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Problem Solving through Root Cause Analysis

holland innovative

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 training Problem Solving by Statistical Engineering 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

The aim and result of the training

This training focusses on using a structured and efficient root cause analysis to solve the problems in your product. Processes commonly result in a certain spread on the output - i.e. the function of your products - causing a number of products to not fulfill the requirements and thus have a problem. The participants are trained to be able to perform a root cause analysis for problem solving using the Statistical Engineering (SE) methodology in an independent and professional manner. The SE methodology exploits the fact that one root cause always has the largest contribution to the problem and the goal is to find this Root Cause and to understand it. The subsequent solution then becomes apparent.

A selection of the skills that will be acquired

This training will make clear to you why and how the SE methodology works. This methodology helps to create the starting grid for a problem analysis and to understand a measurement system. Furthermore, it provides insight in which products and data to investigate and which statistical tools to use. The SE methodology includes many special tools that will be taught extensively during this training. Participants will learn how to deal with failing products and how to report progress to management. The training provides a complete program to become a complete problem solver.

Target group

This training aims at all engineers and specialists working in technical areas. The training is specifically meant for those who want to learn the efficient root cause analysis methods and be able to apply them in their own organization.

In-company

Holland Innovative offers this training also as an in-company training, with an option to include on-the-job coaching on ongoing problem solving projects. The training can be tailored to needs when necessary.

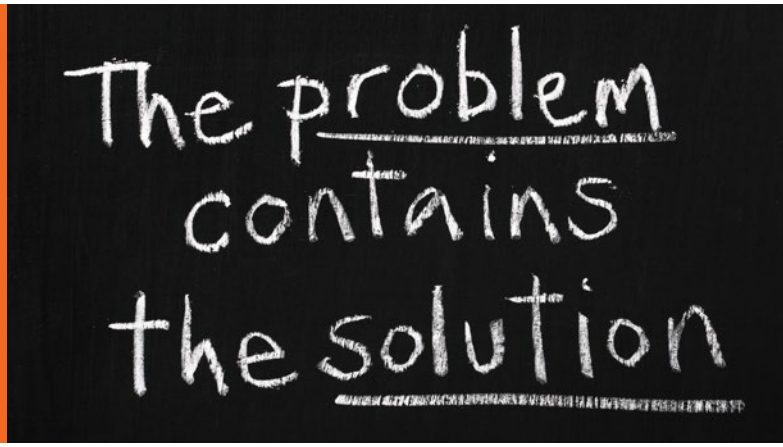
Course duration and number of participants 10 Half day sessions spread over 5 or 10 days. Maximum group size: 12 participants.

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

Location and investment Holland Innovative, High Tech Campus 29, Eindhoven. The investment is €3.500,- (ex. VAT) per participant. This includes the 5 training days, a syllabus of the training material, templates and tools, 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 more info See www.holland-innovative.nl under Academy.

Contact Team HI Academy, tel. +31 40 85 14 610, academy@holland-innovative.nl



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Focus on complex business processes

Major Root Cause Paradigm

MjRC

Listening to the parts

Method 'Listening to the parts'

The principle of this training and of the SE method is 'Listening to the parts'. In other words, go to the production floor, obtain the most Terrible Parts and Products (TPs) and compare these with the Greatest Parts and Products (GPs). This way engineers can manage based on facts instead of relying on physical models and brainstorms.

For a product that has been created by assembling several parts (components), a good starting point is to disassemble and reassemble a deviating or nonconforming product. When the problem keeps occurring, even after several dis-and-reassemblies, the problem could originate in the components. When the problem has disappeared after reassembly, the components are usually eliminated as root cause and the engineer can dive into the assembly process and steps. The main idea is that differences are more apparent when looking at the extremes.

Level University or college education, or equivalent level of knowledge gained through experience.

Program in 5 blocks of 1 day

- Introduction to Statistical Engineering
- MSE test | scoring transform | concentration diagrams
- Decision tools / split types | strategy diagrams
- GP/TP analysis | parts swap analysis
- Y-X scatterplots | process flow diagrams | multi-vari | active multi-vari
- Mixer noise case
- Logical pairs | resistance limit transforms | new vs present testing
- Group comparisons | clue lists | operations search
- Black Belt in problem solving basics | process specification graphs | precontrol / process control | executive summary
- Full factorial DoE | rank order anova | case studies

The usage of own cases and data from the company is highly recommended to enable immediate results and benefits.

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.

February 2021

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

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

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