

Quality Management System

Quality Policy Manual

02-01000.000.02



Approval Notice

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Table of Contents

Section	Page
Table of Contents	1
Foreword	3
1. Quality Methods	4
1.1. General requirements	4
1.2. Quality Management System	4
1.3. Identify Processes.....	4
1.4. Process Effectiveness	4
1.5. Process resources and Information.....	4
1.6. Monitor, measure and analyze processes	5
1.7. Implement Continual Improvement	5
2. Documentation Requirements.....	5
2.1. General documentation requirements.....	5
2.2. Quality Policy Manual	5
2.3. QMS document set	5
2.4. Control of documents	6
2.5. Control of records.....	6
3. Management Responsibility	6
3.1. Management Commitment.....	6
3.2. Customer Focus.....	6
3.3. Quality Policy.....	7
3.4. QMS Planning.....	7
3.5. Responsibility, Authority and Communication.....	7
3.5.1. Quality Manager.....	7
3.5.2. Functional Managers/ Project Leaders.....	7
3.6. Document Control	7
3.7. Internal Communication.....	7
3.8. Management Review	8
4. Resource Management.....	8
4.1. Provision of Resources.....	8
4.2. Human Resources.....	9
4.3. Infrastructure	9
4.4. Work Environment.....	9
5. Production and Service Realization.....	9
5.1. Planning.....	9
5.2. Determine Requirements.....	10
5.3. Review Requirements	10
5.4. Customer Communication.....	10
5.5. Design and Development	11
5.5.1. Design and Development Planning.....	11
5.5.2. Design and Development Inputs	11

5.5.3.	Design and Development Outputs.....	11
5.5.4.	Design and Development Review	11
5.5.5.	Design and Development Verification/ Validation.....	12
5.5.6.	Control of Design Changes	12
5.6.	Purchasing Process/Information.....	12
5.7.	Verification of Purchased Product	12
5.8.	Control of Product and Service Provision.....	12
5.9.	Identification and Traceability	12
5.10.	Customer property.....	13
5.11.	Preservation of Product	13
6.	Control of Monitoring and Measuring Devices.....	13
6.1.	Control of Measuring Devices	13
7.	Quality Measurement	14
7.1.	General – Quality Model.....	14
7.1.1.	Quality Model	14
7.1.2.	Continuously Improvement.....	14
7.1.3.	Internal Audit	15
7.2.	Non-Conformances	15
7.2.1.	Corrective Action	15
7.2.2.	Preventive Action.....	16

QMS Quality Policy Manual	Doc ref:	02-01000.000.02	Page 3 of 16
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Foreword

This *QMS Quality Policy Manual* describes how we implement and maintain our Quality Management System in pursuit of continuous improvement.

1. Quality Methods

1.1. General requirements

Eidsvoll Electronics AS has established, documented, implemented, and is maintaining the QMS for which this document constitutes the formal authority and guidance mechanism. It will undergo routine audits in pursuit for continuous improvement.

1.2. Quality Management System

The Quality management system improves its effectiveness continuously through the methods described in this document.

1.3. Identify Processes

The processes are contained in the Quality Manual. These are documented in order to show the work activity sequence and the interaction between the different processes. It will also show who is responsible for the product of each process.

The two processes which are not put in sequence with the others are either support processes which will proceed stimulatingly with other processes, or project processes which show the management processes for activities done at EIDEL.

Each of these processes will, when required, include references to other processes, relevant standards and guidelines which are essential for the correct execution of the work governed by the process.

1.4. Process Effectiveness

The criteria and method for evaluating the effectiveness of the processes are shown in the processes themselves. In addition, the different processes will be continuously evaluated by the employees. This is a part of the measurement, analysis and improvement which are identified in the Quality Handbook. There is an annual audit to analyse the measurement results and evaluate the current processes.

1.5. Process resources and Information

Process support is provided by the QA manager. The QA manager is also the executive authority for the QMS process implementation, and as such, undertakes to ensure that all applicable resources and information necessary to support QMS processes is provided. This includes human resources, infrastructure and information.

1.6. Monitor, measure and analyse processes

The QMS processes are analysed and monitored and their effectiveness are measured during the scheduled audits identified in the Quality Assurance procedures.

The different processes are analyzed for effectiveness and suitability before it is implemented in the QMS. All processes are monitored during the scheduled audits and the results are submitted as a feature of the regular management review.

