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Implementation of a Management Manual and Documentation System Structuring

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Implementation of a Management Manual and Documentation System Structuring

Abstract

A Management Manual is a document that describes how all the management system in a company is organized. It has the objective of emphasizing the different general management dispositions of an enterprise to ensure the quality of its products and services.

A Management Manual is essential for any type of company. It is intended to be readable by any person involved in it. It can contain a large amount of information such as processes and procedures that the company utilize day by day or be brief, working as a reference for documents located outside the manual.

In this memory the methodology for the creation of Management Manual for an international company at group level is explained in detail; as well as the analysis, structuring and improvement of the documentation system.

Key words: *Management Manual, Management System, General Dispositions, Quality of products and services, Processes, Procedures, Standards.*

Résumé

Un Manuel de Management est un document qui décrit comment tout le système de gestion dans une entreprise est organisé. Il a pour objectif de souligner les différentes dispositions générales d'une entreprise, afin d'assurer la qualité de ses produits et services.

Un Manuel de Management est essentiel pour tous les types des entreprises. Il est destiné à être lisible par toute personne impliquée dans l'entreprise. Il peut contenir une grande quantité d'information tel que toutes les processus et les procédures de l'entreprise ou simplement juste faire référence à tous les documents en dehors du manuel.

Dans cette mémoire, la méthodologie pour la création d'un Manuel de Management pour une entreprise internationale au niveau du groupe est expliquée en détail; ainsi que l'analyse, la structuration et l'amélioration d'un system documentaire.

Mots Clés: *Manuel de Management, Système de Management, Dispositions Générales, Qualité des produits et services, Processus, Procédures, Standards.*

Resumen

Un Manual Administrativo es un documento que describe cómo se organiza el sistema administrativo de una empresa. Tiene como objetivo describir las diferentes disposiciones de carácter general de una empresa, para asegurar la calidad de sus productos y servicios.

Un manual administrativo es esencial para cualquier tipo de empresa. Está destinado a ser leído por cualquier persona involucrada en la empresa. Este puede ser muy detallado, incluyendo todos los procesos y procedimientos utilizados dentro de la empresa; o simplemente haciendo referencia a todos los documentos estando estos fuera del manual.

En esta memoria se describe a detalle la metodológica para la creación de un Manual Administrativo para una empresa internacional a nivel corporativo; así como el análisis, estructuración y mejora del sistema de documentación.

Palabras Clave: *Manual de Calidad, Sistema Administrativo, Disposiciones Generales, Calidad de productos y servicios, Procesos, Procedimientos, Estándares.*

Summary

Figures Summary

Acknowledgements

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List of Acronyms

DMP: Documentation Management Procedure

DSS: Documentation System Structure

PDCA: Plan-Do-Check-Act

GMP: General Management Procedures

BPO: Business Process Owners

Glossary

ISO 9001: Specifies the requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meet customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction though the effective application of the system, including processes for the continual improvement of the system and assurance of conformity to customer and applicable statutory and regulatory requirements.

Management System: framework of processes and procedures used to ensure that an organization can fulfill all tasks required to achieve its objectives.

Quality of products and services: Expected outcome from the client, to reach all their necessities in time and manner.

Documentation: Set of documents provided on paper, or online, or on digital or analog media that permit achieving a specific goal.

Top Management: Group of managers that have as main objective to ensure major business and financial decisions, to allocate resources based on clear priorities and programs

Functional Departments: the leaders of their functional community throughout the Group.

Introduction

In every company a big amount of documents is handled such as: procedures, standards, best practices, forms, memorandums, etc. One of the most important documents is the Management Manual. This manual shows the way the management system of the company works [1].

According to the ISO 9001 norm the specifications that a quality manual must have are:

- The scope of the quality management system
- The documented procedures or the reference to them
- A description of interaction between the processes of the quality management system

Since the specifications of the ISO 9001 norm are very general, this allows the company to make a quality manual according to its preferences, making possible to create a very short management manual to accomplish the ISO requirements [2].

In contrast to most documents within a company, the Management Manual is a document that can be requested by costumers for understanding the way in which the company meets the quality requirements. It is advisable and sought by many companies to have a "well-done" Management Manual which meets the needs of informing all the essential information of the management system of the company.

The objective of this internship was to create a Management Manual at corporate level which did not exist before as well as the analysis, structuring and improvement of the Documentation System Structure. To perform this task it was required to have a great knowledge of the company, its departments, methods, ways of working etc.

The Management Manual in question was not only intended to inform all employees about the management system of the company otherwise the vision, mission, values, way of acting and strategies were other key points to inform the action of the company with respect to the society in which it lives.

Under the circumstances a PDCA method was used during all the developing process, to have a methodological order, achieve objectives in an efficient and ordered way and making easier to transmit this knowledge for future projects [3].

The methodology used to success the creation of a Management Manual and Documentation System Structuring will be detailed explained in this Methodological Memory.

Chapter 1

Company Overview

Who? - Nexans

Nexans is dedicated to bring energy thought an extensive range of cables and cabling solutions that deliver increased performance for customer worldwide [4].

What? - Activities

Nexans offers:

- A complete range of cables, solutions and services adapted to your needs.
- A presence on all continents to assure you of global reach and local proximity.
- A strong R&D organization dedicated to innovation on your behalf.

Nexans has 4 major core businesses:

- Energy and Data Infrastructure (40%):
  - High-, medium- and low-voltage submarine, underground and overhead electricity transmission and distribution networks
  - Land-based and submarine telecommunication networks, using copper and optical fiber cables.

- Energy Resources (10%):
  - On- and off-shore oil and gas
  - Renewable energies: On- and off-shore wins farms and solar power

- Transport (14%):
  - Aeronautical and spatial
  - Automotive
  - Shipbuilding
  - Rolling stock and railway networks
  - Airports, railway stations and ports

- Building (24%):
  - Industrial, logistics, tertiary and commercial buildings
  - Collective buildings
  - Housing
  - Data centers

Where? – Locations

Serving a range of different types of customers – including network operators, energy producers, mining companies, engineering firms, equipment manufacturers, installers and distributors, and infrastructure and construction companies – which have local, regional or even global needs.

Manufacturing sites in 40 countries across 5 continents.

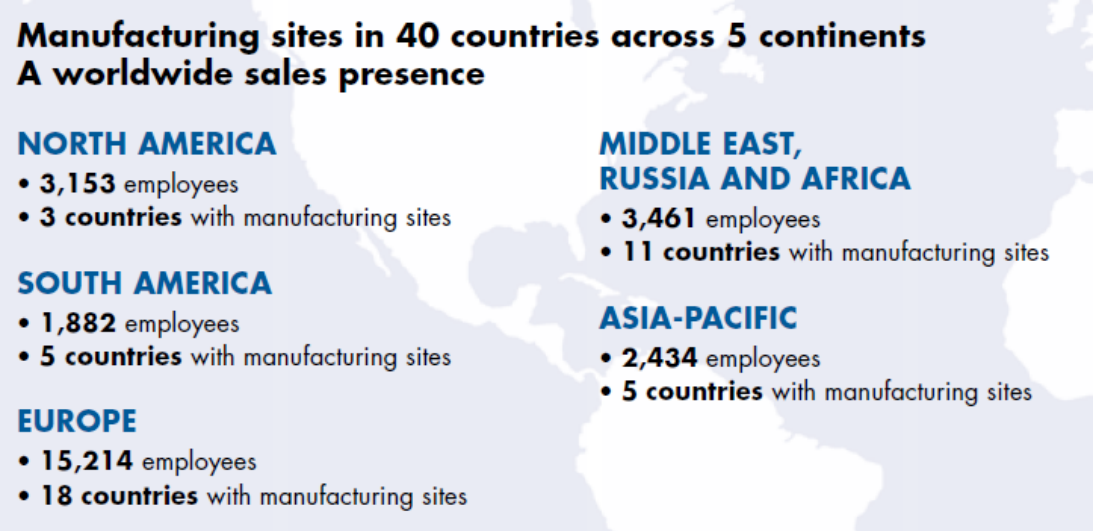

Figure 1 - Sites around the world [4]

When? – Actual Situation

The teams help meet these vital needs for 21st century society by providing high-performing, cost-efficient and long-lasting solutions for the most complex of uses and the most demanding of environments.

How? – Technological Leadership

Through the combination of technological leadership, global expertise and local presence, that can effectively partner our customers' development projects, offering them the best conditions for achieving their objectives while respecting the highest levels of safety and taking the greatest possible care of people and the environment.

Why? – Energy to function

Day to day the world requires more energy to function, develop and achieve higher living standards. For over a century Nexans has played a key role in providing the energy that people need.

Cables are an indispensable part of today's connected towns and cities, providing access to energy, creating communication channels, facilitating the movement of goods and people, and ensuring the comfort and safety of the infrastructure and buildings that are essential for development and improving the quality of life.

PDCA Method

The PDCA (Plan – Do – Check – Act) is a quality iterative method developed by Dr. Edwards Deming that allows developing projects, always looking forward for continuous improvement. It is also known for developing critical thinking and creating a culture of problem solving [3].

It is divided in four main steps:

Plan: To plan what is intended to do. It is necessary to establish the objectives, the output expectations and get to know the tools that are going to be used during the realization of the intended project.

Do: Work on what was planned in the first step. Modifications of the planning can be done if it increase efficiency or improves the project in a certain way.

Check: Measure and analyze the obtained results in the second step (DO). Compare them with the expected results in the first step (PLAN).

Act: Improve and evolve. Involves making adjustments or corrective actions to the revisions done in the step 3 Check.

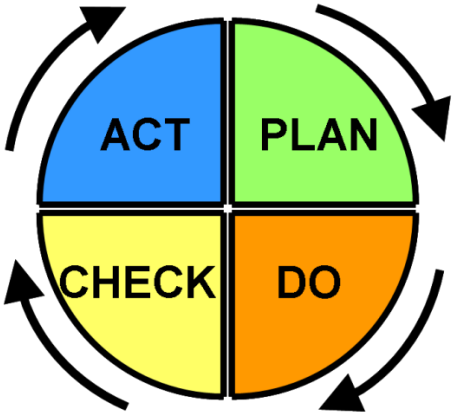

Figure 2 - PDCA Methodology [3]

This method is used:

- **When starting a new improvement project.**
- **When planning data collection and analysis in order to verify and prioritize problems or root causes.**
- **As a model for continuous improvement.**
- **When developing a new or improved design of a process, product or service.**
- **When implementing any change.**

For creating a new improvement project such as a Management Manual or a Documentation System Structuring that have to be always improved and updated (at least every year) the PDCA is a very powerful, useful and efficient methodology.

