



Quality management: Introducing quality control



About quality...



Quality Management

- Quality Assurance (QA) vs. Quality Control (QC)*
- QA and QC are integral & interrelated elements of Quality Management (QM):
- QA – part of quality management focused on providing confidence that quality requirements will be fulfilled, with emphasis on processes. **Application of planned, systematic quality activities to ensure that the project will employ all processes needed to meet requirements.
- QC – part of quality management focused on fulfilling quality requirements, with emphasis on products/outputs.

ISO 9000:2015: Quality management systems—Fundamentals and vocabulary

**PMBOK, 3rd edition

Quality Management

Toyota

“Since its founding, Toyota has steadfastly carried out quality assurance activities, resulting in top ratings from our customers. The core principles behind our company's quality assurance system, including 'Customer First', 'Quality First', and 'Genchi Genbutsu (Go&see at the scene)', were established when the company was founded. Since then, these principles have been passed on and inform every organizational level of today's Toyota, from the shop floor to executive management.”

Conclusively, QM when it comes to Toyota is:

- Present at all levels/processes of the organisation
- Long-lasting & systematic practice, passed from generation to generation (“a habit”, “corporate value”)
- Bottom-up logic (go&see, from shop floor to executives)

Genchi Genbutsu (現地現物) means “Go and See” and it is a key principle of the Toyota Production System. It suggests that in order to truly understand a situation one needs to go to genba (現場) or, the “real place” - where work is done.

Quality Management

JATO Global Top 25 Brands 2017

	Brand*	Sales	ΔYoY
1	TOYOTA	7,843,423	+5%
2	VOLKSWAGEN	6,639,250	+3%
3	FORD	5,953,122	-2%
4	HONDA	4,967,689	+7%
5	NISSAN	4,834,694	+5%
6	HYUNDAI	3,951,176	-9%
7	CHEVROLET	3,857,388	0%
8	SUZUKI	2,891,415	+11%
9	MERCEDES	2,534,181	+13%
10	KIA	2,511,293	-10%
11	RENAULT	2,275,227	+7%
12	BMW	2,030,331	+5%
13	AUDI	1,847,613	+1%
14	PEUGEOT	1,590,300	0%
15	FIAT	1,503,806	+1%
16	MAZDA	1,495,557	+3%
17	BUICK	1,465,823	-1%
18	JEEP	1,390,130	0%
19	GEELY	1,245,055	+61%
20	SKODA	1,180,672	+5%
21	SUBARU	1,050,390	+5%
22	BAOJUN	1,016,250	+34%
23	CITROEN	999,888	-6%
24	OPEL/VHALL	996,559	-6%
25	WULING	883,663	-21%

*Includes LCV.

...but does it worth?

Quality Management

Cost of quality*



*“Cost of quality is a methodology that allows an organization to determine the extent to which its **resources are used for activities that prevent poor quality, that appraise the quality of the organization’s products or services, and that result from internal and external failures.** Having such information allows an organization to **determine the potential savings to be gained by implementing process improvements.**”*

Quality Management

Quality metrics* & benchmarks

Quality metrics

“A metric is an operational definition that describes, in very specific terms, what something is and how the quality control process measures it...Quality metrics are used in the QA and QC processes. Some examples of quality metrics include defect density, failure rate, availability reliability and test coverage.”

Benchmarking*

“Setting goals by using objective, external standards and learning from others.”

***Benchmarking for Competitive Advantage – Robert J. Boxwell, Jr. 1994**

Quality Management

Quality metrics & benchmarks

Case*: *Quality metrics under IMPC (indirect management with partner country) with ex-ante controls*

What is measured?

Processes: *Procurement and contract implementation, failure rate in case of key transactional decisions (contract notice, tender dossier, evaluation report, contract dossier, contract addenda)*

How: measuring rejection rate (number of submissions/rejection(s))

Benchmark: rate of ex-ante rejections in case of key transactional decisions converging to zero

Quality Management

Tools & techniques

Quality audits*

“Structured, independent review to determine whether project activities comply with organizational and project policies, processes and procedures”.

Process analysis

Analysing processes with a view of identifying possible improvements from organizational and technical standpoint (e.g. Cause & Effect Diagram, Flowcharting, Histogram, Pareto...)

