GT CDAIT
Biweekly IoT News Digest (04/25 – 2)

Digest is compiled by Alain Louchez, CDAIT Co-founder & Director Emeritus

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 (3600 entries since April 1, 2022) https://cdait.gatech.edu/sites/default/files/2025-04/Digital_Transformation_Through_IoT_Technologies_as-of-end-of-april-2025_0.pdf

GOVERNANCE & THE INTERNET OF THINGS

Charlie Mitchell, "[Georgia Tech] **Researchers peg AI 'frontier model' cybersecurity challenges in comments to White House,**" Inside Cybersecurity, April 28, 2025 https://insidecybersecurity.com/daily-news/researchers-peg-ai-frontier-model-cybersecurity-challenges-comments-white-house -- See **Georgia Tech related submission here:** https://files.nitrd.gov/90-fr-9088/AISafetyInitiative-AI-RFI-2025.pdf

Guru Winter, "**Organisations Unprepared For Age of Quantum Computing,**" IT Security Guru, April 28, 2025 https://www.itsecurityguru.org/2025/04/28/quantum-computings-rapid-rise-is-a-risk-to-cybersecurity-and-business-stability-but-organisations-are-unprepared/

Jason Meller, "**Securing Access for AI: The Next Frontier of IAM** [Identity and Access Management]," Dark Reading, April 28, 2025 https://www.darkreading.com/vulnerabilities-threats/securing-access-ai-next-frontier-iam

Bart Vingerhoets, "**How IoT is driving sustainable construction,**" PBC Today, April 24, 2025 https://www.pbctoday.co.uk/news/digital-construction-news/construction-technology-news/how-iot-is-driving-sustainable-construction/150520/

Nikki Davidson, "**Crosswalk Hacks: A Wake-Up Call for Government IoT Security,**" Govtech, April 21, 2025 https://www.govtech.com/security/crosswalk-hacks-a-wake-up-call-for-government-iot-security

Sonny Aragba-Akpore, "**5G, IoT and AI to Boost Global GDP,**" This Day, April 16, 2025 https://www.thisdaylive.com/index.php/2025/04/16/5g-iot-and-ai-to-boost-global-gdp/

IoT News and Market Reports

(Second Half of April 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 – 15 entries: https://cdait.gatech.edu/sites/default/files/2025-04/IoT_News_Filings_April_2025_Second_Half.pdf

- Sample list of IoT-related market reports gathered by CDAIT – 50 entries: https://cdait.gatech.edu/sites/default/files/2025-04/IoT_Market_Reports_April_2025_Second_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Nguyen, Tran Duong, Marwan Shagar, Qinghao Zeng, Aras Maqsoodi, Pardis Pishdad, and Eunhwa Yang, "**Exploring the Feasibility of Utilizing Blockchain in Cloud Computing and AI-Enabled Building Information Modeling for Enhancing Data Exchange in Construction Supply Chain Management,**" World Academy of Science, Engineering and Technology, International Journal of Structural and Construction Engineering, Vol.: 19, No:1, 2025 https://publications.waset.org/10013949/exploring-the-feasibility-of-utilizing-blockchain-in-cloud-computing-and-ai-enabled-building-information-modeling-for-enhancing-data-exchange-in-construction-supply-chain-management

- Kim, Myeongsoo, Tyler Stennett, and Saurabh Sinha, "**Advances in Large Language Model,**" Book, (published March 2025), 350pp https://www.scirp.org/book/detailedinforofabook?bookid=3124&booktypeid=1

- Flores, Alejandro, McIntyre, John, Rubinos, Cathy and Peña Contreras, Jorge Luis, "**Is Artificial Intelligence Essential or Just an Accelerator for Product Innovation in Manufacturing Firms? A Configurational Approach,**" Available at SSRN, published March 3, 2025 https://ssrn.com/abstract=5163011 or http://dx.doi.org/10.2139/ssrn.5163011

OF NOTE: National Cybersecurity Center of Excellence (NCCoE), **"Comment Now on NIST CSWP 42, Towards Automating IoT Security: Implementing Trusted Network-Layer Onboarding, "** [*The NIST National Cybersecurity Center of Excellence (NCCoE) has released NIST Cybersecurity White Paper (CSWP) 42, Towards Automating IoT Security: Implementing Trusted Network-Layer Onboarding, for public comment. The comment period is open until 11:59 PM (EDT) on May 29, 2025,*] Govdelivery, April 16, 2025 https://content.govdelivery.com/accounts/USNIST/bulletins/3db8c2a

Special Reading Suggestions

- Ryan Daws, "**Why the IoT is key to securing ATM networks,**" IoT News, April 25, 2025 https://iottechnews.com/news/why-the-iot-is-key-to-securing-atm-networks/

- Jim Frazer, "**Satellite IoT – SpaceX, Inmarsat, Kineis, Orbcomm Enabling Global Supply Chain Visibility,**" Logistics Viewpoints, April 21, 2025 https://logisticsviewpoints.com/2025/04/21/satellite-iot-enabling-global-supply-chain-visibility/

- Peter Brown, "**4 most vulnerable IoT devices in 2025,**" Electronics 360, April 21, 2025 https://electronics360.globalspec.com/article/22180/4-most-vulnerable-iot-devices-in-2025