While other methods for problem solving such as project ISO 21500 can be very complex and take a lot of time to understand how they work, the PDCA is simple and it can be easy to explain and understand by everyone in a short lapse of time. Major advantages over other methods are:

- **Espouses the cause of continuous improvement.**
- **Helps eliminate mistakes.**
- **Improves productivity.**
- **Does away with complacency.**

This method was implemented for the realization of this project and it is going to be explained in detail in the next chapters of this document.

STEP 1 – PLAN

To begin the realization of the first step PLAN of the method it was necessary to establish objectives and limits for the project. Making a plan of what is going to be done and deciding how this plan is going to be successfully completed are the firsts parts to be developed [3].

To perform this first step the problems and objectives were deeply analyzed to understand what the exact goals of this project were and begin the realization of an action plan.

The different stages of the first part of the PDCA (PLAN) method are explained in detail in the next sub-chapters regarding the next subjects:

- Problem Explanation
- Objectives and Deliverables
- Context of the Project

Problem Explanation

The company as is an international entity that has had a very fast growth during the last years in the cable industry, having nowadays; 26, 000 employees, 6.4 billion euros in sales and manufacturing sites in 40 countries [4].

Each plant around the world is dedicated to develop different products depending on the specific needs of the local costumer. To fulfill the quality that each customer is expecting, each plant develops its own work practices and documentation.

As every international company general management documentation is necessary to govern with general rules and common practices that everyone in the company around the world must abide and respect.

For this reason the top management was looking forward to organize, standardize and communicate the general management practices and documentation to increase productivity and making communication and development easier between the different plants and departments around the world within the company.

To achieve this objectives the management proposed to create a set of documents that would summarize and communicate in a clear manner management practices and documentation.

Objectives and Deliverables

The objective of this internship was **to develop a group of management documents that will be diffused and communicated all around the world, explaining in a detailed, clear and easy way how general management works day by day.**

To fulfil this necessity two deliverables were expected to be done by the general management:

- **Management Manual:** A document that contains key information about the company. This manual has as main objective to inform all employees how the group works at a management level.
- **Documentation System Structuring:** Research, order, name and classify the different documentation available at group level and making it reachable to all employees around the world.

Context of the Project

The creation of the deliverables, Management Manual and the Documentation System Structuring are tasks that couldn't be done by a single person or resource. Key factors were needed to succeed:

- Collaboration between managers of the different departments at Group level and other key people as quality experts.
- Deep knowledge of the enterprise, its documentation and way of working.

A cause and effect diagram was created to identify the different causes involved in the creation of the deliverables. Each of the causes are going to be explained in detail [5]:

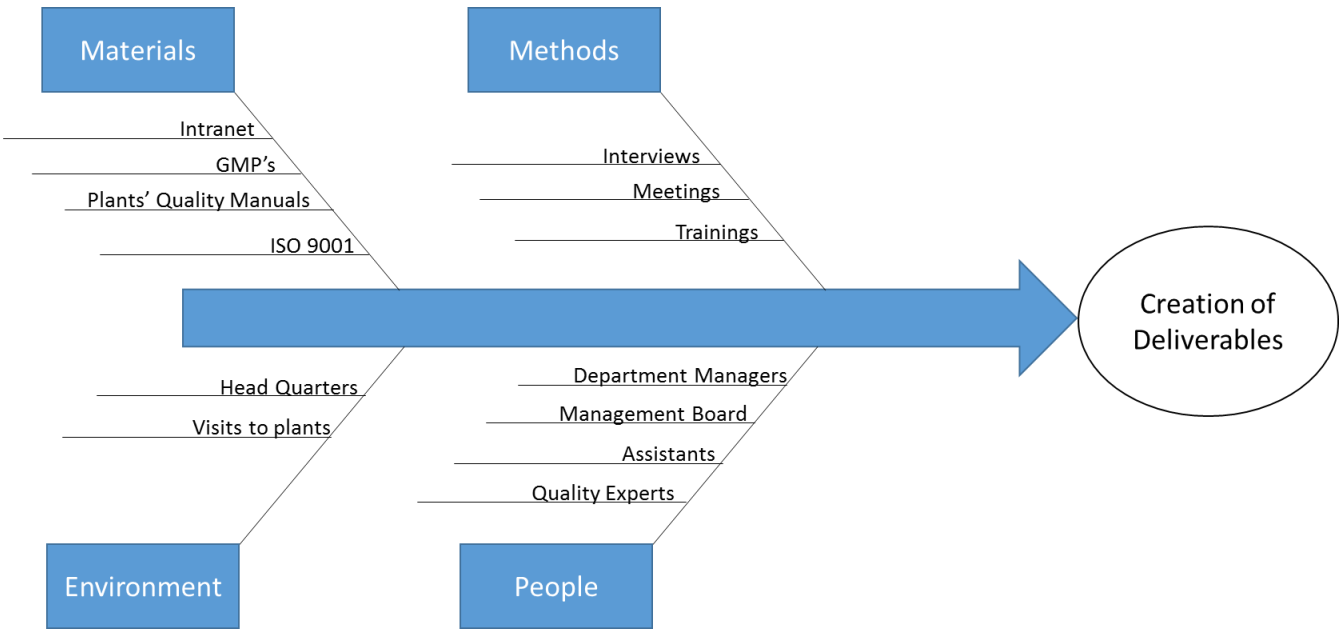

Figure 3 - Context Cause & Effect Diagram [5]

Materials

As in any project there were materials and tools that were key for succeeding. The most important materials and tools utilized in this project were:

The Intranet

As specified in the ISO 9001:

4.2.3 Control of documents

Documents required by the quality management system shall be controlled.

A documented procedure shall be established to define the controls needed [2]:

a) To approve documents for adequacy prior to issue
b) To review and update as necessary and re-approve documents
c) To **ensure that changes and the current revision status of documents are identified**
d) To ensure that **relevant versions** of applicable documents **are available** at points of use
e) To ensure that **documents remain legible and readily identifiable**
f) To ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the quality management system are identified and their distribution controlled
g) **To prevent the unintended use of obsolete** documents and to apply suitable identification to them if they are retained for any purpose

The control of documents in the company is managed in an Intranet that is widely used by all employees all around the world. The number of active users of the group intranet has almost tripled to 10300, while the number of page views has risen 30% to 1.3 million. It is calculated having an average of 5000 visits per day and all employees are have an Intranet's usage training at their entrance to the company [6]:

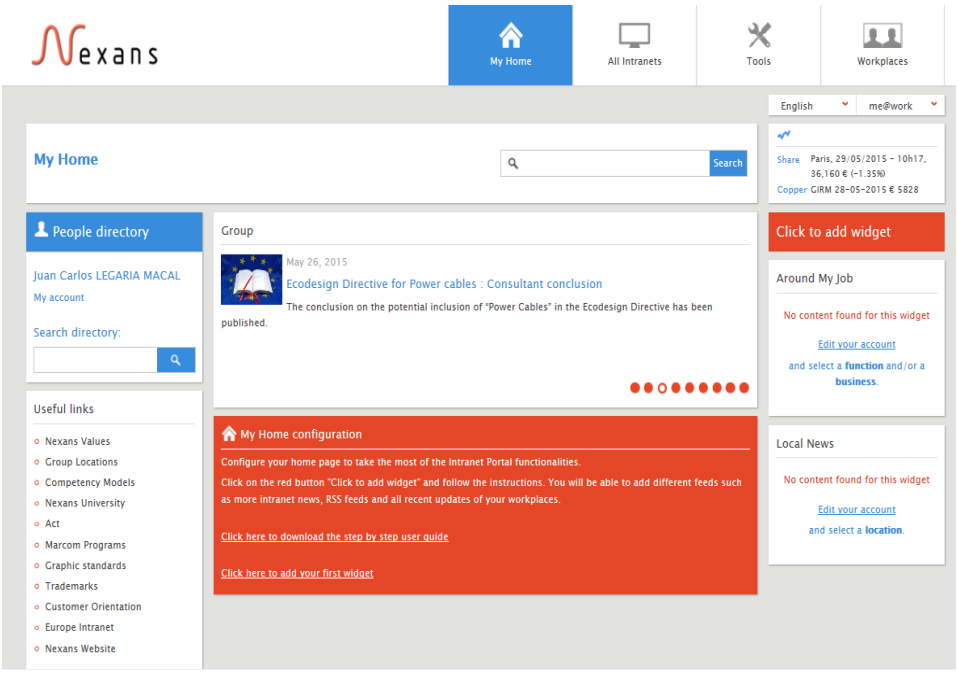

Figure 4 - Intranet Example 1 [6]

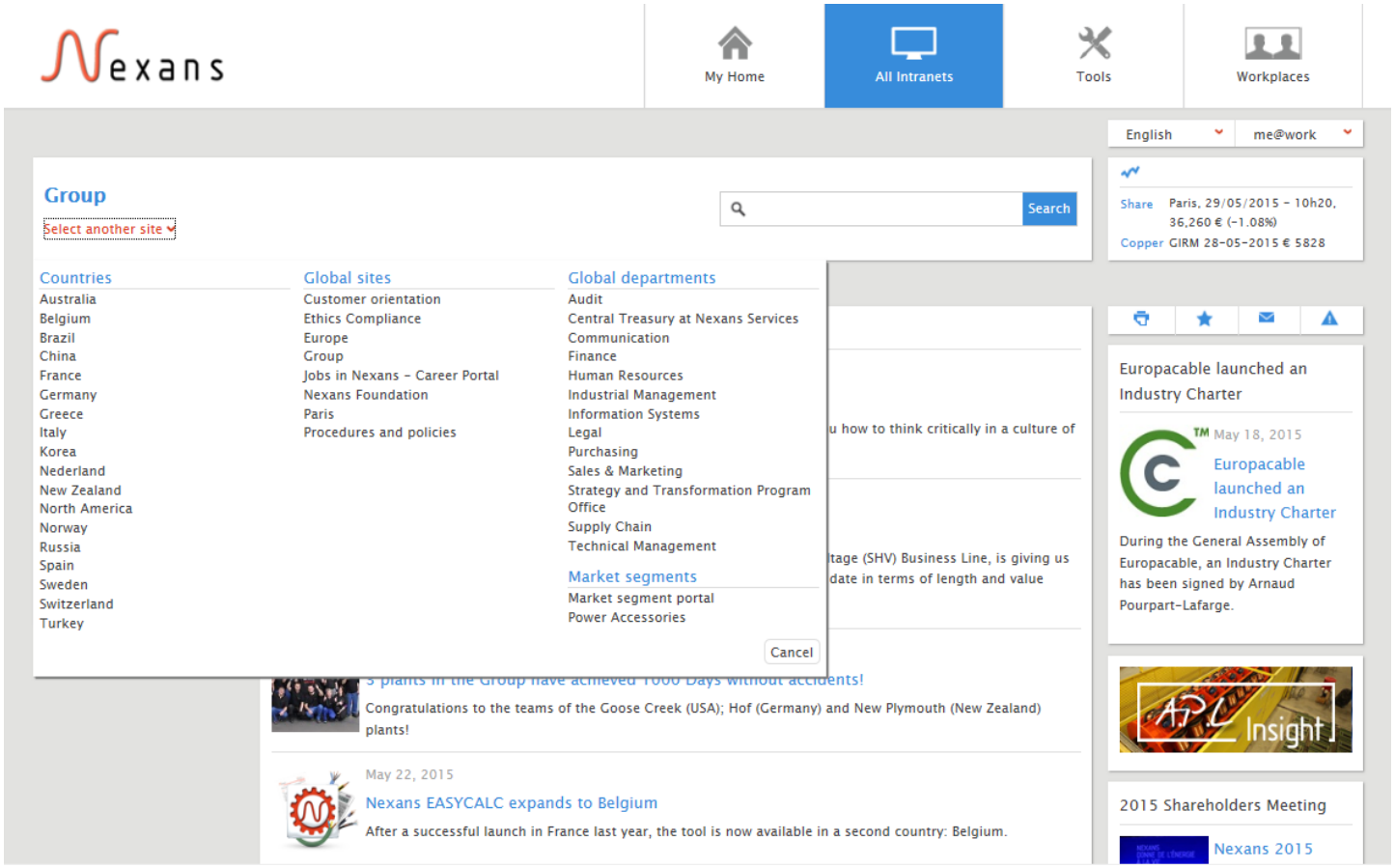

Figure 5 - Intranet Example 2 [6]

