

Industry 4.0 brought digital transformation to existing business models to automate tasks, increase energy efficiency, easily accessible systems, and use data to generate more business value (Lasi h. et al., 2014). This revolution has taken the industry into a new era dominated by digital technologies, i.e., the Internet of Things (IoT), Cloud Computing, and big data(Dalenogare, L.S et al., 2018, p.383).

However, these technologies have numerous challenges and risks that significantly impact their use of these advanced technologies. For instance, SMEs need to factor in considerable amounts of investments and increase by 50% in contrast to not implementing them (Raj, A. et al., 2020, p.107459).

Also, the new technologies used in critical infrastructure pose a significant risk to public safety, which impacts economic, environmental, and social sustainability(Wisniewski M et al., 2022, p. 82718).

Additionally, I agree with the post from Steve about the complexity of implementing these technologies being one of the biggest hurdles for many companies. As Steve mentioned, "Over 30% of projects are canceled before completion," which is shockingly one of the considerable risks seen for a company.

Industry 4.0 comprises many great promises to bring positive changes in our society, but at the same time, many risks are present. Therefore the process of risk identification must be carried out, which helps to enhance the system with better preparation, prevent threats, and create a failure protection mechanism(Tupa, J. et al., 2017). Fig 1 below depicts an example of a simple process of risk analysis that can be conducted.

In conclusion, risk analysis is an essential step toward utilizing the perks of Industry 4.0. To conduct an analysis, the analyst should first determine the scope and the asset, and then the risks are concerned. Consequently, the mitigations for the identified risks are then documented and implemented. The risk analysis can be either qualitative or quantitative, such as open fair, or be used together to assess the risk more detailedly (Spears, J. & Barki, H, 2010, p.506).

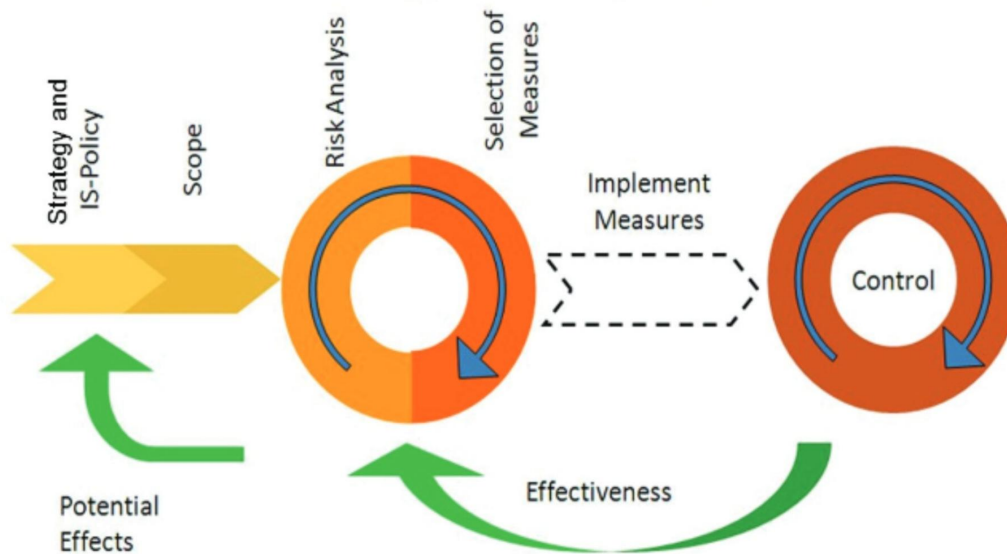


Fig1: Risk analysis Process(Tupa, J. et al., 2017)

## References

- Dalenogare, L.S., Benitez, G.B., Ayala, N.F. and Frank, A.G., 2018. The expected contribution of Industry 4.0 technologies for industrial performance. *International Journal of production economics*, 204, pp.383-394.
- Lasi, H., Fettke, P., Kemper, H.G., Feld, T. and Hoffmann, M., 2014. Industry 4.0. *Business & information systems engineering*, 6, pp.239-242.
- Raj, A., Dwivedi, G., Sharma, A., de Sousa Jabbour, A.B.L. and Rajak, S., 2020. Barriers to adopting industry 4.0 technologies in the manufacturing sector: An inter-country comparative perspective. *International Journal of Production Economics*, 224, p.107546.
- Spears, J. & Barki, H. (2010) User Participation in Information Systems Security Risk Management. *MIS Quarterly* 34(3): 503.
- Tupa, J., Simota, J. and Steiner, F., 2017. Aspects of risk management implementation for Industry 4.0. *Procedia manufacturing*, 11, pp.1223-1230.
- Wisniewski, M., Gladysz, B., Ejsmont, K., Wodecki, A. and Van Erp, T., 2022. Industry 4.0 solutions impacts on critical infrastructure safety and protection—a systematic literature review. *IEEE Access*.