1.7. Implement Continuous Improvement

Actions designed to achieve planned process results and continual process improvements are a part of the annual management review of the QMS. Results of the audits will be used to secure the improvement of the QMS.

2. Documentation Requirements

The QMS documentation requirements are described briefly in the following paragraphs. The detailed documentation for these processes can be found in the QMS support processes.

2.1. General documentation requirements

Eidsvoll Electronics AS shall conform to AQAP 2110 NATO QUALITY ASSURANCE REQUIREMENTS FOR DESIGN, DEVELOPMENT AND PRODUCTION. These standards require that an organization “Document what it does, and does with its documents.” The documentation of processes ensures the seamless transfer of knowledge and capability within our organization. It will also ensure that the quality of work executed using the processes by relating them to quantifiable, repeatable, procedural steps.

The QMS documentation objectives are achieved by formalization of the quality system, realized in the following benefits:

- Encourages consistent action and uniform understanding
- Clearly defines the authority and responsibility of personnel
- Is easily auditable (neither informal nor verbal instructions can be verified)
- Is clearly communicated as a result of consistency

How effective the QMS documentation will be will entirely rely on its use. In accordance with AQAP requirement cited above, *documented* processes are essential if the goal of the QMS is to be achieved.

2.2. Quality Policy Manual

This QMS Quality Policy Manual is included in and supported by the QMS Document Set.

2.3. QMS document set

The current QMS document set includes the following:

02-01000.000.01 QMS Quality Policy Manual. This document is intended for use by management personnel and others in positions of responsibility. It provides summary-level information and general guidance concerning roles and responsibilities in the

implementation, execution, and improvement of the QMS, and provides detailed information concerning the quality system architecture.

The *02-0200.000.01 QMS Quality Handbook* is intended for use by project engineers and technicians. It provides detailed information about the different roles, project deliverables, project preparations, safety and security, property administration and material control methods, project assets, and project execution and close-out. The QMS Quality Handbook gives the overview of the processes and how these are connected together.

02-0300.000.01 QMS Processes contains the processes and procedures to fulfil the quality handbook. It is linked to related task-specific documents, templates, and work instructions that form, by extension, a sub-part of the QMS Document set

2.4. Control of documents

QMS documentation includes documents needed to plan, operate, and control its processes. These documents are described in the *QMS Quality Handbook, support processes* and in detail in the *QMS Processes, 02-03900.000.01 support processes*

2.5. Control of records

Records are maintained to provide evidence of conformity to the QMS (and customer) requirements and of the effective operation of the system. Project leaders are responsible with the Quality Manager in support to ensure that QMS-defined records are created in a manner that ensures they remain legible, readily identifiable and retrievable. Document Control is responsible to ensure that they are identifiable and retrievable.

The methods of record identification, storage and protection are stated in the *QMS Quality Handbook, support processes* and in detail in the *QMS Processes, 02-03900.000.01 support processes*

3. Management Responsibility

QMS management responsibility is described in the following paragraphs.

3.1. Management Commitment

Eidsvoll Electronics AS management team is committed to the development and implementation of the QMS and to continually improving its effectiveness for the benefit of customers, employees and shareholders. The management team uses a number of tools to share the entire organization the importance of meeting the customer needs and fulfilling all statutory and regulatory requirements. Among these tools are all-hands meeting, department meetings and bulletins. The management team is committed to provide for all necessary resources to ensure the QMS is effectively implemented, that customer satisfaction is achieved, and that all regulatory and statutory requirements are met.

3.2. Customer Focus

Identification of customer concerns is the responsibility of the Marketing Manager. All personnel who deal directly with customers, either on-site during project execution, through correspondence, meetings or telephone calls, are responsible for ensuring they

address specific local customer concerns as efficiently as possible within contractual limitations.

3.3. Quality Policy

The Managing Director has endorsed and published this quality policy as a guiding principle of the manner Eidsvoll Electronics AS conducts business.

3.4. QMS Planning

Management planning provides the road map for implementing, controlling, and improving the quality system. Effective planning ensures that quality policy is met, and quality objectives are fulfilled. When business processes and requirements change, the careful planned management of change ensures that the integrity of the overall QMS is maintained.

3.5. Responsibility, Authority and Communication

Eidsvoll Electronics AS management has established an organization structure by means of which quality initiatives are developed and implemented. QMS responsibilities are clearly articulated by the *QMS Quality Handbook*.