Mostly all of the content concerning the Management Manual and the Documentation System Structuring was extracted from different documents available in the group's Intranet. The top management and every department have to have most of their documents concerning to its work, and practices updated.

Some exercises were done to facilitate the discovery of the Intranet. The dynamic of one of the exercise, was about looking for some specific topics to be used in the next months related to project's goals, chronometer the time used to find them and specify the location of each document (See Annex B for more details).

A Pareto Chart was created to make an analysis between the different topics vs the time taken to find information about them in the Intranet:

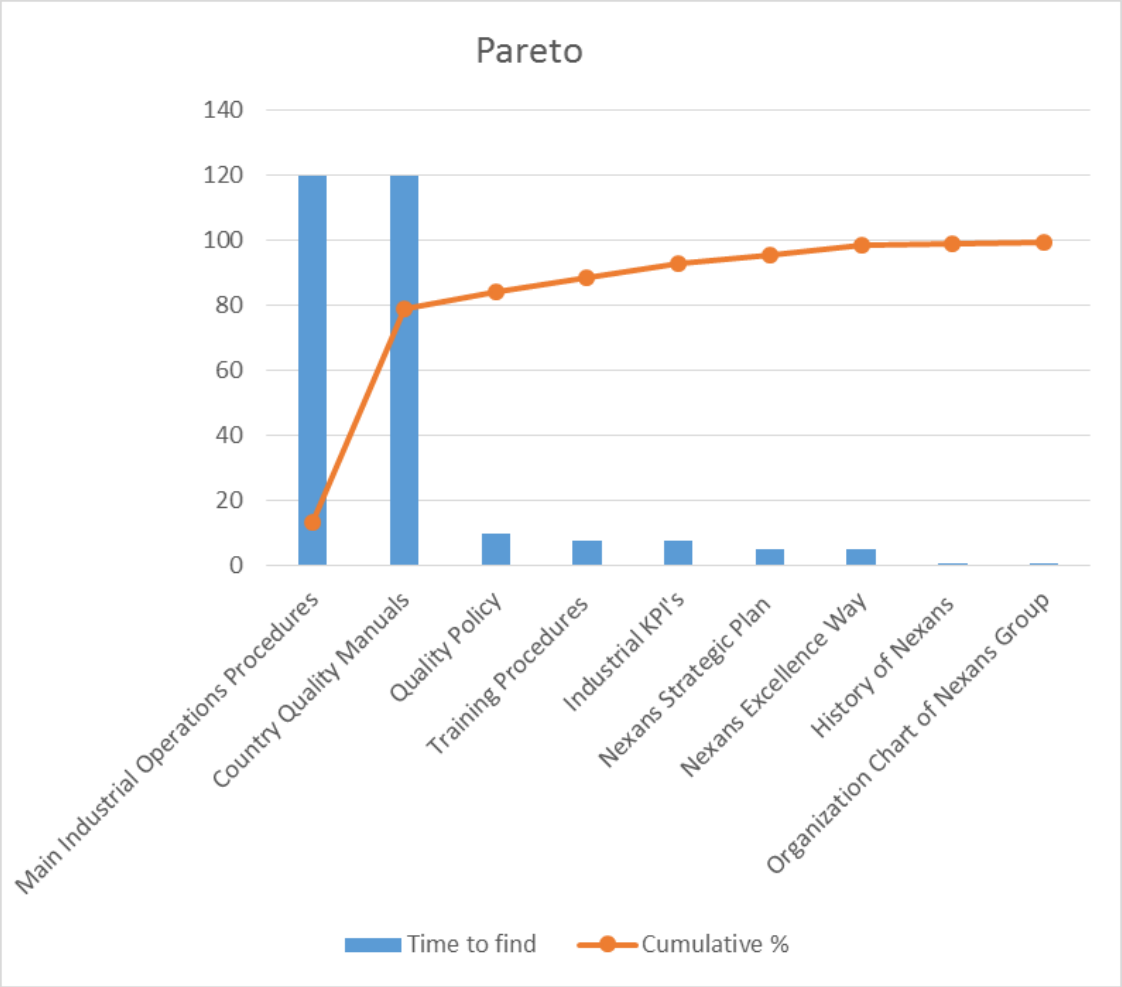

Figure 6 - Pareto Chart Time VS Documentation [7]

As it can be seen in the graphic Pareto Principle applies, meaning that 80% of the time was used to find around 20% of the information. The result of this analysis allowed to discover the documentation that will have to be treated with specific departments and persons since it wasn't fully available in the Intranet [7].

This analysis was very useful, after analyzing the results, Procedures and Quality Manuals were not fully available in the Intranet, having to give priority to appointments with key people for the collection and analysis of this documentation, since the rest was fully available in the Intranet.

General Management Procedures

14 Management Procedures concerning the most important activities, practices and rules in the Company. This procedures are applicable at any level in the company. Reading and analyzing this procedures was essential to get to know the enterprise and to have a guide of how deliverables had to be redirected according to general practices.

Quality Manuals

It is mandatory for every plant around the world to have a Quality Manual since they were all ISO 9001 certificated. Analyzing and comparing the content of the different Quality Manuals helped in the writing of deliverables in various ways:

- Analyzing the quality policies and quality requirements of costumers around the world.
- Understanding the content that a Quality Manual should include (ISO requirements).
- Including certain content in the Management Manual.

ISO 9001

Analyzing and understanding the ISO 9001 was fundamental for de writing of the deliverables, since it specifies the requirements for the quality management system of an organization.

To understand this norm, an excel document was done, making reference to each chapter of the norm, mentioning what is it about with a small description and finally specifying the different mandatory procedures and the procedures that shall be established. (See Annex A).

After this analysis, two subchapters highlighted concerning the objectives of the project:

4.2 Documentation Requirements

4.2.1 General

a) Documented statements of a quality policy and quality objectives
b) A quality manual
c) Documented procedures and records required by this International Standard
d) Documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of its processes

4.2.2 Quality Manual:

The organization shall establish and maintain a quality manual that includes:

a) The scope of the quality management system, including details of and justification and justification for any exclusions
b) The documented procedures established for the quality management system, or reference to them
c) A description of the interaction between the processes of the quality management system

These two subchapters of the ISO 9001 make reference to certain goals that were essential for the realization of the project [2].

Methods

Interviews & Meetings

Contacting key people was fundamental for obtaining specific information and documentation that had to be included in the deliverables. The contacts' information was given the first week of the internship by the tutor and they were contacted in different time lapses depending on the progress and necessities for the manual.

Most people to be contact were managers of the different departments and business process owners as the have key management information. Appointments with key people were normally done with anticipation due to the tight agenda of most them. If they were not available appointments with direct assistants or employees that were experts in the subject were requested, assuring that a discussion will take place and the information in the deliverables would be truthful coming from a thrusted source.

A flow chart diagram was created to explain the way of contacting people for assuring the availability of the different content required in the deliverables [8]:

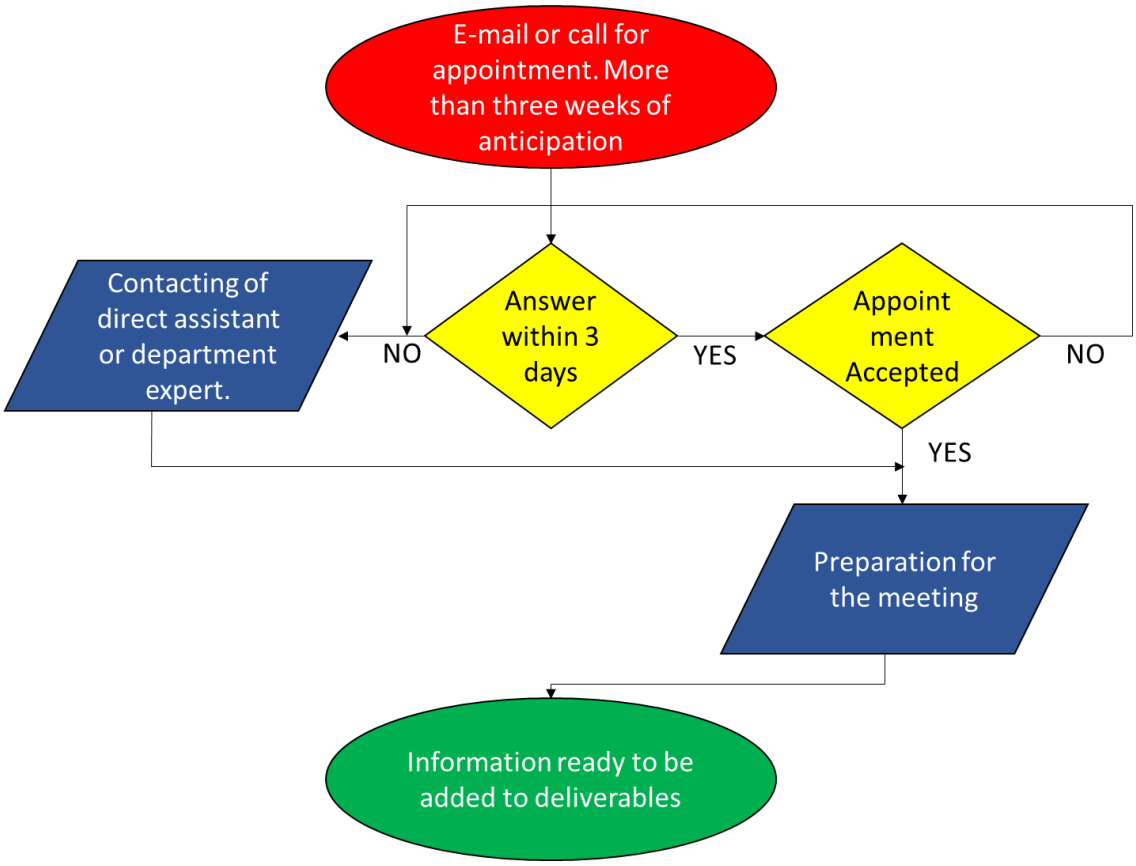

Figure 7 - Flowchart for making appointments [8]

Trainings

Two trainings were taken during the development of the project to strength certain abilities that were essential for its realization:

- **How to do process mapping**: Two days training explaining the reason and best ways to create process mappings.
- **How to communicate:** One day training that explain the basis of communication and how to get better applying them.

