

Using a Six Sigma Project to Improve Canteen Quality and Management

Alberta Araújo

*Instituto Politécnico de Viana do Castelo, Escola superior de Tecnologia e Gestão
Av. do Atlântico, 4900-348 Viana do Castelo*

Rui Lima

*Instituto Politécnico de Viana do Castelo, Escola superior de Tecnologia e Gestão
Av. do Atlântico, 4900-348 Viana do Castelo*

Gilberto Santos

*Instituto Politécnico do Cávado e do Ave, Escola Superior de Tecnologia
Campus do IPCA, Lugar do Aldão, 4750-810 Vila Frescainha S. Martinho BCL*

Diogo Moreira

*Instituto Politécnico de Viana do Castelo, Serviços de Ação Social
Largo 9 de Abril, Ap. 186, 4901-911 Viana do Castelo*

M. Rui Alves (mrui Alves@estg.ipvc.pt)

*REQUIMTE, ESTG, Instituto Politécnico de Viana do Castelo
Av. do Atlântico, 4900-348 Viana do Castelo*

Abstract

The purpose of this work was to improve the quality of meals and service in the canteens of the polytechnic Institute of Viana do Castelo (IPVC), with a simultaneous reorganization of internal processes trying to achieve sustainability.

A team of quality experts, managers and food engineers was set up and used a few quality tools and models, including a Balanced Scorecard and a SWOT analysis, which led to the definition of a six sigma (6σ) project aiming at analyzing possible ways of improving meal quality and implementing preservation processes for precooked meals, thus enhancing the reorganization of canteen operations.

Several preservation processes for precooked meals were compared, namely freezing, refrigeration with vacuum and refrigeration with several modified atmospheres. Initial parts of the project were carried out at the laboratory level, which were followed by a scale up process where some problems related to equipment handling and lack of specific workers' training had to be dealt with. A FMEA was very helpful to overcome these problems.

The project dealt with a few important questions and demonstrated the applicability and success of quality models and tools, in the sense that it applied new methods to solve problems in a public institution, where many resistances are usually met whenever one is facing the implementation of new procedures.

At this stage of the project it was possible to introduce profound changes in spaces, meal production and preservation, keeping or even increasing clients satisfaction, while obtaining substantial financial outcomes as demonstrated by the chosen key process indicators.

Keywords: Six Sigma, DMAIC, Quality Management, Canteen Management