and analyzed by management, and within the processes directly concerned. It is an input for the BU steering review, concerned process review and Group management review.

PROCESS
Each process has indicators of effectiveness and efficiency defined in the process sheet. The objectives of each process are established yearly by Radiall management. The results are analyzed and discussed during each process review. Scorecards are available monthly at Radiall level, BU level and site level.

PRODUCTS
Products are monitored as follows:

- For bought products: on the supplier's premises according to the degree of confidence or during their acceptance phase.
- Throughout manufacture as stipulated on the route sheets and instruction notices.
- During the review of the first article for every new component and as part of the creation of a new article (finished product) or resulting from any significant change.

Radiall is organized into transverse processes, including the SCM activity, which is in direct contact with our customers. The indicators representing these processes are:

- The level of service (On Time Delivery)
- The product quality performance in ppm
- The non-quality cost (NQC)
- The cost to obtain quality (COQ)
- The rotation of stock

### 9.2 Internal Audit

Process, procedure, workstation, 5S, configuration and environment and safety audits are planned and carried out according to procedure **MPQ 1701** "Internal quality audit".
Industrial risks are audited according to:

- **FIQ RAD 026** "SCM risks"
- **FIQ RAD 027**" Sourcing risks"
- **FIQ RAD 028** "Production risks"
- **FIQ RAD 029** "Design risks"

### 9.3 Management Review

The Management review is performed annually at the Group level. Process reviews and Business Units Steering reviews are input data, so they are performed annually before the management review.
This management review is one of the activities of the process "steering" (FDP02).

## 10-IMPROVEMENT

### 10.1 General

Data coming from the different topics listed in the chapter 9 are potential input data for the continuous improvement plan.
At all levels, RADIALL applies continuous improvement and implements the methods needed for the constant strive for progress.
Among others, the tools applied to date are as follows:

- Top Down process (Management of quality by the processes, management review, SWOT, etc…)
- Bottom Up Process (Identification of non-added value, PFMEA, VSM, DMAIC, PDCA, A3, 8D, lesson learn)
- Supplier performance improvement
- Application of statistical techniques in the processes according to products (**MPQ 2001 "**Statistical Techniques")

## 10.2 Nonconformity and Corrective Action

RADIALL implements corrective and improvement actions at the level of products and processes in order to control the situation and ensure stability according to **MPQ 1401** "Corrective and Preventive Action".

## 10.3 Continual Improvement

10.3.1 Continuous improvement of quality

RADIALL management is committed to a process of continuous improvement of quality, which is formalized by:

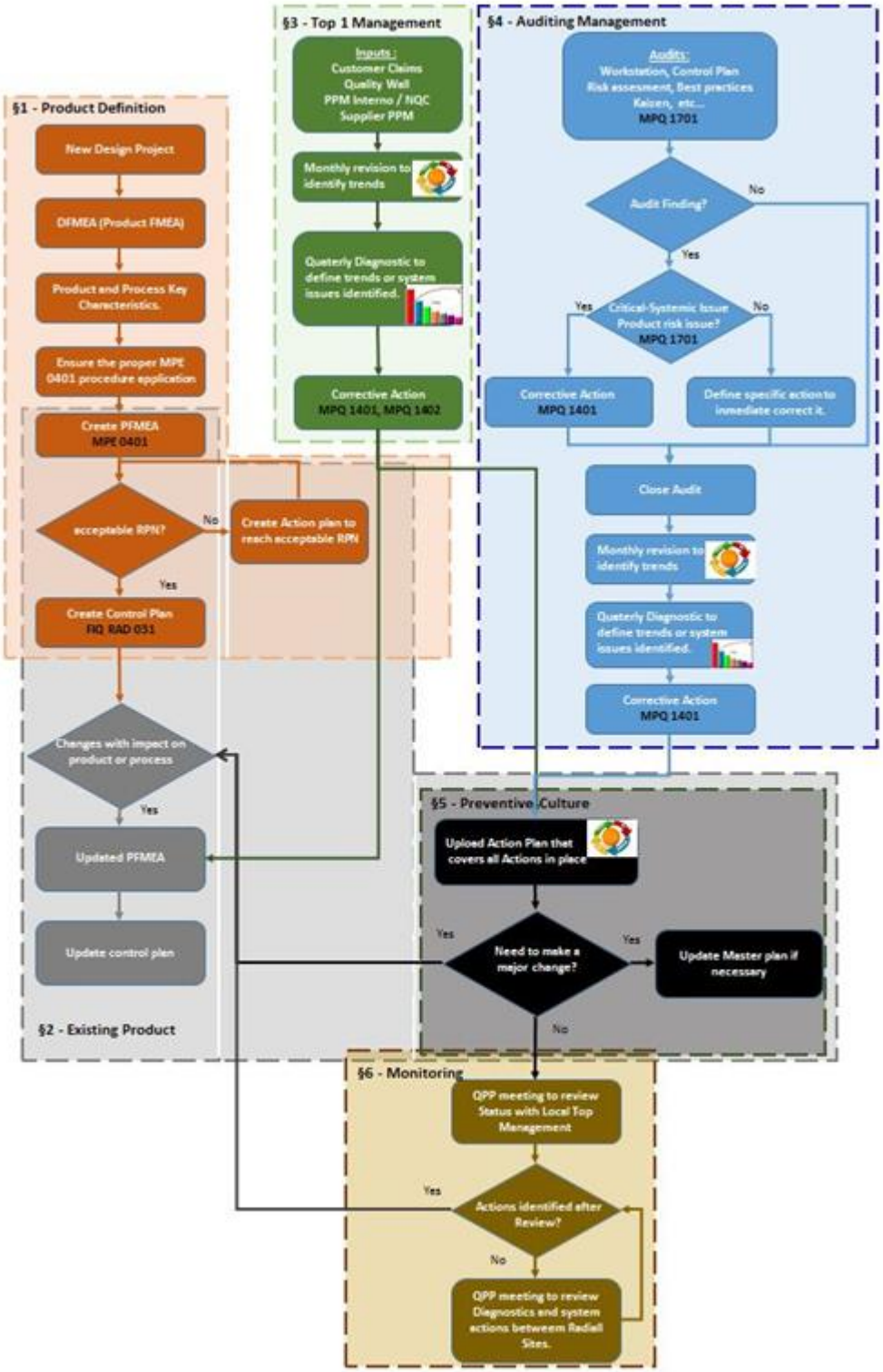
- Its quality system and the associated process method**.**
- The 5-year strategies of SCM, Sourcing, Industrial and Quality.

