



CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives from around the globe gathered by CDAIT

(1000 entries since April 1, 2022)
https://cdait.gatech.edu/sites/default/files/2023-02/Digital_Transformation_Through_IoT_Technologies_February_28_2023.pdf

GOVERNANCE & THE INTERNET OF THING

Andrew Campbell and Erica Abshez Moran, "The Omnibus Appropriations Act Grants FDA Formal Authority to Require Cybersecurity Action by Medical Device Manufacturers," JD Supra, February 21, 2023
<https://www.jdsupra.com/legalnews/the-omnibus-appropriations-act-grants-3979873/>

Olerato Carol Manyapelo, "4IR [Fourth Industrial Revolution] technologies can revolutionise the way local government operates," IOL [Independent Online, South Africa], February 20, 2023
<https://www.iol.co.za/news/politics/opinion/4ir-technologies-can-revolutionise-the-way-local-government-operates-39a715c6-15d1-4dd1-8f9d-1c61420bcbce>

Emma Kelly, "Governance in the digital age: challenges and opportunities," Security Boulevard, February 17, 2023
<https://securityboulevard.com/2023/02/governance-in-the-digital-age/>

Orrick, Herrington & Sutcliffe LLP, "The EU Cyber Resilience Act: Five Things You Need To Know," JD Supra, February 16, 2023
<https://www.jdsupra.com/legalnews/the-eu-cyber-resilience-act-five-things-3178255/>

Robert Lemos, "NIST's New Crypto Standard a Step Forward in IoT Security," Dark Reading, February 15, 2023
<https://www.darkreading.com/ics-ot/nists-new-crypto-standard-a-step-forward-in-iot-security>

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Biweekly IoT News Digest (02/23 – 2)

IoT News and Market Reports

(Second Half of February 2023)

- 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 – 13 entries:
https://cdait.gatech.edu/sites/default/files/2023-02/IoT_News_Filings_February_2023_Second_Half.pdf
- Sample list of **IoT-related market reports** gathered by CDAIT – 76 entries:
https://cdait.gatech.edu/sites/default/files/2023-02/IoT_Market_Reports_February_2023_Second_Half.pdf

Georgia Tech IoT-related Info/Research Noticed by CDAIT

- Nafees, Muhammad Nouman, Neetesh Saxena, Alvaro Cardenas, Santiago Grijalva, and Pete Burnap, "**Smart grid cyber-physical situational awareness of complex operational technology attacks: A review**," *ACM Computing Surveys* 55, no. 10 (published February 2, 2023): 1-36
<https://dl.acm.org/doi/abs/10.1145/3565570>
- Ban, Seunghyeob, Yoon Jae Lee, Shinjae Kwon, Yun-Soung Kim, Jae Won Chang, Jong-Hoon Kim, and Woon-Hong Yeo, "**Soft Wireless Headband Bioelectronics and Electrooculography for Persistent Human-Machine Interfaces**," *ACS Applied Electronic Materials* (publication date February 8, 2023)
<https://pubs.acs.org/doi/full/10.1021/acsaem.2c01436>

OF NOTE: The Eclipse Foundation press release, "**The Eclipse Foundation Releases 2022 IoT and Edge Commercial Adoption Survey Results**," ["IoT technologies are being adopted at an accelerated rate"], Globe Newswire, February 21, 2023
<https://www.globenewswire.com/news-release/2023/02/21/2611916/0/en/The-Eclipse-Foundation-Releases-2022-IoT-and-Edge-Commercial-Adoption-Survey-Results.html>; IoT Business News, "**IoT startups received record funding in 2022, new research [from Avnet Abacus] reveals**," IoT Business News, February 16, 2023
<https://iotbusinessnews.com/2023/02/16/28586-iot-startups-received-record-funding-in-2022-new-research-reveals/>

Special Reading Suggestions

- Simran Bagga, "**Building the industrial metaverse with digital twins and industrial IoT**," Gulf Business, February 19, 2023
<https://gulfbusiness.com/building-the-industrial-metaverse/>
- Wienke Giezman, "**LoRaWAN and the IoT Market**," IoT for All, February 16, 2023
<https://www.iotforall.com/podcasts/e263-lorawan-and-the-iot-market>
- Guneet Kaur, "**10 emerging technologies [IoT among them] in computer science that will shape the future**," Cointelegraph, February 16, 2023
<https://cointelegraph.com/news/10-emerging-technologies-in-computer-science-that-will-shape-the-future>
- Azamat Abdoullaev, "**Combining Neuroscience and IoT in healthcare**," BBN Times, February 14, 2023
<https://www.bbntimes.com/science/combining-neuroscience-and-iot-in-healthcare>

