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Initial Post

by <u>Aleksandr Vygodchikov</u> - Saturday, 15 June 2024, 11:13 AM

Industry 4.0: Definition and Examples

Kovaitė & Stankevičienė (2019) describe Industry 4.0 as the fourth industrial revolution, which uses advanced technologies like the Internet of Things (IoT), big data, cloud computing, robotics, and artificial intelligence. These technologies help people and machines communicate better and make businesses more efficient.

Two examples of Industry 4.0 technologies are:

- IoT (Internet of Things): IoT connects devices to the internet so they can share data. For example, in smart factories, IoT devices can monitor machines in real-time, improving efficiency and reducing downtime.

- Big Data: Big data analytics helps businesses analyze large amounts of data to make better decisions. For example, it can predict when machines need maintenance, preventing costly breakdowns.

Real-World Examples of Risks in Industry 4.0

The authors identify several types of risks, including technical, competence, behavioral, data security, and financial risks. Two real-world examples are:

- Technical Risk: In the automotive industry, the development of autonomous vehicles poses technical risks like software errors or sensor failures, which can cause accidents.

- Data Security Risk: In healthcare, using IoT devices and cloud computing to store patient data increases data security risks. A cyber-attack could lead to data breaches, compromising patient information.

Supporting Journal Article

Muller et al. (2021) supports Kovaitė & Stankevičienė's points. It highlights the benefits of Industry 4.0 technologies but also emphasizes the associated risks, such as data security and technical challenges.

In summary, Industry 4.0 transforms businesses with advanced technologies but also introduces various risks that need careful management. Kovaitė & Stankevičienė (2019) provide a detailed analysis of these risks, supported by other research.

References

- Kovaitė, K. & Stankevičienė, J. (2019) 'Risks of digitalisation of business models', in. Available at: https://doi.org/10.3846/CIBMEE.2019.039.

- Müller, J.M., Buliga, O. & Voigt, K.-I. (2021) 'The role of absorptive capacity and innovation strategy in the design of industry 4.0 business Models - A comparison between SMEs and large enterprises', European Management Journal, 39(3), pp. 333–343.

Re: Initial Post

by [Oi Lam Siu](#) - Sunday, 23 June 2024, 8:22 AM

Dear Aleksandr,

Your post provides a concise and informative overview of Industry 4.0. I particularly appreciate the clarity with which you explain complex concepts like IoT and Big Data, making them easily understandable.

Your choice of real-world examples effectively highlights the potential risks associated with Industry 4.0. The automotive industry's challenges with autonomous vehicle technology and the data security concerns in healthcare paint a realistic picture of the potential downsides.

However, I believe we could enrich the discussion further by exploring the human element within these risks. For instance, while technical failures are a concern with autonomous vehicles, human factors like driver distraction or over-reliance on automation also play a significant role. Similarly, data security risks are often exacerbated by human error or malicious intent.

By delving deeper into the interplay between technological advancements and human behavior, we can foster a more comprehensive understanding of the complexities and challenges inherent in Industry 4.0.

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