



Click here for more information

# One Day Workshop Root Cause Analysis



## Does one of the following sound familiar?

***"We are not sure whether we really solved the problem." "The root cause analysis team has been trying many things but nothing seems to work." "We do not have enough resources for root cause analysis." In that case our one-day workshop Root Cause Analysis will give insight how to get out of the impasse, following state-of-the-art techniques.***

## Problem Solving by using Statistical Engineering

Register: [www.holland-innovative.nl](http://www.holland-innovative.nl)

### The purpose of the workshop

Problem solving deals with processes with a spread on the output, leading to products that do not fit requirements. The Statistical Engineering (SE) methodology exploits the fact that one root cause always has the largest contribution and the goal is to find this root cause and to understand it. When you have found the root cause, the solution is most of the time obvious. During this One Day Workshop awareness

will be developed to solve problems with help of the SE methodology. The workshop enables the participants to apply this methodology in their own working environment.

### What will be learned - the skills

In this workshop the following subjects/skills will be taught:

- Introduction to the SE methodology
- Measuring systems analysis
- Decision tools
- Strategy diagrams
- Specific statistical tools (part swap analysis, GP/TP analysis, multi-vari)
- SE concepts (critical to quality, major root cause)

### Audience

The One Day Workshop Root Cause Analysis is a professional, intensive, one-day workshop, aimed at executives and senior engineers who work in production and development. This workshop is especially designed as an extension to the existing Design for Six Sigma Black Belt training in the area of DMAIC and DIDOV. But this workshop can also be followed separately.

### Level

University or college education, or an equivalent level acquired through working experience.

**Course duration and number of participants** 1 Day from 9.00 to 17.00. Maximum group size: 12 participants.

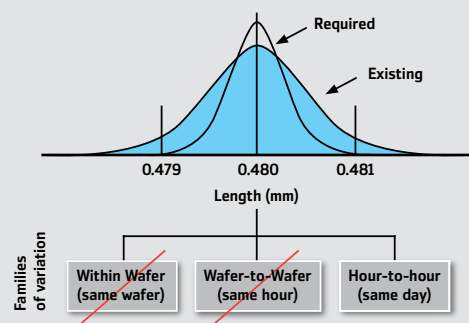
**Instructors** Dr. Ko Dousma, Dr. Ir. Coen Smits

**Location and investment** Holland Innovative, High Tech Campus 29, Eindhoven. The investment is € 795,- (ex VAT) per participant. This includes the workshop, a syllabus of the course material, lunch and refreshments. The training can also be given in-company. The training can be tailored to the requirements and wishes of the company.

**Dates, registration and further info** See [www.holland-innovative.nl](http://www.holland-innovative.nl) under Academy.

**Contact** HI Team Academy, tel. +31 40 85 14 610, [academy@holland-innovative.nl](mailto:academy@holland-innovative.nl)

### RCA problem solving breakdown structure (PSBS)



A PSBS starts with a picture of the variation ...

... and splits the variations into families to find the major root cause

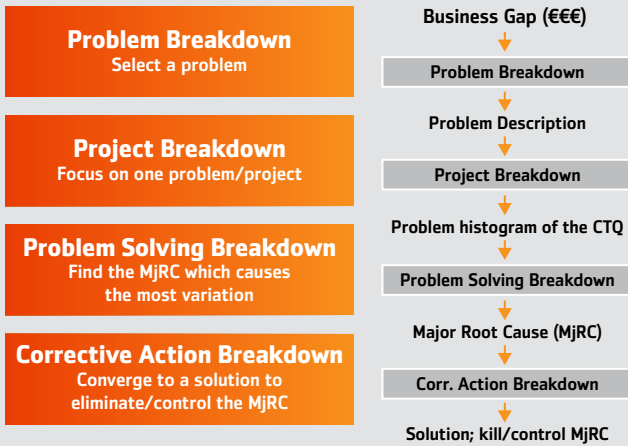
**Headquarters**  
High Tech Campus 29  
NL - 5656 AE Eindhoven

T +31 40 85 14 610  
E [academy@holland-innovative.nl](mailto:academy@holland-innovative.nl)  
W [www.holland-innovative.nl](http://www.holland-innovative.nl)



Focus on complex business processes

## Four types of decision tools



### Methodology: 'Listening to the parts'

The principle of this workshop is: 'Listening to the parts'. In other words, go to the work floor, take the products that are not meeting requirements and compare these with the correct products. This often reveals more than the overflow of data and statistics that the quality manager receives on a daily basis.

When you have a product that is assembled out of different components, it is a good start to disassemble the product and put it together again. When the malfunction keeps persisting there is a problem with one of the components. When the problem after reassembling has disappeared you can eliminate the components as a possible cause and look at the assembly process steps themselves. The underlying thought is that differences will appear more clearly when looking at the extremes.



The **Holland Innovative House**: ■ ■ ■ core ■ results ■ enablers

### Program

- Introduction to Statistical Engineering
- Strategy diagram + goat system case
- Measuring systems – MSE test
- Decision tools
- Multi-vari
- Part swap analysis
- GP/TP analysis
- New vs present significance testing

Presentations will be interspersed with practical examples and exercises.

### In-Company

Holland Innovative offers this workshop also as an in-company workshop. The workshop can be tailored to needs where necessary.

### Instructor

Ko Dousma is Sr. Product, Process & Reliability specialist at Holland Innovative. Ko is a Master Black Belt in Design for Six Sigma and with more than 30 years of experience in dozens of companies in several different industries, Ko is the expert in technical problem solving and reducing product and process variations.

### Holland Innovative BV:

- For solutions in project management, product & process development and improvement, and reliability
- 40 professionals with an experience level of more than 20 years
- Market areas: HighTech, Automotive, Solar & Energy, MedTech, Agro & Food

**Headquarters**  
High Tech Campus 29  
NL - 5656 AE Eindhoven

T +31 40 85 14 610  
E [academy@holland-innovative.nl](mailto:academy@holland-innovative.nl)  
W [www.holland-innovative.nl](http://www.holland-innovative.nl)



**Focus on complex business processes**