Quality Management

Tools & techniques

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Quality control checklists

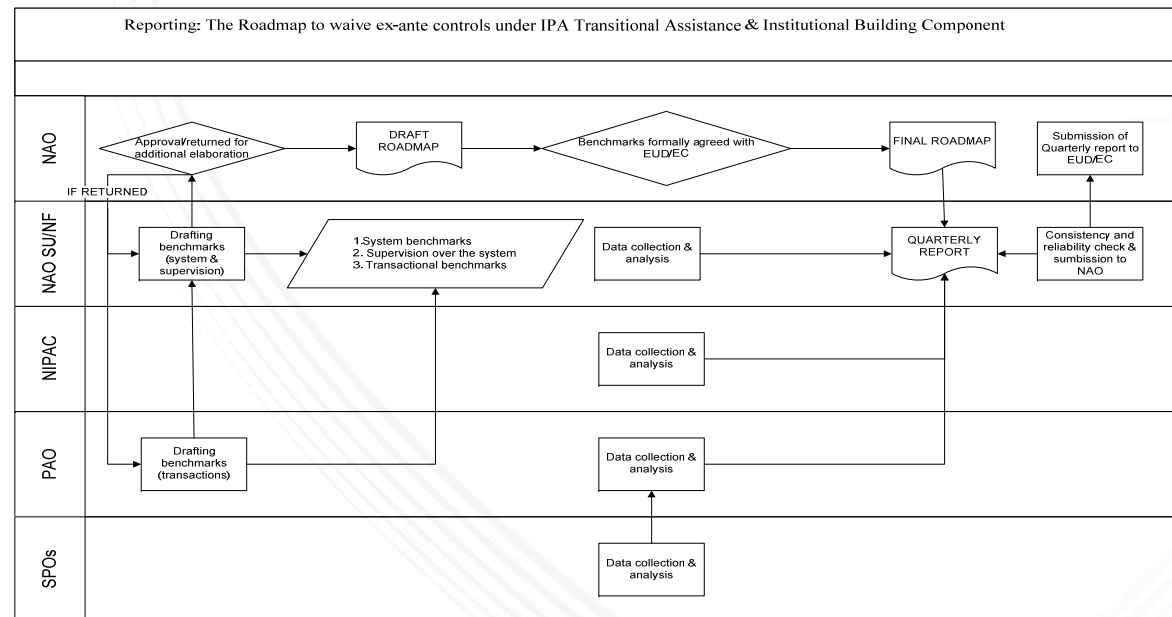
Practice & analysis driven description of most frequent/high impact issues which can negatively affect objective of corresponding processes.

Quality Management

Tools & techniques

Case: Flowcharting -

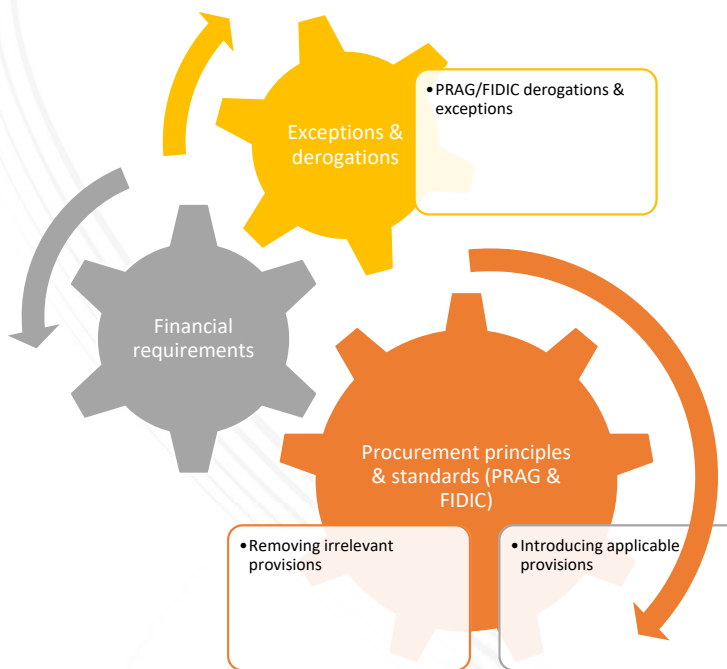
The Roadmap



Quality Management

Tools & techniques

*Case: Checklists –
procurement*



Quality Management

Case: key issues to be addressed when establishing quality controls

1. Establish cases database followed by meticulous analysis

Analyse what went wrong with equal eagerness as “successes stories” – build your own data base which will be used as repository for development of control tools & techniques.

2. Be clear about objectives (at the organisation & project level)

Absence of objectives renders controls irrelevant (“If you ain’t got nothing, you got nothing to lose”)

3. Map key processes, scrap what ever is not manifestly important (“streamlining”). Than scrap some more.

Avoid defending “hollow empire” - unnecessary processes trigger unnecessary controls.

Quality Management

4. Regularly perform risk management

Checklists can be perceived as a dedicated risk registers. Their purposefulness is in direct correlation with capacity of the organisation to effectively & regularly identify and (re)asses risk associated with particular processes.

5. Develop checklists, maintain checklist.

Checklist are powerful tool for: (1) assigning/sharing responsibility (2) mitigating risks (3) attaining objectives. As long as regularly updated (see point 1).

6. When things get tough, tough gets going – engage specialists from time to time.

QC and checklist are primarily in-house job. However, from time to time and especially when introducing new processes, engage specialists. At the age of micro-specialisation, engaging specialist is significant resources saver.

EU PROJECT PREPARATION FACILITY PROJECT

All documents, information, materials and pictures from this EU PPF training are available for download @ www.ppf.rs / webpage - DOCUMENTS

Questions and assistance

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Thank you for your attention!