3.5.1. Quality Manager

The Quality Manager has the overall responsibility and authority to ensure that the QMS as described in this manual is established, implemented and maintained. The QM is tasked with reporting to the Managing Director on the performance of the QMS.

3.5.2. Functional Managers/ Project Leaders

The functional managers and the project leaders are responsible for day-to-day quality assurance and implementation of processes. They also act as internal auditors (cross-auditing functional areas) when assigned according to the audit schedule

3.6. Document Control

The QA manager schedules, receives, quality checks, processes, submits and archives contract deliverables, formats, templates, etc. Contract deliverable documents are monitored to ensure quality control processes are followed. As part of its mission, document control performs the following quality-related functions:

- Quality control review of documents for approval prior to release
- Application of processes which ensure documents are reviewed, updated and re-approved as necessary
- Identification of document revision status
- Identification of changes within documents or attachments
- Documents distribution
- Identification and distribution control of non-Eidsvoll Electronics AS documents, including vendor drawings and specifications, technical documentation, international and national standards, etc.

3.7. Internal Communication

The policy and objectives are communicated to all staff, and reiterate the need for customer focus throughout the organization. The management uses all-hands

meetings, broadcast e-mails, bulletins, etc to share information concerning the effectiveness of the system and achievement of customer requirements.

3.8. Management Review

QMS quality policies, the achievement of quality objectives, and the effectiveness of the QMS are subject to a annual management review.

The management reviews the organization's quality system annually, at a minimum. This is to ensure its suitability, adequacy and effectiveness. The review includes assessing opportunities for improvement and the need for change to the QMS. This includes the quality policy and objectives. The result of the review includes any decision and actions relating to these items. Records from the management review are maintained.

Input to the management reviews includes the following:

- Results of audits of the QMS, installations and reviews with the termination of projects.
- Customer feedback
- Supplier feedback
- Process performance and conformity of services and products supplied
- Corrective and preventive action status
- Previous management review follow-up items
- Changes to processes or the business model that would impact the quality system
- Recommendation for improvement to the system, processes or services
- Review of ongoing resource requirements

4. Resource Management

The QMS resource management policy is described in the following paragraphs.

4.1. Provision of Resources

Eidsvoll Electronics AS is committed to ensure sufficient resources are provided to effectively implement, maintain and improve quality to satisfy customer needs and requirements.

The identification of resource requirements, both in terms of human and infrastructure resources, is the responsibility of functional managers with support from the QA manager. The provision of the necessary tools and equipment for the performance of work and the maintenance of the QMS is the responsibility of all managers.

The management is responsible for staffing requirements and is responsible for defining and maintaining resource provisioning policy and requirements.

The Managing Director is involved in reviewing the resource demands of proposed tasking and determining the actions to be taken.

4.2. Human Resources

It is the responsibility of the management to ensure that personnel at all levels of the organization are competent on the basis of education, training or experience. Competence is determined at the time of hiring, and the ongoing evaluation of competence is ensured through appropriate certification and training.

It is the responsibility of all managers to review the training need for their staff. Or the staff itself will notify their manager of their need for training. Once a year in connection with the employee-manager talk the manager will go through and agree upon an individual training plan. This includes internal training as external training.

Records of training, skills, experience and education are maintained and placed together with the employee's personal file. Personnel are required to accept training to a level appropriate to project requirements.

4.3. Infrastructure

The overall responsibility of the infrastructure belongs to the Managing Director. It contains the responsibility to provide overall building and system maintenance for desktop computers, telephones, cell phones, laptops, etc. Network engineering is the responsibility of the IT manager. It is the responsibility for the QA manager to ensure that the infrastructures are adequate to the requirements in accordance with AQAP 2110.

4.4. Work Environment

Most installation activity is performed on customer-owned premises. Eidsvoll Electronics AS does ensure that the safety of the personnel and equipment, and quality of the work performed by Eidsvoll Electronics AS staff. The engineering work environment is maintained as a conventional office space.

5. Production and Service

The QMS defines the methods for controlling Product and Service processes throughout the service life cycle. This is described in the following paragraphs. The processes can be found in the *QMS Quality Handbook* under Production.

5.1. Planning

Eidsvoll Electronics AS is a task driven organization. The QMS provide the framework of processes and procedures within the personnel define the individual customer requirements for each task.