Selected IoT Perspectives

The Internet of Things and Patient Rehabilitation

Over the last two years [as of January 2022], the home care IoT market has grown by around 20%, primarily driven by a higher need for telemedicine, remote patient rehabilitation, and timely elderly care delivery. "IoT2Market," **Top Three Emerging IoT Segments with a Bright Future**, January 24, 2022
<https://www.iot2market.com/newsView/top-three-emerging-iot-segments-with-a-bright-future>

- GlobalData, "**IoT innovation: Leading companies in remote health monitoring networks for the medical devices industry**," Medical Device Network, February 17, 2023
<https://www.medicaldevice-network.com/data-insights/innovators-iot-remote-health-monitoring-networks-medical-devices/>
- Scarlett Evans, "**MIT Uses IoT Tech for Unsupervised Physical Therapy**," IoT World Today, October 19, 2022
<https://www.iotworldtoday.com/health-care/mit-uses-iot-tech-for-unsupervised-physical-therapy>
- Nils De Vries, "**How the University of Technology Sydney is transforming stroke rehabilitation with biomedical robots and AWS IoT**," AWS, March 21, 2022
<https://aws.amazon.com/blogs/iot/how-the-university-of-technology-sydney-is-transforming-stroke-rehabilitation-with-biomedical-robots-and-aws-iot/>
- Olivier Bloch and Rashmi Raj, "**Precision Rehabilitation Using the Internet of Medical Things**," 2021, YouTube video (22' 40)
https://www.youtube.com/watch?v=Y-bP5D_Mu68
- Oksana Mikhalechuk, "**Intelligent Rehabilitation: How IoT Facilitates Recovery**," Western PA Healthcare News, May 7, 2020
<https://www.wphealthcarenews.com/intelligent-rehabilitation-how-iot-facilitates-recovery/>

Research background info (sample): Branka Rodić, Vladimir Stevanović, Aleksandra Labus, Dragana Kljajić & Marija Trajkov (online February 6, 2023), "**Adoption Intention of an IoT Based Healthcare Technologies in Rehabilitation Process**," *International Journal of Human-Computer Interaction*, <https://www.tandfonline.com/doi/abs/10.1080/10447318.2023.2175160>; Neves, O. Postolache, J. Monge and J. M. D. Pereira, "**Mixed Reality and IoT for Physical Rehabilitation**," 2022 E-Health and Bioengineering Conference (EHB), Iasi, Romania, 2022, pp. 01-06, doi: 10.1109/EHB55594.2022.9991681. <https://ieeexplore.ieee.org/document/9991681>; J. Lei, X. Huang, H. Huang, H. Chu, J. Wang, and X. Jiang, "**The Internet of things technology in the rehabilitation for the disabled in China: A survey**," *EAI Endorsed Trans IoT*, vol. 8, no. 29, p. e4, May 2022
<https://eudl.eu/pdf/10.4108/eetiot.v8i29.988>; L. C. Câmara Gradim, M. Archanjo José, D. Marinho Cezar da Cruz and R. de Deus Lopes, "**IoT Services and Applications in Rehabilitation: An Interdisciplinary and Meta-Analysis Review**," in *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 28, no. 9, pp. 2043-2052, Sept. 2020, doi: 10.1109/TNSRE.2020.3005616 <https://ieeexplore.ieee.org/document/9127531>; N. Mostofa, K. Fullin, S. Zehtabian, S. Bacanlı, L. Bölöni and D. Turgut, "**IoT-Enabled Smart Mobility Devices for Aging and Rehabilitation**," *ICC 2020 - 2020 IEEE International Conference on Communications (ICC)*, Dublin, Ireland, 2020, pp. 1-6, doi: 10.1109/ICC40277.2020.9149442 <https://ieeexplore.ieee.org/document/9149442>; Camara Gradim LC, Archanjo Jose M, Marinho Cezar da Cruz D, de Deus Lopes R. "**IoT Services and Applications in Rehabilitation: An Interdisciplinary and Meta-Analysis Review**," *IEEE Trans Neural Syst Rehabil Eng*. 2020 Sep;28(9):2043-2052. doi: 10.1109/TNSRE.2020.3005616. Epub 2020 Jun 29. PMID: 32746308 <https://pubmed.ncbi.nlm.nih.gov/32746308/> -- See also **Upcoming International Conferences in Disability and Rehabilitation 2023 & 2024** <https://www.allconferencealert.com/disability-and-rehabilitation.html>