by Oi Lam Siu - Sunday, 16 June 2024, 12:26 PM

1. What do the authors mean by the term 'Industry 4.0' - give two examples.

'Industry 4.0' refers to the latest phase of the industrial revolution, which focuses on using new digital technologies in manufacturing and business processes. This phase builds on the third industrial revolution, which used electronics and IT to automate production. Industry 4.0 includes technologies such as the Internet of Things (IoT), big data, cloud computing, robotics, and artificial intelligence (AI).

Internet of Things (IoT): IoT connects physical devices to the internet, allowing them to collect and share data. For example, in factories, IoT sensors can monitor equipment in real-time, predict when maintenance is needed, and improve production processes.

Artificial Intelligence (AI): AI uses large datasets from connected devices and systems to provide insights that help in decision-making. For instance, AI can optimize supply chain management by predicting demand, identifying possible problems, and suggesting solutions.

2. Give two real-world examples of risks that fit into the authors' categories.

Kovaitė & Stankevičienė (2019) list six types of risks with digitalisation: technical, competence, acceptance by staff, acceptance by customers, data privacy and security, and financial risks.

Data Privacy and Security Risks: A recent incident involved a cyberattack on UnitedHealth Group's claims processing unit, Change Healthcare. This unit processes 15 billion healthcare transactions annually and handles nearly half of all U.S. medical claims, involving one in every three patient records (Campisi, 2024).

Competence Risks: Boeing introduced the Maneuvering Characteristics Augmentation System (MCAS) in the 737 MAX, designed to automatically correct the aircraft's angle of attack. In 2018 and 2019, two Boeing 737 MAX aircraft were involved in fatal crashes—Lion Air Flight 610 and Ethiopian Airlines Flight 302. These disasters resulted in the loss of 346 lives and led to the global grounding of the 737 MAX fleet.

Investigations revealed that the Federal Aviation Administration (FAA) had inadequate awareness of the MCAS function, which allowed Boeing to have significant influence over the certification process of the 737 MAX (Herkert, 2020; Wasson, 2019).

Moreover, Boeing assured airlines that the MAX would handle exactly like the previous version of the 737 and recommended only a 30-minute self-study course for pilots on MCAS, rather than additional simulator or classroom instruction (Campbell, 2019).

This competence risk extended to both Boeing and regulatory bodies, showing a lack of comprehensive training, thorough testing, validation, and certification processes.

3. Find another journal article that either supports or contradicts the points made in the cited study.

Another article by Lasi et al. (2014) provides a review of the current state and implications for Industry 4.0. This article also discusses the significant changes Industry 4.0 technologies can bring and the need for careful risk management. The article stresses the importance of a systematic approach to managing the risks of digitalisation, supporting the points made by Kovaitė & Stankevičienė (2019).

References

Kovaite, K. & Stankeviciene, J. (2019). Risks of digitalisation of business models. Proceedings of 6th International Scientific Conference Contemporary Issues in Business, Management and Economics Engineering 2019. DOI: 10.3846/cibmee.2019.039.

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Wasson, L. (Oct 11, 2019). FAA failed to properly review 737 Max jet anti-stall system: JATR report. CNBC. Available from: https://www.cnbc.com/2019/10/11/faa-failed-proper-review-of-boeings-737-max-mcas-system-jatr-report.html [Accessed 16 June 2024].

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