

## Summary Post

by Mariam Ibrahim Ismail Hasan Almarzooqi - Sunday, 19 October 2025, 2:56 PM

This week's discussion explored the transition from Industry 4.0 to Industry 5.0, focusing on the aviation sector and the implications of increasing digital reliance. Industry 5.0 builds on the automation and efficiency of Industry 4.0 by introducing a human-centric approach that prioritizes ethics, resilience, and sustainability (Metcalf, 2024). A key case examined was the 2024 CrowdStrike IT failure, which disrupted global systems and significantly impacted Delta Air Lines. Over 7,000 flights were cancelled, affecting 1.3 million passengers and causing widespread disruption in related sectors such as tourism and hospitality (Alzaabi, 2024; Moenck et al., 2025).

This incident highlighted the vulnerabilities of centralized IT infrastructure and the critical need for redundancy, decentralization, and proactive human oversight. Lawsuits and government investigations followed, exposing gaps in risk mitigation and response strategies (Alojaiman, 2023).

The event underscores the importance of Industry 5.0's focus on socio-technical resilience and ethical collaboration. As aviation and other industries continue to digitize, incorporating human oversight into technological systems will be essential for ensuring reliability and maintaining public trust (Abdel-Basset et al., 2025). The case serves as a reminder that technological advancement must be balanced with responsibility and sustainability.

### References:

Abdel-Basset, M., Mohamed, R., & Chang, V. (2025). A multi-criteria decision-making framework to evaluate the impact of Industry 5.0 technologies: Case study, lessons learned, challenges, and future directions. *Information Systems Frontiers*, 27(2), 791–821. <https://doi.org/10.1007/s10796-024-10472-3>

Alojaiman, B. (2023). Technological modernizations in the Industry 5.0 era: A descriptive analysis and future research directions. *Processes*, 11(5), 1318. <https://doi.org/10.3390/pr11051318>

Alzaabi, A. S. (2024). *Optimizing safety in the age of Industry 5.0: Mitigating domino effect*. Retrieved from <https://khazna.ku.ac.ae/ws/portalfiles/portal/27091826/file>

Metcalf, G. S. (2024). *An introduction to Industry 5.0: History, foundations, and futures*. *Industry 4.0 to Industry 5.0*. <https://library.oapen.org/bitstream/handle/20.500.12657/89928/978-981-99-9730-5.pdf?sequence=1#page=20>

Moenck, K., Koch, J., Rath, J. E., Büsch, L., Gierecker, J., Kähler, F., ... & Schüppstuhl, T. (2025). Industry 5.0 in aircraft production and MRO: Challenges and opportunities. *CEAS Aeronautical Journal*, 1–25. <https://doi.org/10.1007/s13272-025-00832-3>

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