The acquired knowledge was utilized during the whole project, since communication and good understanding with different people was fundamental to achieve the goals proposed.

Environment

Headquarters

Headquarters were the place where mainly all the work was done. There were evident advantages of working in Headquarters [9]:

- Managers and key people were situated in headquarters.
- Trainings took place in headquarters.
- Easy access to archives of management documentation.

Visits to Plants

Three visits to different plants took place during the project. The main objective of these visits was to discuss the content of the deliverables create new ideas and validate information with different quality experts in different places in France and Europe [4].

The places where the visits took place:

- Hannover, Germany.
- Charleroi, Belgium.
- Calais, France.

People Involved

A Process Mapping of the group was created to make a deep analysis of what and who was involved in at management level [10]:

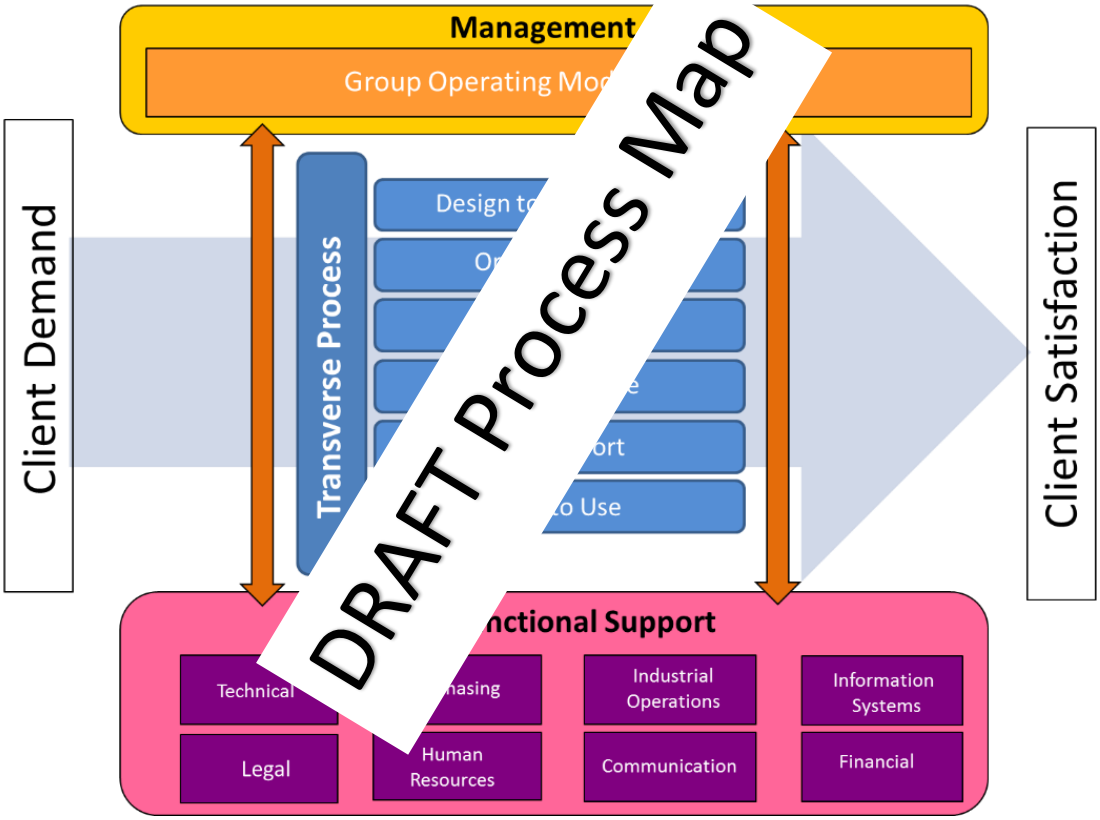

Figure 8 - Company Process Mapping [10]

According to the different processes that can be seen in the Groups' Process Mapping the people involved in the creation of the deliverables were:

Figure 9 - People and Departments Involved [4]

All the people mentioned before was contacted successively for different reasons as:

- Gathering, analyzing and revising information.
- Revising the status and correcting deliverables.
- Upgrading documentation.
- Validation of the deliverables.

Success Criteria

It was essential to have precise characteristics, qualities and attributes to be able to succeed the correct creation of deliverables according to the difficulties presented:

- **Understanding and defining the project:** Understanding what does the management was expecting of the deliverables and what where the real needs of the company to be able to make a program and achieve expectations on time and form.
- **Understanding the different needs and points of view:** The general management, the managers of the different departments and the quality experts had different needs and opinions about the content of the deliverables. One of the main tasks was to understand this opinions and unify and modify them to have the best possible result.
- **Working as a link between people:** To communicate the different needs and opinions of the different people concerned was essential to make others understand the different necessities and align them with theirs.

Risk Analysis

When planning and developing the project some events might have occurred risking its realization. Knowing what those risks might be and implementing measures to prevent or minimize them was essential for finishing the project in the scheduled time and fulfilling all demands.

To determine how to reduce or avoid those risks, a risk analysis methodology was implemented to analyze possible solutions and its feasibility of implementation (See Annex C for the complete table).

After a deep analysis three main risks were found that could have affected the realization of the project:

1. **Documentation written in several ways:** Some terms, definitions and concepts had been written in several ways by different people presenting the same general idea with different wording.
2. **Documentation not updated or not easy available:** Some documents were not recently updated or ere archived by specific persons that did not make these documents available for everyone.
3. **Not being able to work with certain people:** Certain people were not able to revise and work for the Management Manual content since there is no availability on their agenda.

Preventive actions for main risks:

1. Use published information in official documents. If the same information with different working is present in several official documents a meeting with the person in charge of the subjects has to be done to decide which information is more suitable.
2. Contact people to update or ask for the desired documents with anticipation.
3. Make appointments with managers with anticipation, if not possible, make appointments with the second in charge or direct assistants.

Chapter 2

STEP 2 - DO

After having understood the problem and establishing clear objectives. The creation of the Management Manual and the Documentation System Structure were begun. As it can be seen in the program this step is the one that lasted more and is the core of the project [3].

The main tasks for the second part of the PDCA (DO):

- Way to proceed
- Program
- Writing of the Management Manual
- Writing of the Documentation System Structuring

Way to Proceed

Once objectives were clarified the general steps for the realization of the process were traced. A process mapping of the project was done to identify the inputs, outputs, departments, people and the general processes involved for the realization of the project [10].

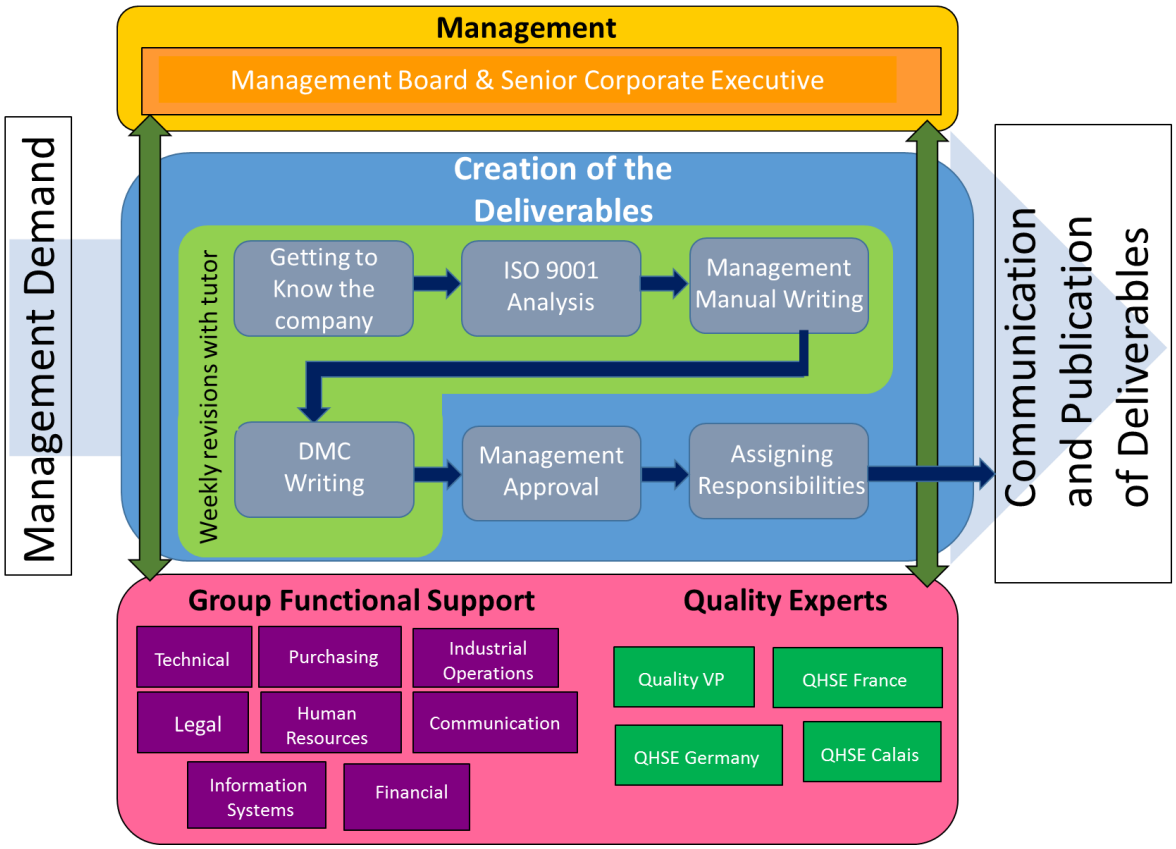

Figure 10 - Project's Process Mapping [10]

Program

A planning was created together with the internship's tutor to clarify and schedule the different activities to perform during the 6 months duration of this project.

