SUSTAINABILITY & GREEN DAM PRACTICES

As the world of Digital Asset Management grows, we must do what we can to mitigate its environmental impact and practice green DAM strategies.[2]

By understanding the relationship between sustainable DAM systems and their impact on our planet, we can lessen the ecological consequences, reduce carbon emissions, and promote a more sustainable digital future.[2]

NEW DAM TECH

With the growth of new technologies also comes a shocking increase in the ***volume of digital assets*** [6]

The reducing lifespans of technologies quickly makes them ***obsolete*** *or in need of upgrades / replacements* [2]

The growth of ***Artificial Intelligence (AI) systems*** *has increased our demand for resources, with adverse effects on the environment* [7]

WHY CARE?

Complete further ***research*** *to expand our knowledge of AI's environmental impact* [7]

Develop frameworks for ***reporting and disclosing*** *AI's environmental impacts* [7]

Establish ***standardized methods for measuring*** *green AI systems* [7]

Prioritize research on energy efficiency and ***reducing the computational complexity & data use*** *of new technologies* [7]

DAM OPTIMIZATION

Optimize the size of larger, rich media assets *to reduce their storage space and storage energy needs* [4]

Ensure well-structured asset ***organization and taxonomy*** [4]

Implement version control to ***eliminate duplicate files*** *to lessen carbon dioxide emissions without increasing storage space* [4]

Employ ***cloud-based storage solutions*** *to decrease energy usage and carbon emissions compared to maintaining on-premises servers* [4]

Effective versioning *allows for a more effective reuse and repurposing system, translating to a more sustainable workflow* [4]

Ensure easy collaboration within the centralized DAM system to eliminate the need for ***unnecessary correspondence*** *that would increase overall carbon footprint* [4]

While AI has its own environmental concerns, its ***predictive and recognition machine-learning capabilities*** *can be embedded into a DAM to improve DAM efficiencies and therefore reduce carbon emissions* [3][5]

RESOURCES & WASTE

The ***constant upgrading and replacement*** *of DAM infrastructures further exacerbates the industry's carbon footprint and the creation of e-waste* [2]

Develop ***sustainable design principles*** *that prioritize resource efficiency, recyclability, and the use of safer materials* [2]

Digitize assets to ***eliminate the need for physical copies****, reducing the carbon emissions from the production and transport of physical materials* [4]

Employ ***Life Cycle Analyses*** *to assess the impact of DAM infrastructures, from its cradle to its grave* [8]

Use ***repair/replace analyses and risk management processes*** *to make decisions on the need for updating DAM infrastructures and the environmental impact of new equipment/technologies* [1]

Invest in the ***research and development of sustainable materials*** *to reduce the need for rare earth materials used in making DAM infrastructures* [2]

ENERGY

Improve energy efficiency through data compression, optimizing routing algorithms, and implementing ***energy-saving practices*** [2]

Use ***Building Environmental Assessment Methods and Life Cycle Analyses*** *to understand DAM's demand on power infrastructures* [8]

Transition to ***renewable energy sources*** *to power digital infrastructures and optimize asset storage & transmission processes* [2]

Implement ***energy-efficient measures*** *like advanced cooling techniques, improving server efficiency, and intelligent power management systems* [2]

WHY CARE?

Digital assets and DAM systems consume ***copious amounts of energy*** *to power their infrastructure* [2]

The majority of the energy used to power DAM interfaces comes from ***non-renewable sources*** *such as coal and oil that emit greenhouse gases* [2]

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[2] Cryptal Global. (2024). Environmental Impact of Digital Assets. Medium. https://medium.com/cryptal-global/environmental-impact-of-digital-assets-c8d01ed48c9f

[3] IBM. (2024). What is Digital Asset Management? https://www.ibm.com/topics/digital-asset-management#:~:text=DAM%20provides%20users%20with%20a,the%20elimination%20of%20redundant%20projects

[4] Lim, M. (2023). Efficient Digital Asset Management and Sustainability. Scaleflex Blog. https://blog.scaleflex.com/efficient-digital-asset-management/#:~:text=Climate%20change%2C%20pollution%2C%20and%20resource,also%20lead%20to%20the%20following

[5] Poghosyan et al. (2024). Optimizing Saas Solutions for Enhanced Sustainability and Predictive Management of Cloud Assets. ACM Digital Library. https://dl.acm.org/doi/10.1145/3639592.3639620

[6] Thangam et al. (2024). Impact of data centers on power consumption, climate change, and Sustainability. IGI Global Scientific Publishing. https://www.igi-global.com/gateway/chapter/340522

[7] United Nations Environment Programme. (2024). Artificial Intelligence (AI) end-to-end: The environmental impact of the full AI lifecycle needs to be comprehensively assessed - issue note. UN Environment Document Repository Home. https://wedocs.unep.org/handle/20.500.11822/46288;jsessionid=99C93C9FC24F1FBD5594EC602AE5571F

[8] Whitehead et al. (2014). Assessing the Environmental Impact of Data Centres Part 2: Building Environmental Assessment Methods and Life Cycle Assessment. Science Direct. https://www.sciencedirect.com/science/article/pii/S0360132314002674?via%3Dihub

Created by **Celeste Gauthier**

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