



Swedish Quality Management Academy

Chalmers University of Technology

- **Research interest**

- Organizational development using the principles of Quality Management in industry and in healthcare
- Product and service development
- Industrial statistics focusing on design of experiments, robust design methodology and statistical process improvement

- **Objective**

We want to develop knowledge and competence in quality management and its supporting methods for use in the ongoing improvement process in the Swedish society. We want to be acknowledged as leading in research in the broad field of Quality Management, spanning organizational development to statistical tools.

- **Background**

- Established in 1999 based on a SKF donation

- **Case studies at hand**

- Improvement programs in Healthcare organisations (for example Skaraborgs Hospital Group)
- The service concept in manufacturing companies (SKF)
- Quality in the Purchasing process (Värmlandstrafiken)
- Quality in small and mediums sized companies (a number of cases)
- Etc.

- **Academic relevance**

Creation of new knowledge in quality management in general and in our reserach areas in particular; epistemology of improvement

- **Industrial relevance**

- Our research is strongly action-oriented. We will create a necessary knowledge base that leads to quality-driven organizational development. Through "action research" we will participate in creating improvement, innovation and transformation.

- **Projects in progress**

- Centre for Health Care Improvements, Gothenburg Mathematical Modelling Centre, Design for Six Sigma in Healthcare, Future SME, Service Innovation in Manufacturing Companies, Innovation systems in SMEs, When process orientation meets the functional structures, Volvo Robust Engineering System

- **Partners**

- Division of Mathematical Statistics, Chalmers, University of Palermo, National University of Singapore, Service Research Centre/Karlstad University, Division of Quality Technology and Managemen / Linköping University/Luleå/ Stavanger, Institute for Operations Management / Strathclyde University, Glasgow, European Society for Quality in Health care (ESQH).. Hamdan bin Muhammed University / Dubai, Center for Excellence in Organisations(CEO) / Univ S. California, Milano Politech, Many units within the Västra Götaland Region.

- **Expected results**

- Creation, translation and dissemination of research-based and action-oriented knowledge of improvement, innovation and transformation of industry and health care systems; a philosophical basis of organisation improvement and transformation

- **Researchers involved**

- Bo Bergman, Sverker Alänge, Stefano Barone, Ida Gremyr, Hendry Raharjo, Andreas Hellström, Henrik Eriksson, Svante Lifvergren, Peter Docherty

Ida Gremyr

Research interest

- Quality Management, Role of Quality Managers, Robust design methodology and its connections to sustainable development, service innovations in manufacturing industries;, Design for Six Sigma

Objective

- Perform research and training in quality management in focusing the application of principles, practices and tools from the area of quality management in product and process development.

Background

- Research in various subjects concerning the field of quality management, focusing product and process development
- Teaching experience from various educational levels, e.g. courses at master's levels and PhD student level.
- Experience from designing and planning of a new program.

Case studies at hand

Skaraborg's Hospital, Cochlear, the SKF Group, the Volvo Group

Academic relevance

- Creation of new knowledge and models in the research area.

Industrial relevance

- The research is strongly action-oriented. Besides academic publications the projects include developing or improving industrial/organizational processes, as well as communicating the results in ways that provide a means for improving quality management practices,

Projects in progress

- Service Innovations in Manufacturing Industries (Vinnova)
- Design for Six Sigma in the Medication Process (CHI/Vinnvård)
- Future SME (EU, 7FP)
- Sustainable Production Initiative (Chalmers' strategic initiative, Vinnova)
- SKF co-operation

Partners

- Skaraborgs Hospital, Cochlear, the SKF Group, Partners in Chalmers' Sustainable production Initiative

Expected results

- Improved understanding and application of quality management in product and process development. Contributions to a continued focus on principles, practices and tools of quality management in academia as well as in practice.

