School of Engineering
IAMP Institute of Applied Mathematics and Physics
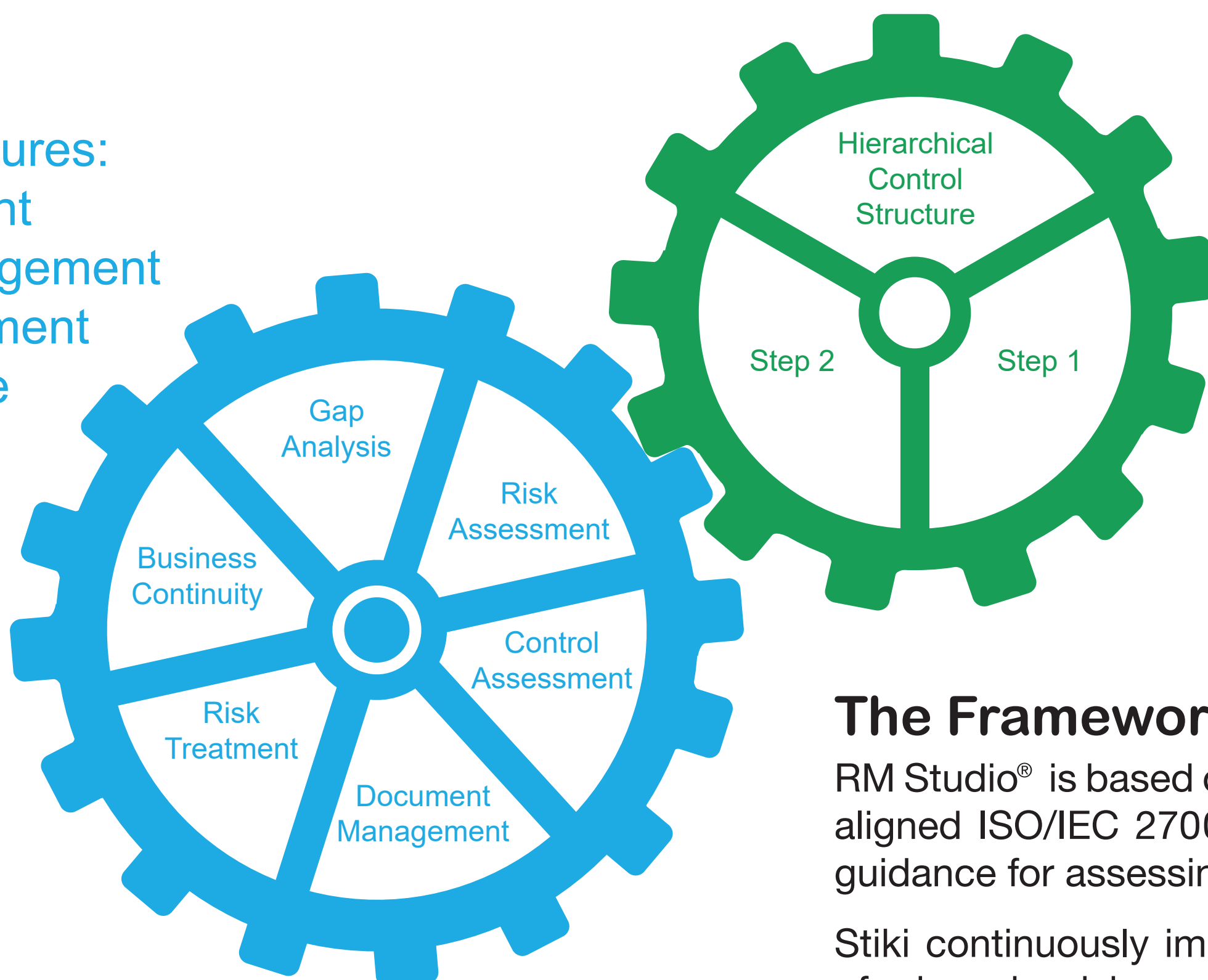
Stiki
Information Security

Embedding STPA into a Highly Successful Risk Management Software Application

RM Studio

The RM Studio features:
- Risk Management
- Document management
- Quality Management
- Central database
- Collaboration

and more

(gear diagram labels: Gap Analysis, Risk Assessment, Business Continuity, Control Assessment, Risk Treatment, Document Management)

(green gear diagram labels: Hierarchical Control Structure, Step 2, Step 1)

STPA

The STPA Module features:
- Hierarchical Control Structures
- UCA Assessment
- Control Loop Modelling
- Scenario Identification
- Report Generation

and more

The Project

Stiki and Zurich University of Applied Sciences announce a 2.5 year joint development project to create a professional software solution for Systems-Theoretic Process Analysis.

The principal objective is to provide the STPA methodology for use in a structured application module combined with the existing RM Studio® software to formulate a truly unique risk management framework. The new RM Studio® STPA module will be a professional, state-of-the-art software complete with all the features and support necessary. The new module will operate as an independent analysis tool, as well as provide further enhancement to the proven risk management procedures RM Studio® utilizes today.

The Background

The project is based on experience with the STPA methodology from research projects conducted by the two partners in multiple fields that include: healthcare, medical devices, power generation, pharmaceutics, and machinery. The results of this decisive reserach clearly indicates that not only the approaches to applying STPA, but also the background and expectations of the analysts, vary significantly across domains and the systems analyzed.

