

# Managing Uncertainty to Improve Decision Making

## Statistical Thinking for Managers

### One-day training course

given by Dr. Diego Kuonen, CStat, CEO, Statoo Consulting, Switzerland

#### Description

Much about the business world has changed in recent years, largely due to the developments and influence of global competition and information technology. In today's global marketplace success – even survival – hinges on an organisation's ability to improve everything it does by continuing to find better and more efficient ways of doing business. Today's customers demand more and global competition for businesses has grown, requiring businesses to improve rapidly and continuously.

However, all managing activities are subject to uncertainty and decisions have to be made in this environment. Uncertainty is everywhere and you can not escape from it. It becomes essential to face up to uncertainty, not hide it away under false concepts, but to understand it and to act in the face of uncertainty. As managing uncertainty leads to better decision making, the need for a formal tool to deal with uncertainty is greater now than ever before. If you want to manage uncertainty, then you need to practise statistical thinking – there is no other choice.

Statistical thinking is a philosophy of learning and action based on the following fundamental principles: all work occurs in a system of interconnected processes – a process being a chain of activities that turns inputs into outputs; variation, which gives rise to uncertainty, exists in all processes; and understanding and reducing variation are keys to success. All three principles work together to create the power of statistical thinking. The definition highlights several key components: process thinking, understanding and managing uncertainty; and using data whenever possible to guide actions and improve decision making. As such, the need to utilise statistical thinking for tangible business improvements is greater now than ever before.

This training course gives an introduction to the philosophy of statistical thinking and is designed to provide managers with the ability to develop their knowledge to describe the role of statistical thinking for decision making, problem solving and process improvement, including the need for understanding, quantifying and reducing variation.

By the end of this one-day training course participants will be able to think statistically. It is already an accepted fact that *"statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write"* (Herbert. G. Wells).

#### Course contents

- Introduction and motivation
- What is statistical thinking?
- Principles of statistical thinking
- Variation in business processes
- Statistical thinking and methods
- Applications of statistical thinking
- A model for statistical thinking
- Using statistical thinking in your organisation
- Tips for statistical thinking
- Conclusion and references
- Case studies

#### Course style

The course style encourages participation and uses a mixture of workshops, individual learning exercises and speaker led sessions to ensure participants gain maximum benefit and to allow them to rapidly translate the philosophy of statistical thinking into their work place.

#### Presentation

The lecture will be given, depending on the participants, in English, French or German. During the course questions may be asked in English, French or German. Training documents will be all in English. All participants will receive a printed version of the documentation for personal use only.

#### Who should attend?

All analysts, decision makers, directors, executives and managers who would like to manage uncertainty to improve decision making and who would like to know how to utilise statistical thinking for tangible business improvements.

#### About the speaker

Diego Kuonen, PhD in Statistics and CStat, is founder and CEO of Statoo Consulting ([www.statoo.info](http://www.statoo.info)). Statoo Consulting is a Swiss consulting firm specialised in statistical consulting and training, data analysis and data mining services. Currently, Dr. Diego Kuonen is also vice president of the Swiss Statistical Society and president of its section Statistics in Business and Industry.

#### Are you drowning in uncertainty and starving for knowledge?

If this is your problem, please contact Statoo Consulting today.