This program was not totally fixed, dates and actions could have had minor changes because of the agendas of the people involved or for improving efficiency at the moment of developing the activities.

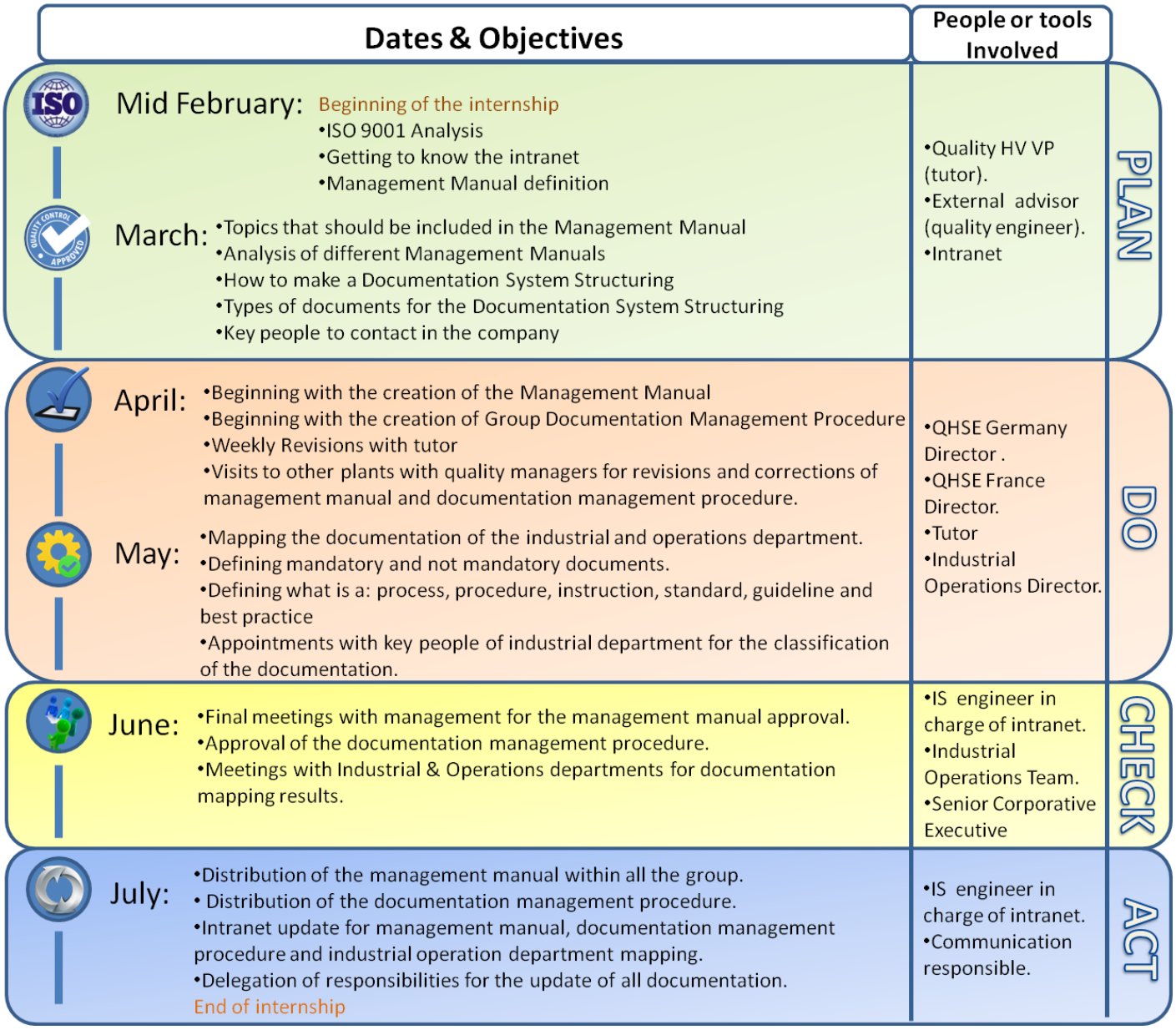

Figure 11 - Project's Program [11]

Management Manual

Quality Manual VS Management Manual

The ISO 9001 was used for defining the beginning of the project until it was decided to create a Management Manual for the reasons presented below:

According to the norm ISO 9001, the requirements that a quality manual must have, can make this manual a very simply document that has just to mention the scope of the management system, include or make reference to the established procedures for the quality manual and have a description of the interaction between the quality management processes.

The main objective to managers in the company for creating a manual was to:

- **Give a reference of the management behavior.**
- **Implementation of the company's management rules and practices.**
- **Standardize common practices within the company.**
- **Make this document to be applicable to the full company organization including worldwide subsidiary sites concerning all employees and members of the staff in the company.**
- **A document that everyone in the company was able to understand**.

As the different objectives demand more requirements than the ones required in a Quality Manual (including them) it was decided to create instead a Management Manual, term that fits better for these purposes [2].

A Management Manual is a document that shows how all the management system in a company is organized. From among all the documents comprising the management system of the company the Management Manual is the most important [1].

Content

6 main chapters were written to fulfill groups' needs in the best possible way covering most sensible topics for describing the management and general rules. The final version of the Management Manual Summary [1]:

Summary

1. THE COMPANY: Presents the most important general information of the company.
    - Overview
    - Vision Statement
    - Values
    - Vision
    - How we act
    - Strategy
    - History

2. THE PRODUCTS: Presents the different product categories and market segmentations within the company.
    - Product Segmentation
    - Product Categories
    - Market Segment
    - Customer Dimensions for Market Segmentation

3. MANAGEMENT MODES: Explains how and why management acts and works.
    - The Group Operating Modes
    - Nexans Organization Chart 2014
    - Roles and responsibilities in Group Organization
    - Business Divisions Level
    - Operational Units Level
    - Group Level
    - The Group Management Board
    - Governance and Committees
    - Performance Steering Modes
    - Operating Modes across Divisions

4. THE GROUP FUNCTIONAL SUPPORT: Describes the departments involved in the management.
    - Group Functions
    - Business Process Owners (BPO's)
    - Other Committees, dedicated to coordinating the implementation of policies

5. MANAGEMENT SYSTEM: Process mapping and structuration of the general management system
    - The System
    - The System Structure

6. GENERAL MANAGEMENT PROCEDURES (GMP's): Procedures that are applicable at any level in the company.

Annex

Follow-up of changes

Glossary

The explanation of all the chapters is not going to be detailed in this document since it is intended to explain the methodology used for the creation and not the content itself.

Documentation System Structuring (DSS)

Organizing, structuring and recording documentation is fundamental in any company. These tasks are successfully done at countries and plant levels in the company; nevertheless at group level this structure was not clear and never formalized. In order to create a solid Documentation System Structure a new Group Documentation Management Procedure and other specific activities were performed [1].

Documentation Management Procedure (DMP)

The purpose for the creation of the DMP at group level is to describe how the documentation is structured, written, verified, approved, referenced, modified, archived and destroyed.

The objective is to standardize the documentation with clarity and simplification in order to improve our efficiency at Group Level.

It was intended that all the existing documents will be gradually upgraded to compliance with this procedure when they will be reviewed.

This procedure had to apply to every function at Group level.

The general content of the DMP:

- **Management System:** Process mapping of the whole Management System within the group.
- **Documentation Structure:** Description of the four levels of documentations, details can be found in the chapter below.
- **List of documentation:** The listing and classification of all the documents in the management and all functional departments.
- **Documentation definitions**: Description of the characteristics for every document at Group Level.
- **General Rules:** Explains some general rules that every document must have such as:
    - Documentation Format
    - Modifications
    - Codification
    - Circulation and Availability
    - Confidentiality

Documentation Structure and Organization

According to the DMP **all the documentation at group level including functional departments had to follow the Group's Documentation Structure** (see Figure 12). **This structure has 4 main levels**:

1. **General Overview:** Set of documents that provide general information of the General Management or Functional Departments some example of these documents are:
   - Management Manual
   - List of documents

2. **Process & Procedures:** Document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.

3. **Standards & Guides:** Mandatory and good to have documents are included in this sections more information can be found in the next sub-chapter.

4. **Tools:** Documents that help achieving a particular tasks or facilitate the creation of documentation such as:
   - Trainings
   - Presentations
   - Formats
   - Questionnaires

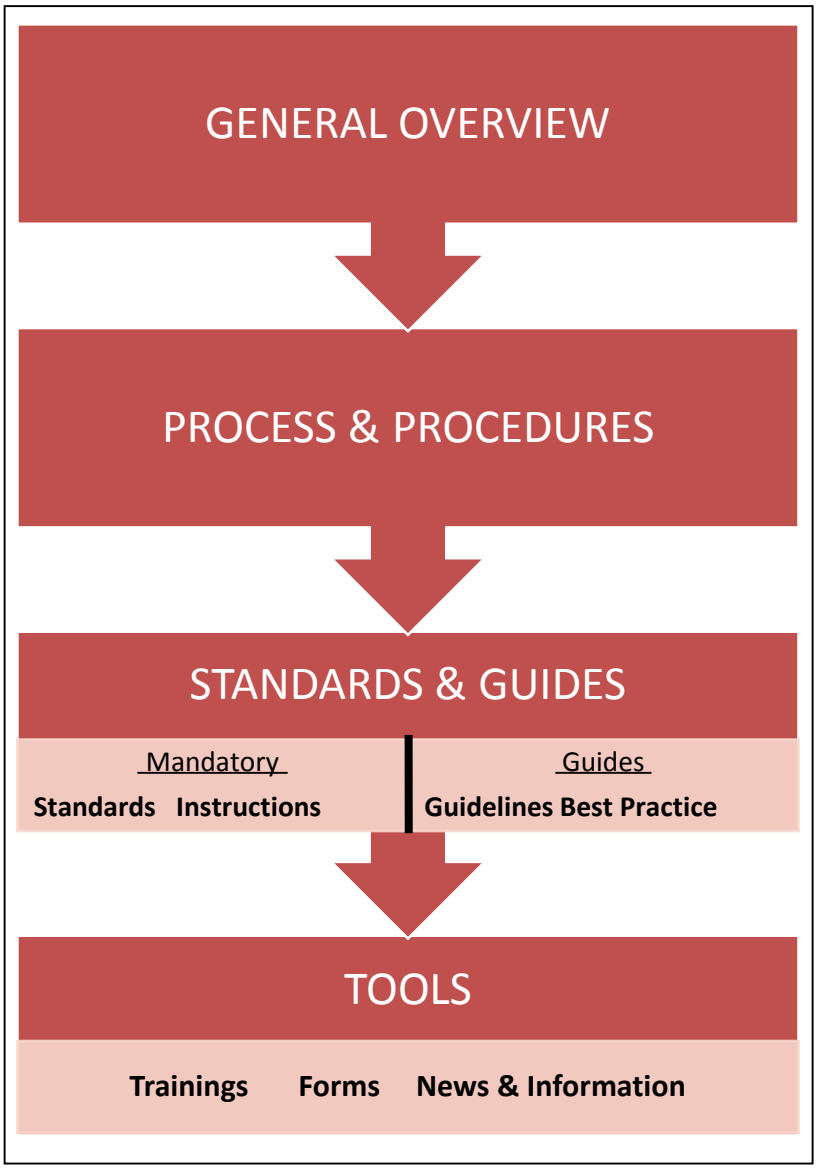

Figure 12 - Documentation Structure Chart [11]

This structured was used to organize all documentation the in the different departments, classifying the available documents with a check list.