Researcher

- Ida Gremyr
- Ph.D. Senior Lecturer
- Ida.gremyr@chalmers.se



Bo Bergman

Research interest

- Organizational transformation and Quality Improvement in industry and healthcare – in action and in theory as well as the corresponding philosophical basis and corresponding diactive perspective
- Understanding of variation

Objective

- Creation of a scientific basis for organizational transformation and quality improvement as well as its didactics

Background

- Extensive research on a wide range of quality related topics from hardware reliability and system safety in the 1970:ties to Organizational transformation in the 2010:th; Supervisor of more than 25 PhD theses, external examiner of many more PhD dissertations, international as well as national. A deep research as well as education interest in the area. A broad international network

Case studies at hand

The improvement program at Skaraborg Hospital Group; Robustness and Design for Six Sigma in industrial companies (SKF, Volvo AB); Improvement projects at Sahlgrenska University Hospital; Purchasing in Public Transport (Värmlandstrafiken)

Academic relevance

- Creating a knowledge basis for a scientific approach to Organizational transformation and improvement as well as the philosophical underpinnings of such a research agenda

Industrial relevance

- Our research is strongly action-oriented. We will create a necessary knowledge base that leads to quality-driven organizational development Through "action research" we will participate in creating improvement, innovation and transformation.

Projects in progress

- Quality Improvement in Healthcare – a Research and Education Agenda (QIHREA) with a number of sub-projects;
- Process orientation (FAS Project)
- The Competent work place (Vinnova)
- The Epistemology of Healthcare Improvement
- Variation in Quality Registries and Open Comparisons as a basis for healthcare improvement.

Partners

- SKF AB, the Västra Götaland Region (Skaraborgs Hospital Group, Sahlgrenska University Hospital, Centrum för Verksamhetsutveckling, Registercentrum, Onkologiskt Centrum etc.); Volvo AB; Volvo Cars; ESQH; Statistics Sweden; SALAR.

Expected results

- A transformation of Healthcare stimulated by their adaption, adoption and further development of industrial quality improvement principles and approaches leading to (1) an increased attractiveness of the Västra Götaland region as well as (2) a stimulus to industrial companies to take a further step towards a higher level of quality improvements, organizational renewal, and transformation.

Professor

- Bo Bergman, PhD
- Bo.bergman@chalmers.se

Sverker Alänge

Research interest

- Innovation management and innovation systems
- Learning and change leadership
- Organizational innovations
- Entrepreneurship and idea evaluation
- Sustainability
- Universities in societal development
- Action research

Objective

- Research with a focus on innovation, change and development processes in industry and society

Background

- Docent in technology management and economics, Ph.D. in industrial management, M.Sc. Mech. Eng.
- Experience of large scale change programs in industry, universities and in innovation systems from Sweden, Latin America, and Russia.

Case studies at hand

- Sustainable innovativeness with Google
- Glocal innovation with Consilium
- Project Open Arenas - Lindholmen and Innovatum
- Learning alliances in product development with Volvo
- Interaction between industrial design and product development engineers
- Diffusion of organizational innovations – the case TQM in industry and hospital, an analytical framework
- The Board's Role in Sustaining Major Organizational Change– cases of FSAB, Mölndal hospital and Scania

Academic relevance

- Integrating and developing theory on various aspects of innovation based on empirical research with industrial partners & other stakeholders in innovation systems.

Industrial relevance

- Colloborative research conducted in close cooperation with industrial and societal partners.

Projects in progress

- Sustainable business development with Mats Lundqvist
- Sustainable innovativeness with Annika Steiber
- Learning Alliances for product development with Azadeh Fazl and Lars Uno Roos
- Design and product development with Lisa Carlgren
- Glocal innovation with Clas Mellby and Hans Fogelberg
- Quality and sustainability management with Magnus Marmgren and Stefan Book
- Innovation in hospitals with Linda Sonesson and Boo Edgar
- Innovation systems with Sari Scheinberg, Andreas Norgren, Mats Lundqvist, Ulf Petrusson

Other projects:

- The Entrepreneurial University – a 10 universities program in Nicaragua with Sari Scheinberg
- Leadership from CEO perspective with SIQ
- Russian Quality Award with Sari Scheinberg and SIQ

Partners

- Volvo AB, Consilium, Google, Effort, SCA, IKEA, ABB, Thule, Bacho, Yacht & Car Design, CIT, CNU

Expected results

- Co-creation of actionable knowledge for developing organizations and innovation systems.

Researcher

- Name Sverker Alänge
- Profession Associate professor
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Hendry Raharjo

Research interest

- Quality Engineering and Management, Quality in Product Development, Quality in Healthcare, Decision Making.

Objective

- Advance and apply research in quality engineering and management for improving business processes.

