DOCUMENT MANAGEMENT

SORBONNE UNIVERSITES

Master Qualité et Performance dans les Organisations

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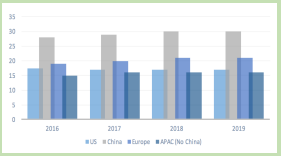
Context

Automotive Industry



The Global automotive market's demand is likely to remain stable, China alone represents one-third[1].

How to keep the stable economy ?

As the cost of technology in vehicles increases, profit from vehicles sales is likely to deteriorate considerably [3].

Volume growth and higher margins that can be commanded by areas such as moving fast in order to avoid being left out of the new automotive technology, **procurement of an excellent quality management system**, digital services and mobility **will allow the organizations to enjoy healthier margins** [3].

1 t0

The Opportunity to Improve the Document Management System

Identify the Quality Documented Information Pyramid

- ✓ Policy and Strategic Objectives Business Value Alignment, Quality Manual, Quality policy statement.
- ✓ Defined Processes, performance measures that define the value identified.
- ✓ Operating Procedures, Work Instructions
- ✓ Control and Maintenance, Tests, training programs, checklists, forms
- ✓ Records, operational information

The Documentation requirements

- **IATF 16949**
- **ISO 9001**
- **ISO 30300 and ISO 30301** Information and documentation -- Management systems for records – (Fundamentals, vocabulary and requirements) [5].

2 t0+ 1 week

Potential Risks and their effects

Proposed tool: **Failure Mode Effect Analysis (FMEA).**

Identify the Potential Failures

Potential Failure Mode	Potential Effect of Failure
Low quantity of updated documents	Not right information in the document system
Unnecessary information	Loss of employee's work time
Duplicated documents	Loss of potential storage
Undervaluing document preparation	Document has not compliance with internal requirements
Difficulty to find the right information	Operational errors
Lack of interest to review the existing documentation	Weak transfer of knowledge
Documentation created just to be understood for the creator	Difficulty to understand information
Poor cooperation between departaments	No information-sharing

Risk Assessment

$$Risk = P \cdot S$$

Process	Potential Failure Mode	Potential Effect of Failure	Severity (S)	Potential Cause	Probability of occurrence (P)	Risk Priority Number (R = S·P)
Records Maintenance	Low quantity of updated documents	Not right information in the document system	3	not having a motivating maintenance methodology to do the review and update of the documented information	4	12
	Unnecessary information	Loss of employee's work time	2		3	6
	Duplicated documents	Loss of potential storage	1		4	4
	Undervaluing document preparation	Document has not compliance with internal requirements	3		2	6
	Difficulty to find the right information	Operational errors	5		4	20
	Lack of interest to review the existing documentation	Weak transfer of knowledge	4		5	20
	Documentation created just to be understood for the creator	Difficulty to understand information	5		5	25
	Poor cooperation between departaments	No information-sharing	3		3	9

Root Cause: Not having a motivating maintenance methodology to do the review and update of the documented information

3 t0+ 3 weeks

Methodology

Proposed tool: **Documented Information Discussion Groups Methodology (DIDG).**

TRIZ 5 basic principles:

It gets people to think "out of the box" to achieve an ideal end result

- Less is more
- Encourages breakthrough design.
- Search for fundamental contradictions
- Technology forecasting: It allows to establish the direction of the project [10][11].

1. Find interested people to create the DIDG

2. Classify all the documented information by subjects, captivating topics and priority (risk level), configure a plan to evaluate the performance, capacity, productivity and quality

3. Create a simple platform where people from different areas can see the schedules by subjects and sign up for a discussion group

4. Find an interesting mediator with a high level knowledge of the subject for each discussion group.

5. Make an attractive programme including name of the subject and the list of documents to be discussed and make it public.
Note Try to organize short time discussions, a short list of documents and groups of different kinds of people

6. The group must take a quiz to know their level of the documented information knowledge. The members of the group should propose their innovative ideas, recommendations, modifications or changes for the procedures and existing documentation.
Finally, as a team, they will agree to present the better proposition as a draft. It does not necessarily have to be another document. It can also be some innovative way of learning and passing this information

4 t0+ 3 months

Performance Evaluation and Analysis of Results

Proposed tool: **The OEE %** result is going to be the indicator that will allow you to see **the level of progress** and the **continuous improvement** [13].

$$OEE\,\% = P \cdot A \cdot Q$$

Theoretical units of modified documents	Theoretical time: 1h Theoretical units/h: 4/h Objective: 4/h	100%
AVAILABILITY	The real time destined to work: 45 min Which means 3units/h	75%
PERFORMANCE	The real finished units: 2	67%
QUALITY	From the total of finished units, just 1 is a good unit	50%
OEE	P · A · Q	25%

REFERENCES

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[11]Elliot Hirst, "Introduction to TRIZ - Theory of Inventive Problem Solving - IBM

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