Mandatory and not Mandatory Documents

In order to structure and organize the documentation available in the group's management and functional departments, defining what a mandatory and not mandatory document and creating examples of these documents was needed. This document made people deeply understand concepts and made them be able to organize its own documentation.

The document was written and distributed defining concepts and giving simple example of each of them:

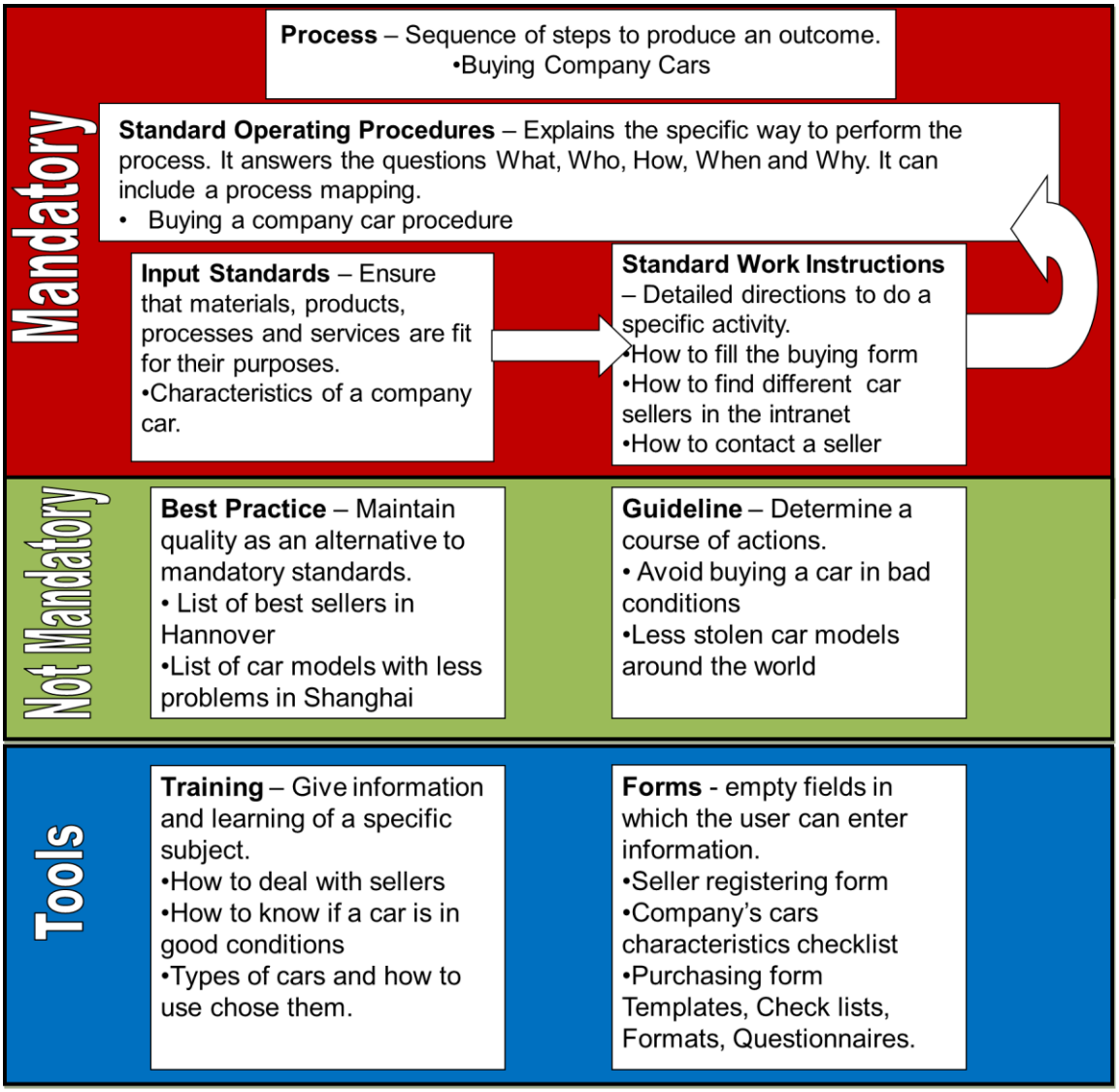

Figure 13 - Types of Documents [11]

After the presentation and diffusion of this document the classification and mapping of documentation turned into an easier and more dynamic task.

Mapping documentation

For analyzing the situation of the documentation a mapping was done in the Industrial Operations department. Meetings were organized with different department's division directors for analyzing and classifying each document belonging to its division. This mapping will be taken as a model for mapping other functional departments.

The main steps for proceeding to do this task:

1. Deciding if it was a mandatory or not mandatory document.
2. Classifying each document by its definition.
3. Writing down the results in a check list (see Figure 14).

Some obstacles were found while performing this task:

1. Creating appointments with divisions Directors.
2. Definitions' differences were not clear in some documents.
3. Some documents were a combination of various documents.

The solutions implemented:

1. Appointments were done with anticipation, when directors were not available appointments with other personal of the same division was done.
2. Creation of the mandatory and not mandatory document (see Figure 13).
3. Combined documents were classified according with the most relevant content.

Documentation Clasification "Name of department"

Code	Name of Document	Date	Mandator			Non Mandatory		Tools	
			Procedure	Standard	Instruction	Guideline	Best Practice	Trainning	Form

Figure 14 - Mapping Documentation Check List [11]

Chapter 3

STEP 3 - CKECK

Once the final drafts of the different documents were ready the third step CHECK of the PDCA was implemented. Revisions to measure, compare, analyze and make final corrections were done in this step [3].

The main subjects treated in this stage were:

- General Revisions
- Meeting quality experts
- Documentation Approval and Final Corrections

General Revisions

Revisions of the Management Manual were for achieving the management's expectation. Around 15 versions of the manual were written before having the final draft ready to be revised by the top management. Weekly revisions were done with the tutor of the internship. The main topics to discuss in these revisions were:

Order of the content: During the revisions the order of the chapters and sub-chapters were one of the most discussed topics. Some other small changes were done between chapters looking for the best way for the reader to understand the logic and content on it.

Verifying the source of the information: All information included in the manual had to come from an existing and official source in the company. Changes could have been done to this information to make it fit better in the manual but the main ideas had to be kept. Some documents used as reference were:

- 2015 Company Overview
- Management Modes
- Intranet
- Roles & Responsibilities

Adding or deleting information: Homogeneity within chapters was one of the priorities for the content. In every revision adding or deleting information was discussed to clear ideas and make the manual easy to read for everyone.

Meeting Quality Experts

Revisions with different quality experts were done:

- QHSE Germany Director in Hanover, Germany
- QHSE France Director in Paris, France

Revising the documents with different people was very useful. Different points of view brought new ideas to add or improve, mainly in the Management Manual and the Documentation Management Procedure. Some important suggestions and corrections made by the quality experts were:

- Modifying some titles of chapters and sub-chapters to make them more clear for readers.
- Making a glossary for terms and acronyms.
- Modification of the Management Manual according to quality points of view and practices.

Documentation Approval and Final corrections

For being able to make the documentation (Management Manual and Documentation Management Procedure) available and official for all the personal in the company they had to be approved by the management board as a general rule of the company.

Before this approval four meetings had place together with the Senior Corporate Executive and the internship's tutor (Vice President Quality for the High Voltage division).

Minor changes were done to the documentation to be aligned with the top management requirements and facilitate the approval of the management board to make the documents publishable.

STEP 4 - ACT

Once the deliverable were officially approved by the management board, communication and continues improvement had to take place [3].

The main subjects treated in the last part of the methodology were:

- Distribution of Documents
- Mapping Results
- Responsibilities for the future
- Satisfaction Measurement.

The delegation of responsible people that had to make updates, corrections and adjustments to these documents at least every year was discussed to achieve the continuous improvement for the project.

The company has important changes every year since it has presence all over the world. Keeping employees informed about important changes in the company (appearing in the Management Manual) is another reason for making updated if it every year.

Mapping and organizing documentation at group level was another requirement of top management. It was begun with the Industrial Operations departments as an example and it will be implemented in a similar way in all other functional departments and the managements.

Next Steps

Measures to assure sustainability and continuous improvement were developed. The action presented below are going to be performed after the publication of this memory as this memory had to be presented 1 month before the ending of the project, nevertheless, all the actions that will be mentioned are ready to be deployed.

Distribution of the Documents

As mentioned before the Management Manual had as objective to inform all employees how the company functioned at the management level. To make the manual available in the different offices, plants and service centers all around the world two strategies were implemented:

1. **Publishing a pdf version of the manual in the group's intranet:** As mention before all employees have access to this tool. Global e-mails were sent to all employees to inform that the manual was available in the intranet.
2. **Distribution of printed versions:** a big amount of printed versions were distributed to general managers, making this document physically available in offices and plants.

Industrial Operations Documentation Mapping Results

The first mapping of a functional department was done in Industrial Operations. It is important to mention that inside the department there are some divisions included.

A presentation of the results was done in presence of all the department division managers. Some remarks were explained related to the mapping:

- Codification of the documents was complicated to understand and was not the same between divisions.
- Some documents couldn't be classified since they were a combination of various definitions.
- Documentation had not the same format.
- There were several standards that could be formalized as procedures.

Measures would be taken by Industrial Operation management to improve these points. This mapping had to be done for the other departments.

Distribution of the DMP

The distribution of the Documentation Management Procedure was not developed since some changes had to be done and approved to the final draft before its publication. As soon release was planned after some modifications that would be done by the experts.

Responsibilities for the future

All documentation within the years has to be updated in any organization. It is intended by the company to update the Management Manual at least once a year since there is information that can usually change such as management modes or the organization chart among others. A responsible person were be assigned to perform these tasks.

Satisfaction Measurement

As in all projects there has to be measure that can evaluate if the project was successful or not.