Two key questions that prompted the joint development project:

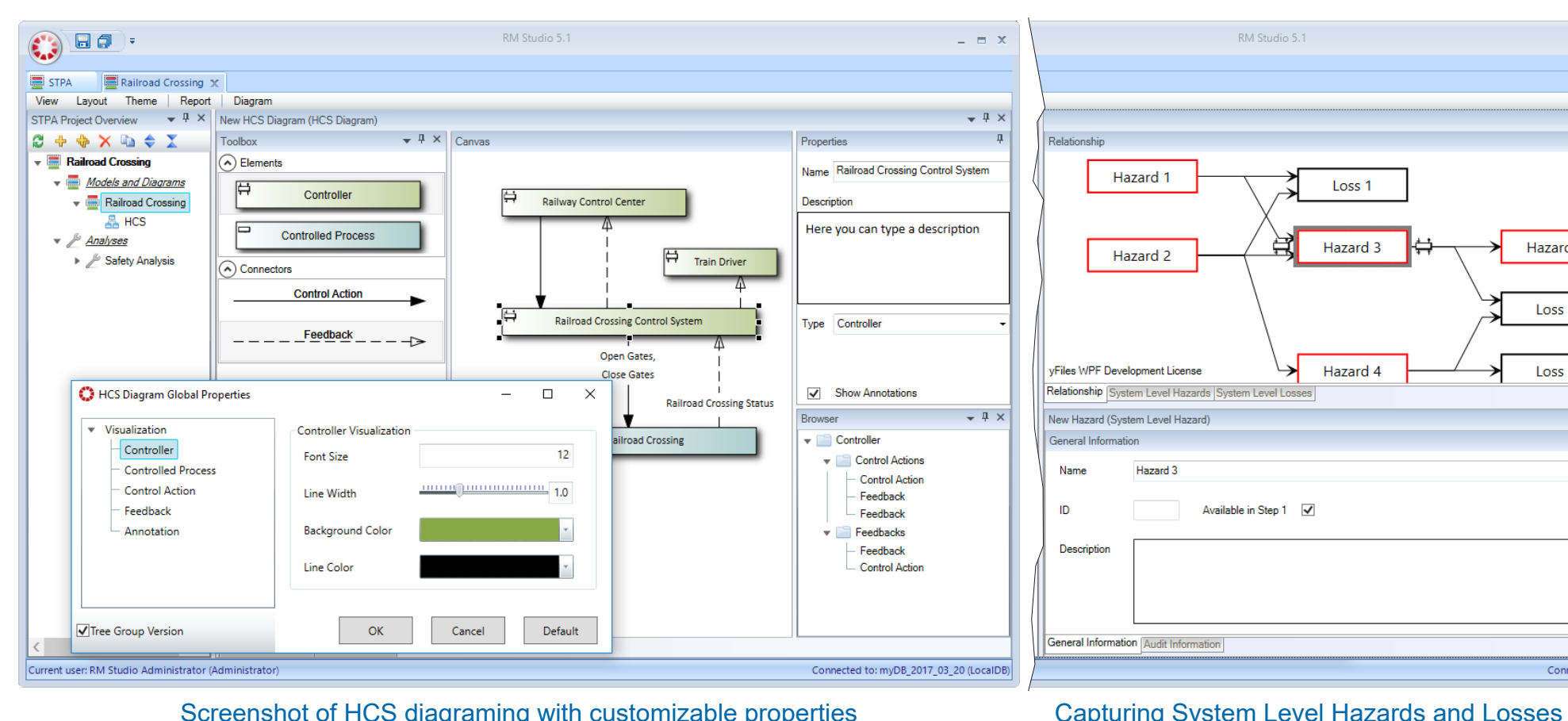Can a software tool efficiently and effectively support the STPA methodology?

How will such a tool cope with the varied requirements of vastly diverse groups of stakeholders?

The success of RM Studio®, along with feedback from its users, paired with the experience of using the application SAHRA in STPA research projects allowed the teams to create a unique and innovative concept for the new STPA module that satisfies the varied demands and requirements. With the aid of the select technology development funds the project has a clear path to success.

The Framework

RM Studio® is based on the risk management methodology of the risk-aligned ISO/IEC 27000 family of standards that outline and provide guidance for assessing security risks to information.

Stiki continuously improves RM Studio® by adopting more elements of a broader risk management methodology primarily observed from the ISO 31000:2009 Risk Management Standard. The adoption of the STPA methodology further broadens the capabilities of RM Studio®, along with expanding the uses and applications.

Screenshot of HCS diagraming with customizable properties

Capturing System Level Hazards and Losses

The Conclusion

Efficiency and effectiveness are at the core of everything we do. We believe accuracy in execution equals efficiency and timely execution of the efficiencies equals effectiveness. Adopting the STPA risk analysis methodology into RM Studio®'s risk assessment capabilities provides an enhanced risk management framework for efficient and effective risk management from the top down and the bottom up.

Talk with the presenting authors at the workshop

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Visit our website and subscribe to receive updates regarding our progress with the project, as well as other information we discover along the journey.

https://www.riskmanagementstudio.com/features/stpa

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RM Studio® and SAHRA are solely owned and developed by Stiki and ZHAW respectively

RM Studio Risk Management — Efficient and Effective

SAHRA STPA based hazard and risk analysis

Stiki is a Microsoft Gold Certified Partner and ISO/IEC 27001 Certified

Microsoft GOLD CERTIFIED *Partner*

bsi. ISO/IEC 27001 Information Security Management