

## ASIGURAREA CALITĂȚII – QUALITY ASSURANCE

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# Evaluation of Lean Approaches in UK National Health Trusts

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## **Abstract**

The concept of Lean manufacturing was initially developed by Ohno (1988) and resulted in the well known Toyota Production System. This work was later commercialised by Womack and Jones (1996) who described lean as the ‘antidote to waste’. More recently, the concept of lean manufacturing has been developed and implemented for various industrial scenarios. Independent of the industrial sector implementation still focuses on the core objectives of elimination of waste and creation of value for the end user. Adoption of lean principles has been successful to service companies as well as to manufacturing companies from where the concepts originated (Alstrom, 2004). In particular health care organisations are increasingly recognising the benefits of adopting lean practices (Sarkar, 2008), (Ballé and Régnier, 2007), (Allway and Corbett, 2002) and they have embarked on their implementation. According to Brandao de Souza (2009), the NHS Modernisation Agency first suggested the implementation of lean practices in healthcare back in 2001 and since then, the adoption has ‘grown significantly in the last few years’. Jones and Mitchell (2006) have identified particular problems that UK NHS Trusts face and suggest that implementation of lean practices is the way forward in resolving hospital acquired infections, capacity and financial constraints and public concern about waiting times. The NHS hospitals are now required to operate within budget and provide high quality healthcare service. Lean system implementation can enable the attainment of these benchmarks. Assessing the extent of adoption and its associated benefits therefore becomes useful in the formulation of implementation strategies. This paper presents the results of a preliminary research carried out across NHS trusts in the UK. The research aimed to determine the extent of lean implementation and the perceptions of those with lean roles and responsibilities.

**Keywords:** Lean manufacturing, health, quality, healthcare service, NHS, United Kingdom

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# Dezvoltarea unui model decizional într-un sistem socio-tehnic complex

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## Abstract

Nowadays, the society is dominated by fast development of computer networking and by the integration of Internet services at every organisational levels. The success of an organisations depends largely on the quality and the quantity of information that's available in order to make decisions capable to respond fast to the current requirements. The need of a collaborative environment within the central administration, leads to the consolidation and unification of the resources around the Center of the Government, together with the main objectives for increasing the quality and efficiency of the decision making process and decreasing the time allocated for the decision making process, developed for the improvement of the decision making process. The institutional analyze and definition of informational architecture in an organisation (up to the last level), together with the complete utilisation of informational resources and infrastructure contributes at growing the the quality of the information and services offered by that organisation. Defining of working models by integration all components (hardware and software ) within the complex systems of great functional responsibility leads to a higher efficiency of the ratio of costs and expenses. Defining a hierarchical structure of infrastructure in a organisation (on different levels of importance and criticality), and consistent implementation of security policies in a computer system, lead by default to a reduction in costs related to performance, safety and maintenance thereof. To create a real basis of decision should be taken into account, above all, achieving an integrated infrastructure applications. Developing performant software tools for integrating and aggregating information should be main strategy of the organizational information architecture. Decisional strategy based on a system complex / critical must always pay attention to the context from that moment and to trends of development a decisional system.

**Keywords:** Management, strategy, decision, complex systems, infrastructure, e-government, information society, government platform. public administration, standards, e-government, government infrastructure.

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# Total Quality Management and Reorganization of Large Companies

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## Abstract

Many organizations/companies are going through periods of downsizing, rightsizing re-engineering, restructuring or other types of reorganization with the ultimate goal of reducing staff numbers, developing a leaner organization and reducing costs. In the public sector much of this change is driven by the economic rationalist model where the focus is usually on contracting out services, selling parts of the enterprise to the private sector, corporatization and deregulation. At the same time, many of these organizations have already invested or are investing in continuous improvement activities and adopting the principles of total quality management (TQM). Many are using the quality award models as they strive for business excellence. What happens to quality in periods of downsizing? Can quality programmes survive when quality departments are completely removed, team members are displaced and the situation for many employees who remain becomes insecure? Can TQM assist in the restructuring process? This paper addresses some of these issues. Several large public sector organizations and one private sector organization in the state of Western Australia were investigated. All had been examined as part of an Australian survey on quality management self-assessment practices. The organizations were reexamined later, using similar research techniques. All had undergone substantial restructuring involving workforce reductions, the removal of entire divisions, outsourcing, corporatization and two had new CEOs assume office.

**Keywords:** Quality, TQM, Reorganization, Downsizing, Re-engineering, Large organizations.

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# Selecting Critical Contingencies using Reliability Index in Power Systems

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## Abstract

In composite power system adequacy assessment, the selection of contingency involves the determination of possible and reasonably likely outage events and a means of pre-selecting the most severe of these events for testing. For an  $n$  component system, when a two-state model of each component is used, the number of outage events is  $2n$ . Consideration of all outage events for large  $n$  will result in a large increase in the required computational time. Contingency screening is, therefore, essential to reduce the number of such outages. This paper presents an algorithm to identify the critical outage events using a reliability-based index from the list of all possible contingencies. The selected critical contingencies are then ranked with respect to their severity.

**Keywords:** Reliability, Power system, Reliability index, Contingencies, Algorithm

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