



Digest is compiled by Alain Louchez,  
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#### CHRONICLE OF DIGITAL TRANSFORMATION (DT) THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives on DT from around the globe gathered by CDAIT - 50 added for this Digest (3900 entries since April 1, 2022) [https://cdait.gatech.edu/sites/default/files/2025-07/Digital\\_Transformation\\_Through\\_IoT\\_Technologies\\_as-of-end-of-July-2025.pdf](https://cdait.gatech.edu/sites/default/files/2025-07/Digital_Transformation_Through_IoT_Technologies_as-of-end-of-July-2025.pdf)

#### GOVERNANCE & THE INTERNET OF THINGS

Gary Ng, "Industrial IoT Steps Up: Transforming Construction Safety from Ground to Cloud," IoT World Today, July 22, 2025 <https://www.iotworldtoday.com/iiot/industrial-iiot-steps-up-transforming-construction-safety-from-ground-to-cloud>

Louis Bruno, "The Tech-Driven Shift: Redefining Business in the Digital Era," Vocal, July 20, 2025 <https://vocal.media/education/the-tech-driven-shift-redefining-business-in-the-digital-era>

Giacomo "Jack" Lee, "PwC warns against AI threat complacency in telecoms - AI poses trust and security (T&S) issues to telecom security, particularly in light of the rise of IoT and 5G," Sdx Central, July 18, 2025 <https://www.sdxcentral.com/news/pwc-warns-against-ai-threat-complacency-in-telecoms/>

Francesca Boem, "How to Address Growing Security Risks in Cyber-Physical Systems," Infosecurity Magazine, July 18, 2025 <https://www.infosecurity-magazine.com/opinions/security-risks-cyber-physical/>

John Burke, "8 best practices for IoT data management," TechTarget, July 17, 2025 <https://www.techtarget.com/iotagenda/tip/Best-practices-for-IoT-data-management>

Jason Pollock, "[Australia's] Govt launches consumer tech label program for smart devices," IoT Hub, July 15, 2025 <https://www.iothub.com.au/news/govt-launches-consumer-tech-label-program-for-smart-devices-618755>

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## Biweekly IoT News Digest (07/25 - 2)

### IoT News and Market Reports

(Second Half of July 2025)

- Selected IoT-related announcements and featured activities/topics gathered by CDAIT from governments; agencies; consortia; alliances; associations; standards, research and other similar groups around the world – 16 entries: [https://cdait.gatech.edu/sites/default/files/2025-07/IoT\\_News\\_Filings\\_July\\_2025\\_Second\\_Half.pdf](https://cdait.gatech.edu/sites/default/files/2025-07/IoT_News_Filings_July_2025_Second_Half.pdf)
- Sample list of IoT-related market reports gathered by CDAIT – 50 entries: [https://cdait.gatech.edu/sites/default/files/2025-07/IoT\\_Market\\_Reports\\_July\\_2025\\_Second\\_Half.pdf](https://cdait.gatech.edu/sites/default/files/2025-07/IoT_Market_Reports_July_2025_Second_Half.pdf)

### Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Smith, Laury P., Theodore W. Callis, Marvin Joshi, Genaro Soto-Valle, Denitsa Dimitrova, Fernando Pastrana Aguirre, and Manos M. Tentzeris, "A Comprehensive Review of Millimeter-Wave RFID: Retrodirective Topologies, Passive and Semi-Passive Energy Architectures, and the Integration of Advanced Communication Methods," IEEE Journal of Radio Frequency Identification (published July 7, 2025) <https://ieeexplore.ieee.org/abstract/document/11072474>
- Baru, Abdurrahman, Marwan Shagar, Anshi Vajpayee, Jin Lee, Graham J. Moore, and Eunhwa Yang, "Predicting and Enhancing Indoor Environmental Quality in Educational Environments: Latest Trends in AI and Machine Learning Applications," In CIB Conferences, vol. 1, no. 1, p. 93, 2025 <https://docs.lib.purdue.edu/cib-conferences/vol1/iss1/93/>
- Marwan Shagar, Qinghao Zeng, Abdurrahman Baru, Eunhwa Yang, Pardis Pishdad, "Systematic Review of Residential Indoor Environmental Quality Assessment Surveys and the Development of an Exemplary Novel Survey Identifying and Analyzing Tool," Building and Environment, available online July 17, 2025, 113448, ISSN 0360-1323, <https://doi.org/10.1016/j.buildenv.2025.113448>

**OF NOTE:** David Rodriguez, "The Brains at the Edge: What's Next in IoT Hardware Design?" Futurism, July 18, 2025 <https://vocal.media/futurism/the-brains-at-the-edge-what-s-next-in-iot-hardware-design>