An inquiry was created to analyze readers:

- Thought about the Management Manual
- Improvements proposed
- Information to add or delate

This opinions will be taken in account for next version that will allow the continuous improvement sought for this project.

This inquiry had to be printed with every single copy of the Management Manual. For the intranet version a link below the one of the Management Manual was going to be created to show the inquiry in a web version. Results were automatically captured and statistics were presented in several graphics for numerical data and text for the recommendations.

Another method to measure the people the amount of people reading the manual was an internal counter of the manual downloads. This would be compared with the total number of employees (26,000) in the company.

Depending on those results measures would be taken to increase the number of readers in the minimum amount of time possible.

All this measurements and measures were managed by the Information System and Communication departments.

The inquiry created is shown below:

Nexans Group

Management Manual Inquiry

Nexans is looking forward for your opinion! After readying the new Management Manual 2015, we want to know your opinion about it. Please answer the questions below taking in account that:

1- The most suitable 5- Not suitable

1. - The clarity in the way of presenting the information is:

1 2 3 4 5

2. – The order that the information is presented is:

1 2 3 4 5

3. – In general terms the content presented in the manual is:

1 2 3 4 5

5. - Would you recommend to your employees or colleges to read this manual:

1 2 3 4 5

4. - Would you like some information or topics to be added in the manual

_____

_____

6. - How did you received this manual:

Internal Mail My boss Colleges Intranet Other: _____

Other Remarks:

_____

_____

Conclusion

Quality studies can be very extensive and can cover many aspects within the industry. Implementing the knowledge gained during the courses in this internship was critical to work in a specific branch I would like to focus in on quality.

The objectives accomplished in the internship helped me to develop a lot of skills including my first work experience in an international company and learning how to manage time autonomously, delivering expected results on time and as expected.

Besides implementing the quality knowledge acquired, this internship let me figured out how an international company is organized in different its departments and managements levels, deal with directors managers and directors and learn their ways of working and leading; knowledge that is going to be fundamental for a future job.

One of my long-term goals is to create my own company. The creation of Management Manual and the Documentation System Structuring are essential tasks for any company to grow in a standardized and organized way.

Having completed successfully both tasks in the attended manner and in schedule is a big step to get my next job, being able to show my skills and abilities and how I apply them in daily life in a professional level.

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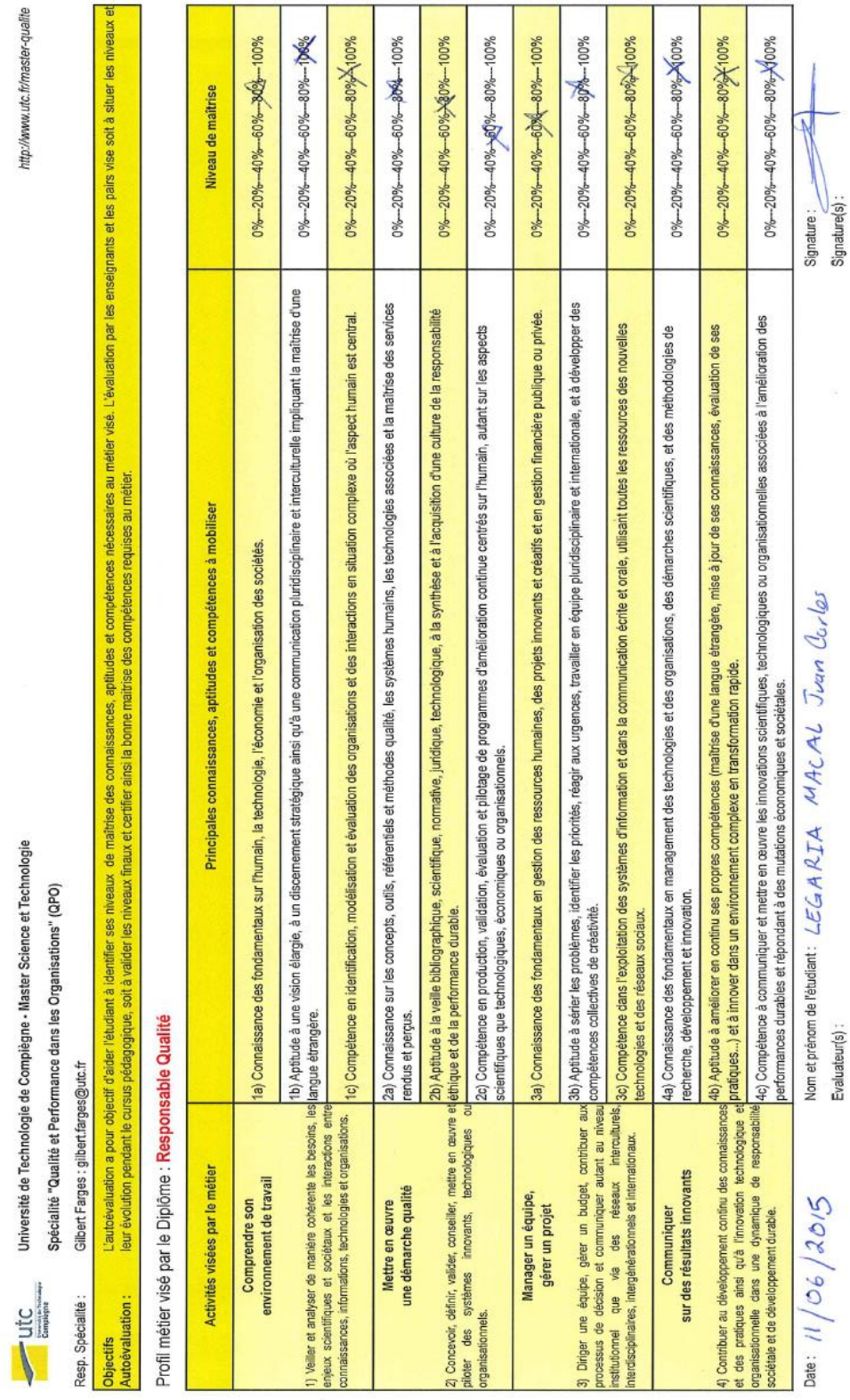
Annex

0) Self-Evaluation Sheet



utc Université de Technologie Compiègne — Université de Technologie de Compiègne - Master Science et Technologie — http://www.utc.fr/master-qualite

Spécialité "Qualité et Performance dans les Organisations" (QPO)

Resp. Spécialité : Gilbert.Farges@utc.fr

Objectifs Autoévaluation : L'autoévaluation a pour objectif d'aider l'étudiant à identifier ses niveaux de maîtrise des connaissances, aptitudes et compétences nécessaires au métier visé. L'évaluation par les enseignants et les pairs vise soit à situer les niveaux et leur évolution pendant le cursus pédagogique, soit à valider les niveaux finaux et certifier ainsi la bonne maîtrise des compétences requises au métier.

Profil métier visé par le Diplôme : **Responsable Qualité**

Activités visées par le métier	Principales connaissances, aptitudes et compétences à mobiliser	Niveau de maîtrise
Comprendre son environnement de travail 1) Veiller et analyser de manière cohérente les besoins, les enjeux scientifiques et sociétaux et les interactions entre connaissances, informations, technologies et organisations.	1a) Connaissance des fondamentaux sur l'humain, la technologie, l'économie et l'organisation des sociétés.	0%---20%---40%---60%---80%---100%
	1b) Aptitude à une vision élargie, à un discernement stratégique ainsi qu'à une communication pluridisciplinaire et interculturelle impliquant la maîtrise d'une langue étrangère.	0%---20%---40%---60%---80%---100%
	1c) Compétence en identification, modélisation et évaluation des organisations et des interactions en situation complexe où l'aspect humain est central.	0%---20%---40%---60%---80%---100%
Mettre en œuvre une démarche qualité 2) Concevoir, définir, valider, conseiller, mettre en œuvre et piloter des systèmes innovants, technologiques ou organisationnels.	2a) Connaissance sur les concepts, outils, référentiels et méthodes qualité, les systèmes humains, les technologies associées et la maîtrise des services rendus et perçus.	0%---20%---40%---60%---80%---100%
	2b) Aptitude à la veille bibliographique, scientifique, normative, juridique, technologique, à la synthèse et à l'acquisition d'une culture de la responsabilité éthique et de la performance durable.	0%---20%---40%---60%---80%---100%
	2c) Compétence en production, validation, évaluation et pilotage de programmes d'amélioration continue centrés sur l'humain, autant sur les aspects scientifiques que technologiques, économiques ou organisationnels.	0%---20%---40%---60%---80%---100%
Manager un équipe, gérer un projet 3) Diriger une équipe, gérer un budget, contribuer aux processus de décision et communiquer autant au niveau institutionnel que via des réseaux interculturels, interdisciplinaires, intergénérationnels et internationaux.	3a) Connaissance des fondamentaux en gestion des ressources humaines, des projets innovants et créatifs et en gestion financière publique ou privée.	0%---20%---40%---60%---80%---100%
	3b) Aptitude à sérier les problèmes, identifier les priorités, réagir aux urgences, travailler en équipe pluridisciplinaire et internationale, et à développer des compétences collectives de créativité.	0%---20%---40%---60%---80%---100%
	3c) Compétence dans l'exploitation des systèmes d'information et dans la communication écrite et orale, utilisant toutes les ressources des nouvelles technologies et des réseaux sociaux.	0%---20%---40%---60%---80%---100%
Communiquer sur des résultats innovants 4) Contribuer au développement continu des connaissances et des pratiques ainsi qu'à l'innovation technologique et organisationnelle dans une dynamique de responsabilité sociétale et de développement durable.	4a) Connaissance des fondamentaux en management des technologies et des organisations, des démarches scientifiques, et des méthodologies de recherche, développement et innovation.	0%---20%---40%---60%---80%---100%
	4b) Aptitude à améliorer en continu ses propres compétences (maîtrise d'une langue étrangère, mise à jour de ses connaissances, évaluation de ses pratiques...) et à innover dans un environnement complexe en transformation rapide.	0%---20%---40%---60%---80%---100%
	4c) Compétence à communiquer et mettre en œuvre les innovations scientifiques, technologiques ou organisationnelles associées à l'amélioration des performances durables et répondant à des mutations économiques et sociétales.	0%---20%---40%---60%---80%---100%

Date : 11/06/2015 — Nom et prénom de l'étudiant : LEGARIA MACAL Juan Carlos — Signature :

Evaluateur(s) : — Signature(s) :