Project plans are established, this plan define the design configuration activities, responsibilities and timelines.

Engineers identify and provide the documentation and information needed for testing, verification and audit of the activity. The QMS will ensure the consistency of the approach. Review and monitoring the activities will ensure that the planning is adequate to meet customer needs and expectations.

Records are maintained as required by the process, procedure or customer-specific documents to demonstrate conformity of the service with QMS and customer requirements.

As a minimum, planning output that includes a design schedule, service/product schedule, service estimates, implementation procedures, service/product acceptance criteria and required resources/documentation.

5.2. Determine Requirements

The Eidsvoll Electronics AS appointed engineers are responsible for determining customer requirements. It is the responsibility of Managing Director to ensure all customer requirements have been identified and captured, including requirements for delivery and post delivery activities. The Contract manager manages all inquiries, contracts and contract amendments.

5.3. Review Requirements

Once the customer requirements are defined and before the commitment to supply is entered into, a review is undertaken. The result of this review the organization identifies any requirement not stated by the customer but which is necessary for the specified of intended use when this is known. This is to ensure that all statutory and/or regulatory requirements are addressed and identified.

The offer of contract following a bid processes will be analyzed to ensure that the requirements are the same as those on the original submission. The review team will ensure that the company has the ability to meet all the defined requirements.

Any contract changes initiated are also required to be reviewed. The formal procedures ensure that the changes are distributed to the appropriated personnel in a timely manner. This is to enable the necessary changes in contract planning documentation to be made and implemented. Records of the results of the review and any actions arising from the review are maintained.

When the customer does not provide a documented statement of requirements, the customer requirements must be confirmed by the organization and customer before acceptance. Where the requirements have change, the organization ensures that the relevant documentation is amended and the appropriate personnel are aware of the changed requirements.

5.4. Customer Communication

The primary responsibility for customer interface rests with the Managing Director. Most of this communication is informal, but records are maintained of any communication concerning service information and customer feedback. Any customer complaints are recorded and directed to the appropriate personnel for solution.

5.5. Design and Development

5.5.1. Design and Development Planning

Design activities undertaken by Eidsvoll Electronics AS are mainly research and development contracting, but it will also contain elements of configuring externally procured equipment to fulfil customer requirements.

An engineering project plan is produced for all contracts. This will identify manpower, equipment, activities, documentation and project timeline as required.

The review stages for each project are defined and the overall project plan is subject to review prior to project initiation to ensure all company and contract requirements have been addressed, appropriate quality checks included, and necessary documents and data identified. The responsibilities and authorities for each activity are also indicated in the project plan.

Eidsvoll Electronics AS has procedures which ensure an effective communication and clear assignment of responsibility between the different groups involved in design and development. Planning output is updated, as appropriate, as the design and development progresses.

5.5.2. Design and Development Inputs

Inputs relating to requirements are determined and records are maintained. Inputs include the following:

- Functional and performance requirements as stated in the contract or Statement of Work (SOW)
- Any applicable statutory and/or regulatory requirements
- Lessons learned from previous, similar activities

The input is reviewed by the engineers for adequacy and to ensure that all requirements are complete, unambiguous and not in conflict with each other.

5.5.3. Design and Development Outputs

Engineering outputs consist of information necessary to allow equipment removal and/or installation to proceed.

Outputs would typically include Technical solutions, Studies, Support plans, Project support agreement, Installation quality plans, Project management plans, Implementation plans, Operation and Maintenance plans, Test plans, etc.

5.5.4. Design and Development Review

Engineers will perform reviews to ensure that all necessary information for the procurement and installation has been provided in a complete a usable manner. The review compares the engineering output against the contractual requirements and all documents are approved prior to formal release.

5.5.5. Design and Development Verification/ Validation

Design and development reviews provide verification of the engineering output. Validation is undertaken when removal and/or installation work is complete to ensure technical performance of the activity meets customer requirements. A record is maintained of the results of the reviews and any necessary actions.

The engineers develop acceptance test criteria based on the output of the engineering activity.

5.5.6. Control of Design Changes

Engineering changes that occurring after the final review activity is completed are identified and records maintained. The changes are reviewed, validated and approved prior to any activity or implementation. Review of engineering changes includes evaluation of the effect on the equipment, installation and work already performed. The results are recorded and any necessary actions are maintained.