Background

- Published research in eight different peer-reviewed international scientific journals. Regular reviewer of a number of reputable international journals. Received the International Journal of Production Research Highly Commended PhD Prize and was listed in Marquis Who's Who in Science and Engineering 2007. Served as Quality and Operations Management master program coordinator 2008-2009. Received research grant from Kristina Stenborgs foundation (280000SEK, with Bo Bergman and Svante Lifvergren).

Case studies at hand

Developing decision support system for Warfarin management at Skaraborg Hospital Group (SkaS).

Academic relevance

- Creation of new methods and knowledge in the research area.

Industrial relevance

- Our research is strongly action-oriented. We will create a necessary knowledge base that leads to quality-driven organizational development. Through "action research" we will participate in creating improvement, innovation and transformation.

Projects in progress

- Decision support system for Warfarin management
- FutureSME

Partners

- Skaraborgs Hospital Group

Expected results

- Creation of new methods and knowledge in the research area that can not only improve business processes, but also advance the scientific literature.

Researcher

- Hendry Raharjo
- Ph.D. Researcher
- hendry@chalmers.se

Svante Lifvergren

Research interest

- Sustainable quality management in Healthcare, Process Management, Variation in Healthcare Processes, Critical Management Studies

Objective

- Perform research and training in healthcare quality management in search of a sustainable healthcare system

Background

- Senior physician, internal medicine and pulmonology. Development Director and a member of the top management team at the Skaraborg Hospital Group.
- Researcher at CHI

Case studies at hand

International network comprising twelve healthcare systems: In search of a high quality and safe, sustainable healthcare systems

The application of Lean Six Sigma in a Swedish hospital group

Learning microsystems in healthcare processes

Variation in the individual patient; prediction and beyond....

Academic relevance

- Creation of new knowledge and models in the research area.

Industrial relevance

- Our research is strongly action-oriented. We will create a necessary knowledge base that leads to quality-driven organizational development. Through "action research" we will participate in creating improvement, innovation and transformation.

Projects in progress

- International network comprising twelve healthcare systems: In search of a high quality and safe, sustainable healthcare systems
- The application of Lean Six Sigma in a Swedish hospital group
- Learning microsystems in healthcare processes
- Variation in the individual patient; prediction and beyond....

Partners

- Kaiser Permanente, Cleveland Clinic, Aegion, Aravind, Orbis, Sevilla, Debrechen, Malaysia, SkaS, Angered Närsjukhus, Sahlgrenska University Hospital (SU), Västra GötalandsRegionen (VGR), the SKF Group, Swedish Institute of Quality (SIQ)

Expected results

- Creation, translation and dissemination of research-based and action-oriented knowledge of improvement, innovation and transformation of industry and health care systems.

Researcher

- Svante Lifvergren
- M. D.
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Henrik Eriksson

Research interest

- Quality Management, Quality management in Healthcare, Process Management, Business Excellence, Quality Awards, Self-assessment, Training of health care professionals

Objective

- Perform research and training in quality management in general and in health care and on business excellence in particular based on theoretical and practical experiences.

Background

- Conducted research in various subjects concerning the field of quality management
- Practical experience from different organisations, including leading different groups of employees that are working full-time or part-time with organizational development and quality management.

Case studies at hand

Sahlgrenska University Hospital (SU), Västra GötalandsRegionen (VGR), the SKF Group, Swedish Institute of Quality (SIQ)

Academic relevance

- Creation of new knowledge and models in the research area.

Industrial relevance

- Our research is strongly action-oriented. We will create a necessary knowledge base that leads to quality-driven organizational development. Through "action research" we will participate in creating improvement, innovation and transformation.

Projects in progress

- CHI- Kattegatt and Skagerack (KASK) Innovation
- CHI- Acute Breast Pain. Variation in Quality, Safety and Costs
- FutureSME
- Business Excellence and Organisational Assessment

Partners

- Sahlgrenska University Hospital (SU), Västra GötalandsRegionen (VGR), the SKF Group, Swedish Institute of Quality (SIQ)

Expected results

- Creation, translation and dissemination of research-based and action-oriented knowledge of improvement, innovation and transformation of industry and health care systems.

Researcher

- Henrik Eriksson
- Ph.D. Researcher
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