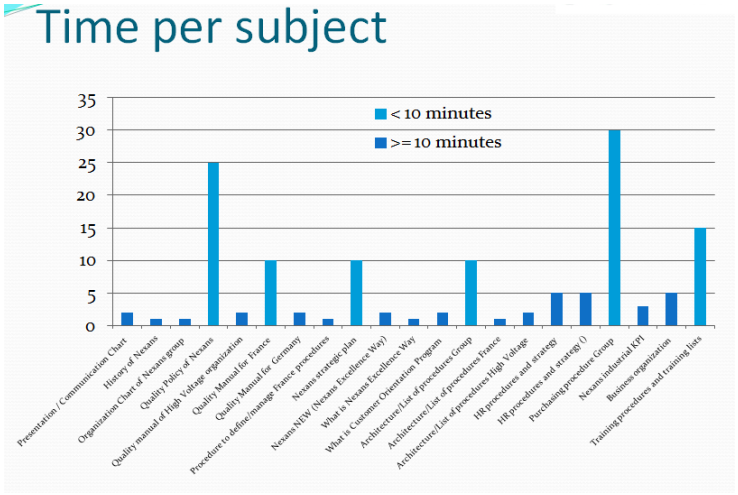
A) ISO 9001 Analysis

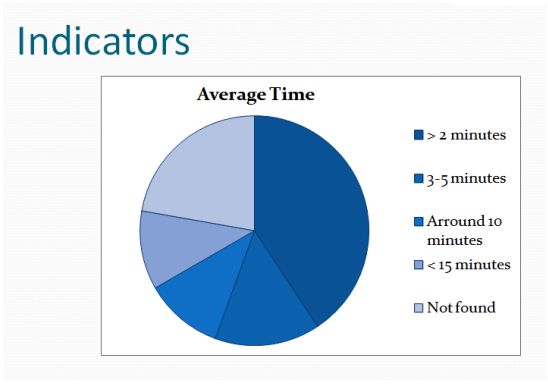
Chapter	Topic	Description
1	**Scope**	
1,1	**General**	This IS specifies requirements for a QMS for an oranization
1,2	**Application**	All requirements of this IS are intended to be applicable to all organizations
2	**Normative Reference**	The following referenced documents are indispensable for the application of this document
3	**Terms and definitions**	The term product it can also mean service
4	**Quality management system**	
4,1	**General requirements**	TO shall establish, document, implement and mantain a QMS
4,2	**Document requirements**	
4,2,1	*General*	The QMS shall include a: quality manual, documented procedures, documents ...
4,2,2	*Quality Manual*	TO shall establish and mantain a quality manual
4,2,3	*Control of documents*	Documents required by the QMS shall be controlled
4,2,4	*Control of records*	Records to provide evidence of conformity to requirementsand of the effective operation
5	**Management responsibility**	
5,1	**Management commitment**	Evidence of commitment to the development and implementation of the QMS
5,2	**Customer focus**	TM shall ensure that customrs requirements are determined and met
5,3	**Quality Policy**	TM shall ensure a quality policy
5,4,1	*Quality Objectives*	TM shall insure that quality objectives are stablished aat relevant functions and levels
5,4,2	*QMS planning*	The QMS is carried out to meet requirements given
5,5,2	*Management representative*	TM shall appoint a member who shall have responsability and authorith...
5,5,3	*Internal communication*	TM shall ensure that appropiate communication processes are established
5,6,1	*General*	TM shall review the organization´s QMS to ensuresuitability, adequacy and effectiveness
5,6,2	*Review input*	Shall include information on ...
5,6,3	*Review outout*	Shall include any decisions and actions related to ...
6	**Resource management**	
6,1	**Provision of resources**	TO shall determine and provide the resources needed
6,2,1	*General*	Personnel performing working shall be competent on the basis of appropiate education...
6,2,2	*Competence, trainning and...*	TO shall: determine competence, provide trainning, evaluate actions...
6,3	**Infrastructure**	TO shall provide and mantain the infrastructure needded to mantain conformity
6,4	**Work environment**	TO shall determine and manage work environmnet to achieve conformity
7	**Product realization**	
7,1	**Planning of product realization**	TH shall plan and develop the process needed for product realization
7,2	**Customer-related processes**	
7,2,1	*Determination of requirements*	TO shall determine requirements: specified by costumer, not stated by the costumer...
7,2,2	*Review of requirements*	TO shall review the requirements related to the product
7,2,3	*Costumer comunication*	TO shall determine and implement effective arrangements for communicating with costumers
7,3	**Design and developement**	
7,3,1	*Design and development planning*	TO shall plan and control the design and developement of product
7,3,2	*Design and development inputs*	Inputs relating to product requirements shall be determinated and records mantained
7,3,3	*Design and development outputs*	The outputs of design and developeñent shall be in a form suitable for verification
7,3,4	*Design and development review*	Systematic reviews of design and development shall be performed
7,3,5	*Design and development verification*	Verification shall be performed to ensure that design and dvp outputs have met the design
7,3,6	*Design and development validation*	Shall be performed in accordance with planned arrangements
7,3,7	*Control of design and dvp changes*	Shal bee identified and records maintained. The changes shall be reviewed, verified and validated
7,4	**Purchasing**	
7,4,1	*Purchasing process*	Purchased product conforms to specified purchase requirements
7,4,2	*Purchasing information*	Purchasing information shall describe the product to be purchased
7,4,3	*Verification of purchasing product*	TO shall establish and implement the inspection for ensuring the purchased product
7,5	**Product and service provision**	
7,5,1	*Control of production and service provision*	TO shall plan and carry out production under controlled conditions
7,5,2	*Validation processes for production and ...*	TO shall validate any processes for prodution and service provision
7,5,3	*Identification and traceability*	TO shall identifythe product status to monitos and mesure requirements
7,5,4	*Customer property*	TO shall exercise care with customer property. TO shall identify, verfy, prodect customer property
7,5,5	*Preservation of product*	TO shall preserve the product during internal processingand deliver to the intended destination
7,6	**Control monitoring and measuring equipment**	TO shall determine the monitoring and measurement to be undertaken
8	**Measurement, analysis and improvement**	
8,1	**General**	TO shall plan and implement the monitoring, measurement, analysis and improvement processes
8,2	**Monitoring and measurement**	
8,2,1	*Customer satisfaction*	TO shall monitos information relating to customer perception to fullfill customer requirements
8,2,2	*Internal audit*	TO shall conduct internal audits at planned intervals to determine wheter the QMS
8,2,3	**Monitoring and measurement of processes**	TO shall apply suitable methods for monitoring and meassure the QMS
8,2,4	**Monitoring and measurement of product**	TO shall monitor and measure the characteristics of the product to verify product requirements
8,3	**Control of nonconforming product**	TO shall ensure that product wich does not conform to product requirements is identified
8,4	**Analysis data**	TO shall determine, collect and analyse data to denmostrate the suitability and effectiveness
8,5	**Improvement**	
8,5,1	*Continual improvement*	TO shall continually improve effectiveness of the QMS through qualicy policy, quality objectives...
8,5,2	*Corrective action*	TO shall take action to eliminate the causes of nonconformities in order to prevent recurrence
8,5,3	*Preventive action*	TO shall determine action to eliminate the causes of potential nonconformities to prevent ocurrence

Glosary	
QMS-Quality Management Systems	
TM-Top Management	
TO-The Organisation	
IS-International Standard	
	A procedure shall be stabl
	A documented procedure
	Chapter 1
	Chapter 2
	Chapter 3
	Chapter 4
	Chapter 5
	Chapter 6
	Chapter 7
	Chapter 8

B) Getting to Know the Group's Intranet exercise

Subject	Time to find (min)	Where	# Documents	Notes
1. Presentation / Communication Chart	2	France/About	2	
2. History of Nexans	1	France/About	0	Found after in the management manual
3. Procedure to write a group procedure	Not found (<30)			
4. Organization Chart of Nexans group	1	Group/About/Organization/People/Group Organig	2	
5. Quality Policy of Nexans	25	Costumer Orientation/Competency Management	0	Not the quality Policy
6. Quality manual of High Voltage organization	2	France/HVTC/Nos cvitités /Management Qualité/I	0	Quality Manual not available
7. Quality Manual for France	10	France/FR Quality/Documentation/Manuel de ma	1	Not the quality manual (management manual)
8. Quality Manual for Norway	Not found (2)			This category is in Norwegian
9. Quality Manual for Germany	2	Germany/Quality/our activities /Policies	1	Management Manual not quality manual
10. Procedure to define/manage Europe procedures	Not found (20)			
11. Procedure to define/manage France procedures	1	France/FR Quality/Documentation/Procédures	1	
12. Procedure to define/manage Germany procedures	Not found (10)			
13. Meetings done by management	Not found (20)			
14. Nexans strategic plan	10	Group/Stategy/strategy/Strategy	0	What they do is not very clear
15. Nexans NEW (Nexans Excellence Way)	2	Group/Industrial Management/Our activities/NEV	1	
16. What is Nexans Excellence Way	1	Group/Industrial Management/Our activities/NEV	1	
17. Customer Orientation Program procedure	Not found (10)			
18. What is Customer Orientation Program	2	Customer Orientation/Initiatives		
19. Architecture/List of procedures Group	10	France/FR Quality/Documentation/Procédures		Group and France Procedures in the same page
20. Architecture/List of procedures France	1	France/FR Quality/Documentation/Procédures		
21. Architecture/List of procedures High Voltage	2	France/HVTC/Nos cvitités /Management Qualité/F	3	Some documents not online
22. HR procedures and strategy	5	Groupe/HR/Our activities/HR procedures	6	
23. HR procedures and strategy ()	5			
24. Purchasing procedure Group	30	Goup/Purchasing/Tools and Indicators/PCS Guide	2	Not a standarized procedure. Group/Legal/Nev
25. Nexans industrial KPI	3	Group/Industrial Management/Our activities/Industrial Performance Dashboard		
26. Business organization	5	Group/About/Organization/People/Group Organig	1	
27. Training procedures and training lists	15	Group/FR/Our activities/Développement professi	4	Not the procedures, just the training lists





C) Continuous Activity Plan Chart

Level	Difficulty
1	Easy to implement
2	Moderately easy to implement
3	Not so easy to implement
4	Not easy to implement

Risk	Actions that allow the performance of the activity	Difficulty Level	Remarks	Means to test solutions
Not being able to work with certain people because of its tight agenda.	Send appointments invitations within a month	3	Sometimes not expected information has to be added and it is not that easy to make an appointment before a big period of time.	Number of appointments done according to the schedule.
People is not interested in the subject	Explain the purpose and importance of the project and give reasons of how it is going to help the company.	2		Number of people interested in the subject
Revisions and corrections not done very often	Ask for specific questions and things to do in every revision. Have ideas clear.	2		Time during revisions is well administrated.
Documentation not updated or not easy available	Contact responsible to update information	3		Number of updated information written in the manual.
Same documentation written in several ways	Go to person in charge to decide which information should be used.	3		Good information written in the manual, approved by managers