

# MASTER CLASS SYSTEMATIC SAFETY RISK MANAGEMENT

BASED ON SOCIO-TECHNICAL SYSTEMS THINKING  
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# MASTER CLASS SYSTEMATIC SAFETY RISK MANAGEMENT

## BASED ON SOCIO-TECHNICAL SYSTEMS THINKING

You work in organisations where, daily, there are challenges to face that require effective risk management. Problems occur when outcomes cannot be predicted due to unidentified interactions or priorities that shifted. On the other end, problem-based approaches might lead to myopic analyses to manage organisational politics and group dynamics. If you juggle multiple stakeholder systems and various system objectives, and safety is a real priority for your organisation, then this master class in safety risk management based on socio-technical systems thinking is for you.

The Amsterdam University of Applied Sciences (NL) and Queensland University of Technology (AU) are proud to present a safety risk management master class. In this highly interactive, demanding and challenging course you will be introduced to systems thinking through group methods, and systematic analysis models and techniques such as the STAMP/STPA.

You will comprehend the limitations of prevalent risk management aspects and get exposed to techniques that aim at decreasing subjectivity. We will demonstrate how traditional approaches, as well as the results from STPA, can be exploited to assessing risk in more valid and reliable manners. We will also show you the benefits of strength-based approaches to addressing challenges in the risk management cycle.

### APPROACH

The master class will include discussions about the theory, application to well-known and lesser-known cases, and ample room for reflection on your own practice. Each step of the risk management cycle will be complemented with tips to help you cope with challenges during application.

We will show how the results of systematic methods can retrofit the data which are necessary for currently used tools (e.g., FTA, ETA, BowTie). We will discuss the advantages and disadvantages of various approaches, and you will become competent in using each of the techniques depending on the resources and data available.

### PROGRAM

The following subjects will be covered:

- ▶ Introduction: what is risk and risk management?
- ▶ Risk assessment: the role of risk perception.
- ▶ Hazard and risk identification: newly introduced tools and techniques and comparisons with traditional approaches.
- ▶ Risk controls: how to assess their effectiveness and find the best combinations.
- ▶ Risk monitoring methods: closing the loop.
- ▶ Industry guest speaker: real-world challenges and solutions.

## PARTICIPANT PROFILE

This master class is aimed at safety professionals, risk analysts, engineers, managers and any practitioner involved in risk assessments within complex socio-technical systems. Students and academic staff are also welcome as they will benefit from the theoretical and practical parts of the master class. This master class is open and relevant to any domain. Some work experience in hazard identification and risk assessment is preferable to enable fruitful participation in group discussions.

## PRACTICALITIES

The program runs for four full days from Monday until Thursday; the program times are 9:00 to 17:00. The registration fee is €1890. An early-bird fee (€1700) applies to registrations made up to the 30th November 2019. Aviation Academy Alumni, RAAK PRO and RAAK MKB project partners, ATAERA members can register with early-bird fee (equivalent with 10% discount) during the entire registration period. All lunches and welcome drinks on Monday afternoon are included in the registration fee. The location will be in the vicinity of Amsterdam.

## INFORMATION AND REGISTRATION

For registration and more information please visit our website [amsterdamuas.com/mcra](http://amsterdamuas.com/mcra). With further questions please contact Viktória Balla-Kamper at [v.balla-kamper@hva.nl](mailto:v.balla-kamper@hva.nl), or at +31 (0)6 211 57720.

## MASTER CLASS FACILITATORS

**Dr. Maria Papanikou** is Associate Professor in Safety and Human Factors at the Aviation Academy. She holds a PhD in Aviation Safety focusing on systemic – safety studies through transdisciplinary research. Her interdisciplinary background is at the core of her projects and her research interests. Before joining the Aviation Academy, Maria worked in the United Kingdom

both as flight crew trainer, and as a researcher and academic. Following her departure from London, Maria joined the research team of the Medical School at the Aristotle University of Thessaloniki (AUTH), Greece. At AUTH Maria worked on pilot mental health and participated in as well as coordinated research bids for projects on aviation human factors. Maria serves as organising and scientific committee in conferences internationally.

**Dr. Nektarios Karanikas** is Associate Professor in the Health, Safety and Environment discipline of the School of Public Health & Social Work (Faculty of Health) at Queensland University of Technology (AU). He holds a doctorate in Safety and Quality Management (Middlesex University, UK) and an MSc in Human Factors and Safety Assessment (Cranfield University, UK). He has (co)authored various peer-reviewed journal and conference articles with a focus on safety/risk management and he is an active member and volunteer in scientific and professional bodies. In addition to his academic teaching, since 2009 Nektarios has been delivering professional courses in safety and risk management and safety investigations.

## TESTIMONIAL

"In HvA's Master Class Risk Assessment, I have learned to cope with the complexity inherent in socio-technical systems. Through practical application of STAMP, I've learned that it's of vital importance not to focus on separate parts, but on systems as a whole including the interaction of its components. I've also learned how to minimize bad effects of cognitive biases and how to test your assumptions. The Master Class had a great mix of learning tools, which made it a riveting experience. I daily apply the knowledge acquired in my work." (Martijn Flinterman, Rijkswaterstaat)

## TESTIMONIAL

"Having completed the SMS training for our organization, I would like to thank you on behalf of all the participants. We had only positive feedback from everyone, your ability to connect with the students and your talent at teaching advanced topics with complex concepts were truly superior. The carefully chosen academic material, combined with the practical exercises and your in-depth knowledge and experience of the aviation industry was the catalyst for a successful project."

(Cpt Stavros Christeas, Safety Manager, AEGEAN Airlines)

## ABOUT THE AVIATION ACADEMY

The Aviation Academy - part of the Amsterdam University of Applied Sciences - performs practical scientific research related to real-life cases and problems in the industry, focusing on safety & human factors, MRO process improvement, composites and aviation capacity. Our goal is to improve and innovate professional practice. We perform all of our research projects in close cooperation with industry, governmental agencies, scientific institutions and other universities. This ensures a solid connection with state-of-the-art scientific knowledge, as well as a focus on the most urgent and current problems and challenges on the shop floor.



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## ABOUT QUEENSLAND UNIVERSITY OF TECHNOLOGY

QUT is a major Australian university with a global reputation and a 'real world' focus. Our courses are in high demand and equip our students and graduates with the skills they need in an increasingly disrupted world. We are an ambitious institution, with a rapidly growing research output focused on technology and innovation. With nearly 50,000 students QUT places a premium on the national and international accreditation of our professional degrees in fields spanning business, creative industries, education, health, science and engineering, and law. We are transforming the learning experience and embed work-integrated learning in courses, and have a strong focus on developing entrepreneurial skills and start-ups.

