

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⁾



Complete further **research** to expand our knowledge of AI's environmental impact ⁽⁷⁾



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



RESOURCES & WASTE

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



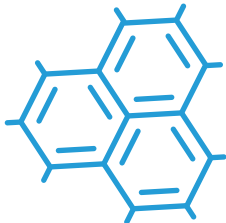
Develop **sustainable design principles** that prioritize resource efficiency, recyclability, and the use of safer materials ⁽²⁾



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⁾



WHY CARE?

Develop frameworks for **reporting and disclosing** AI's environmental impacts ⁽⁷⁾



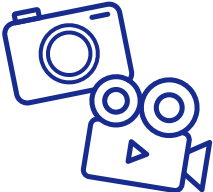
Establish **standardized methods for measuring** green AI systems ⁽⁷⁾



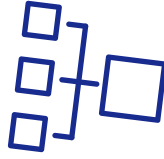
SUSTAINABILITY & GREEN DAM PRACTICES

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⁾

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⁾



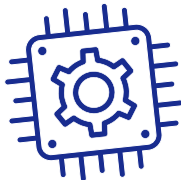
Effective versioning allows for a more effective reuse and repurposing system, translating to a more sustainable workflow ⁽⁴⁾



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⁾



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⁾

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⁾

⁽¹⁾ Abdi, A., & Taghipour, S. (2019). Sustainable Asset Management: A repair-replacement decision model considering environmental impacts, maintenance quality, and risk. Science Direct. <https://www.sciencedirect.com/science/article/pii/S0360835219304127#s0005>

⁽²⁾ Crystal Global. (2024). Environmental Impact of Digital Assets. Medium. <https://medium.com/crystal-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>