- Snehal SD Gade, "**The Future of Smart City Market and IoT in Urban Planning,**" Timestech, April 18, 2025 https://timestech.in/the-future-of-smart-city-market-and-iot-in-urban-planning/

- Partner Content (Verizon), "**Successful ways to adopt smart manufacturing,**" The Manufacturer, April 17, 2025 https://www.themanufacturer.com/articles/successful-ways-to-adopt-smart-manufacturing/

- Catherine Knowles, "**Satellite IoT to transform South Australian resource monitoring,**" IT Brief (Australia), April 17, 2025 https://itbrief.com.au/story/satellite-iot-to-transform-south-australian-resource-monitoring

- Knud Lasse Lueth, "**The evolution of enterprise IoT asset tracking: From locating assets to optimizing operations,**" IoT Analytics, April 16, 2025 https://iot-analytics.com/asset-tracking-evolution-locating-assets-to-optimizing-operations/

- Ashish Dhakan, " **AI and IoT: A Powerful Combination that is Revolutionizing Home Security,**" Timestech, April 15, 2025 https://timestech.in/ai-and-iot-a-powerful-combination-that-is-revolutionizing-home-security/

Selected IoT Perspectives
Internet of Things and Energy Management

"IoT platforms in the energy sector leverage smart, web-connected devices equipped with sensors, processors, and communication hardware to collect and analyze data. This technology transforms traditional operations into smart grids-intelligent networks that connect assets, optimize system performance, and enable real-time decision-making. The result is increased efficiency, productivity, and the development of innovative energy services. The growing adoption of IoT and AI technologies in the energy sector presents promising opportunities for market expansion. Smart grids in residential, commercial, and industrial settings are driving further growth." Allied Market Research press release, "**IoT in Energy Market Growth to Reach $703.52 Billion by 2031: Bosch, Cisco, Google Inc.,**" openPR, April 9, 2025 https://www.openpr.com/news/3962850/iot-in-energy-market-growth-to-reach-703-52-billion-by-2031

- Energy Monitor posting, "**IoT is key to tackling the energy transition challenge across the power industry,**" Energy Monitor, April 25, 2025 https://www.energymonitor.ai/analyst-comment/iot-energy-transition-across-power-industry/?cf-view

- Hina Gupta, "**Smart manufacturing - Unlocking energy efficiency with IoT-based energy monitoring & HVAC automation,**" ET Manufacturing, April 23, 2025 https://manufacturing.economictimes.indiatimes.com/news/hi-tech/smart-manufacturing-unlocking-energy-efficiency-with-iot-based-energy-monitoring-hvac-automation/120550451

- Nayan Sharma, "**Top 10 Use Cases and Benefits of IoT Energy Management Changing the Power Industry,**" Appinventiv, April 3, 2025 https://appinventiv.com/blog/iot-in-energy-management/

- Rose Morrison, "**Smart Construction: How IoT and AI Are Optimizing Renewable Energy Use in Heavy Machinery,**" Renewable Energy Magazine, March 24, 2025 https://www.renewableenergymagazine.com/rose-morrison/smart-construction-how-iot-and-ai-are-20250324

- Zac Amos, "**How IoT Is Driving Grid Modernization in the US,**" IoT for all, March 12, 2025 https://www.iotforall.com/iot-grid-modernization

- Jasmin Jensen, "**Top 10: Uses of IoT in Energy,**" Energy Digital, March 12, 2025 https://energydigital.com/top10/top-10-uses-of-iot-in-energy

Research background info (sample): Magda I. El-Afifi, Bishoy E. Sedhom, Sanjeevikumar Padmanaban, Abdelfattah A. Eadl, "**A review of IoT-enabled smart energy hub systems: Rising, applications, challenges, and future prospects,**" Renewable Energy Focus, Volume 51, October 2024, 100634, ISSN 1755-0084, https://doi.org/10.1016/j.ref.2024.100634; Nikpour, Maryam, Parisa Behvand Yousefi, Hadi Jafarzadeh, Kasra Danesh, Roya Shomali, Saeed Asadi, Ahmad Gholizadeh Lonbar, and Mohsen Ahmadi, "**Intelligent energy management with iot framework in smart cities using intelligent analysis: An application of machine learning methods for complex networks and systems,**" Journal of Network and Computer Applications 235 (2025): 104089 https://www.sciencedirect.com/science/article/abs/pii/S1084804524002662; Kalambe, Shilpa, Bhavna Jain, Pradhnya Morey, Sheetal Ahir, Reeta V. Humane, and Sanjay Jain, "**Smart energy grid enabled by IoT: Potential uses and difficulties,**" In AIP Conference Proceedings, vol. 3253, no. 1. AIP Publishing, 2025 https://pubs.aip.org/aip/acp/article-abstract/3253/1/020006/3332930/Smart-energy-grid-enabled-by-IoT-Potential-uses;; Zhou, Xiaotian, Kimia Honari, Hao Liang, Sara Rouhani, and Scott Dick, "**Blockchain-based Decentralized Stochastic Energy Management in IoT-enabled Smart Grid with Voltage Regulation Coordination,**" IEEE Internet of Things Journal (2025) https://ieeexplore.ieee.org/abstract/document/10963867

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