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An Intranet based system as an enabler in effective project management and implementation of quality standards: A case study

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ABSTRACT

This paper reports on the development of an Intranet based system, as an enabler in project management and implementation of a quality standard (ISO9001:2000) at Tyco Fire & Integrated Solutions Oil Gas & Marine Europe, a subsidiary of Tyco International a worldwide Engineering Conglomerate, (Referred to as TFIS). The system enabled stakeholders to follow standard project protocols, playing an important role in creating integration between different sub-sections. This paper discusses the strategic relevance of the system in achieving desired business outcomes, by making the organisation more responsive, agile and increasing the accountability of stakeholders involved in managing projects.

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1. Introduction

This paper focuses on the crucial role played by an Intranet based system in achieving effectiveness of project management and supporting the implementation of a quality standard (ISO9001:2000) at a major international engineering organisation—Tyco Fire & Integrated Solutions Oil Gas & Marine Europe (Referred to as TFIS, here forth). It is a subsidiary of Tyco International—a worldwide Engineering Conglomerate. The Intranet based system, which incorporates key business processes, would play a crucial role in helping engineers to manage, tender, document and archive project information. It would also serve as a guide for project engineers in completing all the required

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documentation associated with a project. The central purpose of the system was to make TFIS more responsive, flexible and to improve its processes.

The new system would be of strategic importance and would facilitate an integrated project estimation, design, engineering, installation, commissioning and subsequent service. So the key aim was to improve the coordination, interaction and communication of quality management information managed both internally and externally by the organisation. Similar to those reaped by other organisations (Zhang, 2005). This would allow the contract and project management operations to be managed more efficiently and effectively, that would:

- Prevent engineers working to their own ways of working and not following the TFIS standard quality procedures.
- Prevent applying outdated pre-merger organisational 'systems' in place.
- Prevent clients dictating to engineers their preferred methods of working.
- Help train and increase awareness within TFIS of the standard contract and project management procedures.

It was envisaged that the overall solution developed for TFIS as part of the research project would lead to following benefits for the business:

- Improve performance of contract and project management through a standardised and consistent approach in the management of quality management information.
- Improve team working and continuity between engineers working on contracts and projects.
- An alternative approach to the potential configuration costs, issues and disruptions surrounding the implementation of commercial enterprise resource planning (ERP) and project management solutions.
- Increase productivity, effectiveness and raise profile of the quality management system to support the management of contract and project information.
- A methodological approach that could be implemented across business units within the organisation as "one best way" to improve the performance of contract and project information management.

On average, the company was exceeding estimated costs on some specific contracts worth over a million pound by as much as 10% or approximately £100K. If the performance of managing contract and project information could be improved by implementing the new Intranet based system potential cost savings of between 1% and 5% or approximately £10,000–£50,000. Based on the company's turnover at the start of the project in 2001, which was approximately £62 million, the realisation of a 1–5% improvement in contract performance could save the company between £620,000 and £3.1 million. Also the increased transparency and tracking through the system developed would allow performance to be evaluated at key stages of a specific contract and project. Action research methodology was used to focus on the development of this system over a longitudinal period. The system was designed based on the project management requirements along with the need to use quality standard.

Therefore, in order to achieve the envisaged benefits, an extensive amount of work was required to develop the Intranet based system, for example, by working closely with individual business functions. Key processes had to be identified and incorporated into the overall Intranet based system. In order to measure the potential benefits envisaged for the Intranet based system, feedback was collated from TFIS's workers involved in contract and project management.

2. Literature review

The project involved a systematic focus on TFIS's processes for the management of projects, and use of a quality standard. Three main sources of literature were identified as being relevant to this research project: (1) information systems, (2) enterprise resource planning (ERP) and (3) process-based quality information management systems.

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