

Everyone's Smart University

College of Management

Project Management Department



جامعة الجميع الذكية

كلية الإدارة

قسم إدارة المشاريع

THE IMPACT OF THE TECHNOLOGY IMPROVEMENTS IN STATISTICAL PROCESS CONTROL (SPC) IN INDUSTRIES

تأثير التحسينات التكنولوجية بالتحكم في العمليات الإحصائية في الصناعات

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INTRODUCTION

Every organization has different tools to maintain and to ensure the level of quality is retained in all products or services. Different engineers and Researches had contributed towards quality. Statistical Process Control (SPC) is an approach to process control that has been widely used in any industrial or non-industrial fields. SPC is based on so called Shewhart's conception of the process variability. This conception distinguishes variability caused by obviously effected common causes (process is considered to be statistically stable) from variability caused by abnormal assignable causes (process is considered not to be statistically stable).

The main goals of SPC is an identification of abnormal variability caused by assignable causes with the aim to

1. Make the process stable.
2. Minimize the process variability.
3. Improve the process performance.

The main function is "to reduce variation in an output characteristic by signaling the change of an undefined process input". Effective application of SPC is such complex application which leads to the reduction of the process variation, i.e. to the process improvement. Meeting this goal is proportional to the level of allowing for groups of these factors during the SPC implementation and application and to the rate of integrating SPC into the overall business system of an organization.

Quality Management ensures that an organization, product or service is consistent. It has four main components

1. Quality planning.
2. Quality assurance.
3. Quality Control.
4. Quality Improvement.

CONCLUSIONS

Statistical Process control in manufacturing ensures real time analysis of the enterprise, resulting in cost effective manufacturing and efficient use of all resources. Manufacturing organizations are looking for SPC to analyze their impact, identify problems, and monitor the results you can achieve your quality goals.

REFERENCES

- Statistical techniques for quality. <http://dx.doi.org/10.1108/09544789910272913>.
- Shewhart W. A., (1986), Statistical Method From the Viewpoint of Quality Control, Unabridged Dover,Toronto.
- Luis I. Alvarez-Gonzalez, Maria Leticia Santos-Vijande 2007, TQM and firms performance: An EFQM excellence model research based survey.