

ProM@in



Task M3:
Total Quality Management -
Second Tranche of Implementation

Total Quality Management - A means to improve customer satisfaction and RAMS performance

Problem description

ProMain recognised in expert discussions that TQM¹ is a possible means to increase infrastructure performance and customer satisfaction. The infrastructure managers are using TQM standards to a varying degree. This is not to say that the way to increase performance is that all use a standard. Quality and customer satisfaction are important, not the quality system as such. The ProMain partners believe that TQM with its overall thinking on optimal management, its focus on processes and on continuous improvement could be of great help to increase customer satisfaction and to ameliorate the cost situation and RAMS performance. Management of a company and involvement of all company members are often the critical success factors. TQM is a general tool to be used by railways for the optimisation of all of their processes of which two distinct examples are given:

The railway has lost market share on freight to road transport. In order to increase the competitive advantage in this example, one important element is the time spent at national borders (interoperability). The ideal is that the process times at border crossings should be minimised, where the use of TQM strategies can be of real help. The more efficient border crossings are, the more attractive and competitive the freight freeways would become. It would be an aim that the border crossings should not take any longer than the time to shift train personnel when needed. A solution could be harmonisation of processes and online provision of the requested freight documentation, which could be sent ahead of the train to prepare necessary processes at the border in advance. Information Technology would be of help to increase the interoperability and reduce the time on border crossings, which itself is in the scope of another ProMain task on elimination of IT obstructions.

The second example relates to indications that knowledge transfer from the head office to the district offices can be a challenge for amelioration. Good efforts and tasks are being produced centrally. However, when it comes to implementation, the district offices are dedicated to other tasks without having free capacity, which is not known to the central office. It has been identified in many organisations that most of the quality problems are caused by the fact that the knowledge within the organisation is not being used efficiently, for which TQM methods offer solutions.

Goals and benefits

The goal is to investigate how TQM and the use of standards could be a general framework for increasing customer satisfaction, managing costs and ensuring RAMS management.

The work ProMain wants to do is to clarify strong and weak points in TQM related to railway processes. This will make the decision on how to use and implement TQM easier.

TQM has the potential to make railway processes more efficient and to ameliorate information exchange among railway departments. This will speed up internal processes in railways, improve customer satisfaction and make rail transport more attractive and competitive.

Approach offered by ProMain

The work is proposed to be organised in two phases, where Phase I could be viewed as a feasibility study financed by internal ProMain resources. For the subsequent implementation of recommended TQM aspects in Phase II, ProMain will need external resources.

¹ There is no official definition of TQM. The following definitions are often used: "Conformance to agreed customer requirements", "Fitness for purpose or use", and "Total composite product and service characteristics of marketing, engineering, manufacture, and maintenance through which the product and service in use will meet the expectation of the customer". These definitions focus on the result of TQM. ProMain will also stress the importance to focus on the "content of TQM", see section below on Phase II.

Case study of the work on quality and quality standards (Phase I)

A case study would be of great help to understand benefits and drawbacks of a TQM system and working with TQM in general. To convince railways that are sceptical towards TQM ProMain should focus on those railways that have implemented a standard, and answer questions like:

- Which benefits have they experienced?
- What were the critical factors for succeeding?
- What challenges do they have?
- How could cost reductions be demonstrated?
- What are the lessons learned and what can be done to improve the methods?

ProMain would interview key personnel in those railways where TQM-standards have been implemented successfully to gather the answers. The experience collected from railways, which use a TQM system, provides a useful guide for other infrastructure managers who want to implement TQM and those infrastructure managers already using a system could also benefit from a comparison of systems providing them with useful feedback on their system and possible improvements. On the results a brief **anonymous case report** would be delivered to the ProMain website and contribute to the dissemination of experience and preparation of new implementations.

Interoperability for conventional rail (Phase I)

It is of great importance that the interoperability is improved and that e. g. the time lost at border crossings is reduced. ProMain will maintain a dialogue with the European Commission and AEIF to ascertain the status at important border crossings and benchmark the different processes. Harmonisation of rules and procedures might be an answer. However, this is also a political task to agree on standards and to set service goals, therefore the communication with the European Commission is very important and a critical success factor.

TQM as a general management tool (Phase II)

In the section above TQM is proposed as a tool for improvement on interoperability. However, TQM is a general tool, or way of thinking, with emphasis on *Visions, Continuous Improvements, Change processes, Total Scope, Contribution by Everybody, Internal and External Customers, Individual Adaptation, and The "Seven Tools"* (i.e. simple tools for process control at the operator level). In ProMain we will investigate how these dimensions really can be utilised within the railway industry as a management tool to increase infrastructure performance and customer satisfaction. The problem is very often that you have the technology, the systems and the methods, but you are not able to get it implemented due to different barriers within the organisation. In this setting TQM may be viewed as the necessary "facilitator" to do this. Due to annual budget restrictions many maintenance activities are postponed although they should be recommended for economic reasons judged over a longer period. In this way the potential reward cannot be realised and infrastructure managers know that it is "expensive to be poor".

ProMain will investigate how TQM could be helpful in such particular situations, but all types of "barriers" will be treated systematically in Phase II of the TQM activity of ProMain.

Deliverables

Case studies and reports on successful implementation strategies from Phase I will be presented on the ProMain Website.

Further information about this task

can be obtained from:

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