### Special Reading Suggestions

- Hina Gupta, "Why manufacturers with multi-plant operations need IoT now more than ever," Manufacturing, July 22, 2025 <https://manufacturing.economictimes.indiatimes.com/news/hi-tech/why-manufacturers-with-multi-plant-operations-need-iiot-now-more-than-ever/122837221>
- World Business Outlook posting, "What Is IoT Development? An Introduction to the Internet of Things for Beginners," World Business Outlook, July 21, 2025 <https://worldbusinessoutlook.com/what-is-iiot-development-an-introduction-to-the-internet-of-things-for-beginners/>
- Charlotte Hathway, "Growing the IoT," Commsbusiness, July 21, 2025 <https://www.commsbusiness.co.uk/content/market-report/growing-the-iiot>
- StudyFinds Analysis reviewed by Steve Fink [Research led by Kou Yoshida (University of St. Andrews)], "Scientists Achieve Record 4 Gbps Internet Using OLED Display Technology," StudyFinds, July 20, 2025 <https://studyfinds.org/scientists-achieve-record-4-gbps-internet-using-oled-display-technology/>
- Urban Matter Staff, "How the Internet of Things (IoT) Will Shape The HVAC Industry in 2025?" July 18, 2025 <https://urbanmatter.com/how-the-internet-of-things-iiot-will-shape-the-hvac-industry-in-2025/>
- Simon Trend, "The importance of uptime and layered IoT security," Frontier Enterprise, July 16, 2025 <https://www.frontier-enterprise.com/the-importance-of-uptime-and-layered-iiot-security/>
- Monica Allevan, "AT&T ups its IoT game with nationwide 5G RedCap coverage," Fierce Network, July 16, 2025 <https://www.fierce-network.com/wireless/att-iiot-5g-redcap-coverage>
- David Newton, "Revolutionizing Power Distribution: The Impact of IoT, AI, and Digitalization," TD World, July 16, 2025 <https://www.tdworld.com/members/back-to-basics/article/55294747/revolutionizing-power-distribution-the-impact-of-iiot-ai-and-digitalization>

### Selected IoT Perspectives IoT and Quantum Computing

"Quantum computing has the potential to redefine IoT, offering unprecedented computational power, enhanced AI, and next-generation security. However, its ability to break encryption poses serious risks to the integrity of IoT systems. As quantum technology advances, IoT developers, security experts, and policymakers must work together to harness its benefits while mitigating its threats. The next decade will be critical in shaping how quantum computing and IoT evolve together, ensuring that our connected world remains secure, efficient, and future-proof." Quantum World.News posting, "The Quantum Impact on IoT: Opportunities, Threats, and the Future of Connected Devices," Quantum World.News, February 5, 2025 <https://quantumworld.news/2025/02/05/the-quantum-impact-on-iiot-opportunities-threats-and-the-future-of-connected-devices/>

- Julis Černiauskas, "Are We Truly Prepared for the Era of Quantum Computing?" Security Boulevard, July 17, 2025 <https://securityboulevard.com/2025/07/are-we-truly-prepared-for-the-era-of-quantum-computing/>
- Avishay Shraga, "How quantum computing will challenge IoT security," EE News Europe, July 10, 2025 <https://www.eenewseurope.com/en/how-quantum-computing-will-challenge-iiot-security-2/>
- Jean-Luc Aufranc, "Preparing IoT Security for the Quantum Computing Era," CNX Software, April 1, 2025 <https://www.cnx-software.com/2025/04/01/preparing-iiot-security-for-the-quantum-computing-era/>
- Softgent posting, "Is Quantum Computing Driving the Next IoT Revolution?" Softgent, January 27, 2025 <https://softgent.com/2025/01/27/is-quantum-computing-driving-the-next-iiot-revolution/>
- HiTechNectar posting, "IoT and Quantum Computing: A Futuristic Convergence!" HiTechNectar, n.d. <https://hitechnectar.com/blogs/iiot-and-quantum-computing-a-futuristic-convergence/>

**Research background info (sample):** hig, P., Kasula, B.Y., Yathiraju, N., Jain, A., Sharma, S., Kautish, S. (first online July 20, 2025), "Quantum-Powered Intelligence: Unleashing the Potential of IoT in the Quantum Computing Era," In: Goyal, S.B., Kumar, V., Islam, S.M.N., Ghai, D. (eds) Quantum Computing, Cyber Security and Cryptography. Springer, Singapore [https://doi.org/10.1007/978-981-96-4948-8\\_14](https://doi.org/10.1007/978-981-96-4948-8_14); Xiong, J., Shen, L., Liu, Y. et al. "Enhancing IoT security in smart grids with quantum-resistant hybrid encryption," Scientific Reports 15, 3 (2025). <https://doi.org/10.1038/s41598-024-84427-8>; Radanliev, Petar, "Cyber diplomacy: defining the opportunities for cybersecurity and risks from Artificial Intelligence, IoT, Blockchains, and Quantum Computing," Journal of Cyber Security Technology 9, no. 1 (2025): 28-78 <https://www.tandfonline.com/doi/full/10.1080/23742917.2024.2312671>; Sonavane, Arnav Shailesh, and Amit Aylani. "Integration of IoT and Quantum Computing: Revolutionizing Manufacturing," In Machine Learning for Environmental Monitoring in Wireless Sensor Networks. pp. 331-358. IGI Global, 2025 <https://www.igi-global.com/chapter/integration-of-iiot-and-quantum-computing/357298>; Tiwari, Aanya, Ahsaan Ahmad Ahanger, Anjali Meena, and Pawan Singh Mehra. "Quantum Edge Cloud Computing: Revolutionizing IoT," In 2025 3rd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT), pp. 626-631. IEEE, 2025 <https://ieeexplore.ieee.org/abstract/document/10986380>; Kefaloukos, Ioannis, Nikolay Tcholtchev, Michail-Alexandros Kourtis, Giorgos Oikonomakis, Emmanouil Eleftherios Rompogiannakis, and Evangelos Markakis, "The Internet of Quantum Things (IoQT)-A New Frontier in Quantum Emulation and Simulation," In Joint National Conference on Cybersecurity 2025. 2025 <https://ceur-ws.org/Vol-3962/paper43.pdf>; Selvarajan, Shitharth, Hariprasad Manoharan, and Adil O. Khadidos, "QCA: Quantum Computational Approach for Internet

<https://cdait.gatech.edu>



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