5.6. Purchasing Process/Information

The Integration Manager is responsible to ensure that all purchased material is qualified products and procured from approved suppliers. The engineers determine the specifications for products and services. Engineers are responsible to send complete and accurate information to Integration. Integration is responsible to ensure that they have received complete and correct information and that this is send to the supplier.

Supplier selection is based on historical performance data, suitability for product and supplier documentation. Suppliers are evaluated against performance to requirements and re-evaluated as appropriate. Evaluation techniques include, but not limited to, ongoing review of performance data, on-time delivery, accuracy of supply, evaluations of supplier, responsiveness and audit activities.

5.7. Verification of Purchased Product

The products are verified by testing upon receiving. When the product acceptance is based on supplier qualify data, the requirements must be contained with the purchasing documents.

5.8. Control of Product and Service Provision

Planning for provision of services to customers is the primary responsibility of Project Management. Project Leader has the responsibility for developing a variety of project planning documents (Technical solutions, Implementation Plans, Program management plans, etc) identifying requirements and materials. Project plans include quality and customer acceptance requirements.

5.9. Identification and Traceability

CM processes provide the primary means of traceability on the services and products by Eidsvoll Electronics AS. By using configuration control, the status of relevant engineering information, installation instructions and tests status of activities and installations can be identified and tracked.

Accountability is required for all procured hardware and software. Serial and part numbers provide the necessary information to Eidsvoll Electronics AS QMS records and for customer information.

Installation procedures ensure any marked drawings indicating “as built” information different from the original planning information provided to customers and also retained in Program management files.

5.10. Customer property

Eidsvoll Electronics AS exercise care with all materials and customer property while it is under their control. Although the customer must themselves make sure that the equipment is properly insured. All material owned or procured by Eidsvoll Electronics AS (or provided by its customers) is suitably identified, verified, protected and safeguarded against loss or damage.

5.11. Preservation of Product

The appropriate precautions to ensure all material is handled in a safe manner and safeguarded are taken.

If any customer property is damaged or otherwise found unsuitable for use, it is reported to the customer. Records of these findings are maintained.

6. Control of Monitoring and Measuring Devices

6.1. Control of Measuring Devices

All equipment which is to be controlled is sent to provider of such tests. The Integration Manager is responsible so that the equipment is tested according to manufacturer intervals. A record is kept for all testing committed.

7. Quality Measurement

Our QMS defines the mechanism and methods used for measuring the processes and services, analyzing performance and continuously improving its effectiveness. The requirements for measurement, analysis and improvement are described in the following paragraphs.

7.1. General – Quality Model

To ensure an effective measurement, analyzes, and improvement of the quality of the services and products provided by EIDEL it is essential to have an understanding of the quality model. The quality is ensured in a continually circle of inspections, reviews and adjustment.

7.1.1. Quality Model

The quality model is shown in the figure 1 below.

