

# **The Role of AI in Security Risk Management**

Seminar 2 activity summary based on Spears & Barki (2010).

Objective:

Analyse how AI supports or replaces user participation in RM processes.

# User participation in risk management

- Users engage across RM phases: process mapping, control identification, testing, and remediation.
- Spears & Barki (2010): Participation enhances ownership, communication, and policy compliance.
- Challenge: Maintaining engagement in repetitive or complex control activities.

# AI-enabled enhancements

- AI Applications
  - Machine learning → automates workflow and control identification.
  - Neural networks → detect anomalies in testing and monitoring.
  - Case-based reasoning → supports remediation and control design.
- Benefits: Improved efficiency, consistency, and predictive accuracy.
- Human role shifts from operator to supervisor and validator.

## **Tools and conclusion**

Key tools:

- Celonis, Power BI, Splunk, Okta, Jira, Metasploit/Maltego. These tools demonstrate AI's integration into RM processes.

Conclusion:

- AI complements rather than replaces user participation. It enhances speed, insight, and governance.