The performance indicators, and the associated objectives, are monitored and issued. Scorecards are available for Group, BU, Site, processes.

RADIALL invests heavily in training for all its personnel in the use of the tools for solving problems, lean tools and work groups. This plan is the result of the overall management of quality with the participation of the whole company (One System).

Product Quality is improved according to **MPQ 1403**, as follows:

## Radiall Standard/Quality Management System



10.3.2 Supply Chain Organization

In this chapter on continuous improvement, a particular point is to be made on the organization of the Supply Chain. This transverse activity needs to be controlled in order to produce and deliver the right products, at the right price to the right customer.

The Supply Chain is organized per site, UAP (Autonomous Unit of Production), with SCI (Supply Chain Improvement).

## Industrial process flowchart

- Flow chart will be provided as soon as products are be completely defined.
- On time delivery, measured at each step of manufacturing process.
- Rejection rate also recorded at each step of manufacturing process.
- Every step of manufacturing process cycle time is measured

Customer on-time delivery and customer return PPM are some of our KPI's, followed at different levels:

- All customers
- Top customers
- Each customer, if needed

Bottleneck identification is made at 3 different levels:

- Resource plan (horizon 6 months to 1year)
- MPS (Horizon 1 to 3 months)
- PAC (horizon 1 to 2 weeks)

## Production management system

***Sales and Operations Planning process (SOP)***

Our sales and operations planning is a process that permits better management of production, inventory and backlog.
It is reviewed by management at sub product family every quarter.
The process starts with the sales and marketing department, assessing market potential and forecast demand.
Forecasted demand includes the customer's forecast.
Then the updated customer demand plan is communicated to manufacturing engineering and finance, which adjust their plans to support the reviewed demand plan.
The SOP is stated in quantity.
SOP is conducted on each BU.
The output from the sales and operations planning process, once the equilibrium has been achieved, is an approved production plan.

***Master Scheduling process (MPS)***

The Master Production Schedule is a plan for the production of end items. It breaks down the production plan to show the quantity of each item to be made, for each time period.
Whereas the production is based on product families, the MPS is developed for individual end items.
MPS input is the production plan.
MPS output is rough cut capacity planning that will be detailed in §9-8.

***Material Requirement Planning (MRP)***

Our MRP is supported by ERP. ERP applies both to items that are purchased from outside suppliers, and to sub-assemblies and final assemblies produced internally.
It provides the following information:
*What* items are required? *How many* are required? When are they required?
Over the following 12 month horizon.
MRP runs every night. Calculation is made based on different information:

- Firm orders and forecasted customer's needs.
- MOs, DOs and POs in progress.
- Inventory status records.
- Bills of materials.
- Planning Data that include all the restraints and directions to produce the end items or sub-assemblies such as: Routings, Labor and Machine Standards, cycle time of manufactured products, lead-time of purchased products, Lot sizes, Scrap Percentages, and other inputs.

***Outputs***

There are two outputs and a variety of messages/reports:

- Output 1 is the "Recommended Production Schedule" which lays out a detailed schedule of the required minimum start and completion dates, with quantities, for each step of the Routing and the Bill of Material required to satisfy the demand from the MPS.
- Output 2 is the "Recommended Purchasing Schedule". This lays out both the dates that the purchased items should be received into the facility AND the dates that the purchase orders, or Blanket Order release should occur to match the production schedules.

Messages and Reports:
Reschedule notices. These *recommend* cancelling, increasing, delaying or speeding up existing orders.