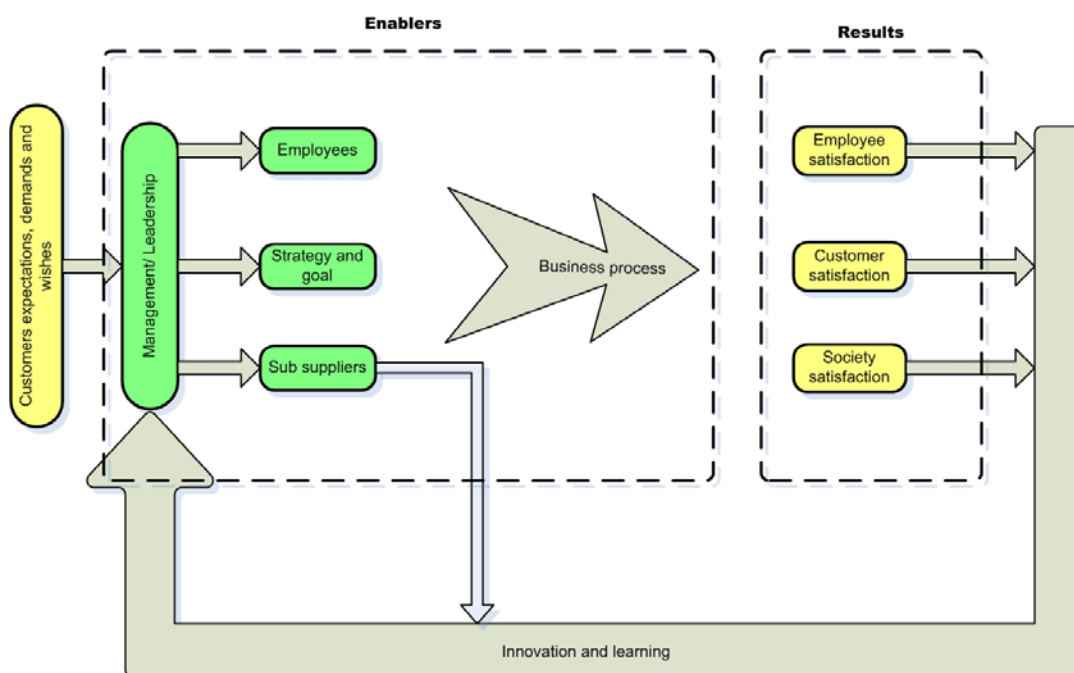


Figure 1 02-03100.000.01 Quality Mode

7.1.2. Continuously Improvement

On the basis of the customer's expectations, demands and wishes the management will develop the strategy and goals for EIDEL. The management also adapts the processes in accordance to changes as a result of audits to ensure that the quality of work is at the highest level possible. This is passed on to the employees which is given training to ensure correct execution of the processes.

All requirements lay upon EIDEL to ensure the quality of work is passed on to the sub suppliers. This controlled by audits at the sub suppliers facilities to make sure that the quality of work is satisfactory.

All day to day operations is described in the business process, EIDEL process 02-03200.000.01. They describe how the work is done, what is needed for a successful execution and what the result is. These processes are controlled by audits and analysis of non-conformances. The result of these is basis for the yearly audit of the QMS.

The results of all process can be measured in employee satisfaction, customer satisfaction and society satisfaction. The society satisfaction includes all that have an economical interest in EIDEL. The result from these groups together with the result of yearly audit will result in adjustment in the QMS and the strategy and goals for EIDEL.

7.1.3. Internal Audit

To ensure a continual improvement EIDEL performs internal audits. These are performed regularly throughout the year and are one of the key components on the yearly audit of the QMS.

The internal audit program is managed by the QM and is conducted on annual basis. It takes into consideration the significance and importance of the processes, areas and products to be audited in order to achieve customer satisfaction. Results from earlier audits, when this is available, is also used to determine the frequency and depth of internal audit activity.

All audits is defined is performed with a checklist. These checklists and a general impression give the basis for the report. The audit result determines if any corrective action is needed. The audit is performed by the QM except when the QM is audited.

The product managers, SW and HW managers and area managers are responsible for follow up and verification within their area of expertise. This is controlled by the QM after completion.

All internal audits will be a basis for the annual management review.

7.2. Non-Conformances

EIDEL has documented processes to ensure that non-conformances are not used unintended or handed-over. This is documented in EIDEL process 02-03902.004.01 Control of Non-Conformances.

All non-conformances is treated in accordance with EIDEL process 02-03902.001.01 Non-Conformances.

This ensures that all non-conformances is discovered, documented and analyzed to prevent additional non-conformances. This includes a track record including which actions where taken.

Where applicable the customer is handed the report of the non-conformance if it is classified as a minor. In the unlikely case of a major non-conformance the customer is informed and EIDEL has to be given permission to perform the chosen preventive action from the customer.

7.2.1. Corrective Action

A corrective action is taken as soon as a non-conformance is identified to eliminate the cause. This is managed by the QM who has the authority to initiate and require corrective action whenever a process, product or service is out of conformity.

This action is executed to prevent recurrence and the level is in accordance with the severity of the non-conformance.

A summery on the corrective actions is reported to the management for review. Where applicable the report is also presented to the customer.

QMS Quality Policy Manual	Doc ref:	02-01000.000.02	Page 16 of 16
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7.2.2. Preventive Action

All employees are encouraged to identify potential problems and sources to non-conformances. This applies to all processes, products and services performed by EIDEL. Preventive actions are managed by the QM and the summary is given to the management for review. The management will decide if action will be taken to eliminate the cause of the potential non-conformance.

A record of all preventive actions is maintained to be able to measure the effect of the action taken.

A summary of all preventive action taken is reported and used in the annual management review of the QMS.