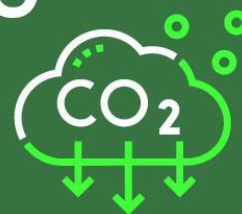**PAN-EUROPEAN CASE STUDY: DECARBONISING THE DIGITAL ADVERTISING SUPPLY CHAIN**

Country

Global

About the Initiative

In 2023, GumGum, the contextual-first technology leader, announced a new partnership with Cedara, the Carbon Intelligence Platform. Using Cedara's software solution, GumGum was able to access carbon measurement, reduction and reporting tools, a carbon compensation marketplace, and the ability to seamlessly sync emissions data with brand and agency partners through the platform. Cedara also served as strategic advisors in GumGum's company-wide decarbonisation and sustainability efforts. Thanks to the partnership GumGum, achieved a significant milestone: a 38% reduction in bidstream carbon emissions. This success was driven by GumGum's partnership with Assertive Yield (AY), an AI-powered traffic shaping solution provider for supply-side platforms (SSPs) and publishers. This collaboration exemplifies how technology can enhance efficiency and sustainability within the digital advertising sector.

Objective

The initiative's goal was to decarbonise and optimise bidstream processes, helping platforms and publishers reduce their environmental footprint without compromising performance. Using Assertive Yield's Traffic Shaping technology, GumGum optimised

demand path efficiency by applying Query Per Second (QPS) thresholds specific to each demand-side platform (DSP) partner, ensuring tailored, effective carbon reduction.

Relevance

By addressing bidstream emissions, this initiative tackles a critical aspect of environmental impact within digital advertising. Reducing carbon output from network transmission directly aligns with sustainability goals, making it a pertinent solution for the industry.

Quantifiable Results

Throughout 2023, GumGum's throttling solution reduced bid requests from **161.2 billion to 99.2 billion,** equivalent to a daily savings of **7 tons of CO_2 emissions**. According to the U.S. EPA, this reduction compares to taking one gas-powered vehicle off the road for 17,903 miles or offsetting the electricity use of 1.4 homes for a year.

Innovation

Leveraging Assertive Yield's real-time Traffic Shaping technology, which refreshes every 20 seconds to adapt to network scaling changes, GumGum achieved reductions in outgoing requests by up to 70% without revenue impact. This pioneering application of adaptive throttling demonstrates innovative use of implementing traffic reduction measures on a broader scale, offering potential industry-wide emissions AI in sustainable digital operations. This initiative promotes long-term sustainability within digital advertising, contributing to a carbon net-zero future. By reducing emissions associated with bidstreams, GumGum and Assertive Yield are setting a standard for sustainable digital media practices.

Scalability

With Assertive Yield's scalable Traffic Shaping solution, both GumGum and other ad platforms can increase reductions as more SSPs and DSPs adopt similar strategies.

Stakeholder Collaboration

This partnership engaged multiple stakeholders, including DSP partners and publishers, fostering a collaborative approach to reducing emissions. Additionally, GumGum utilised Cedara's enterprise software to measure and report emissions accurately, enabling data-driven collaboration.

Sustainability Beyond Decarbonisation

GumGum continues to assess ways the company can be more sustainable and is currently developing their larger decarbonisation and offset strategy. Outside of decarbonisation, GumGum prioritises swag and marketing items that are recycled or are made of sustainable materials to reduce their carbon footprint and waste. The company continues to develop more robust ways to assess our vendors and partners on their commitment to the environment to ensure they have a greener supply chain. GumGum also plans and hosts educational programming for its employees to learn about Cedara, larger sustainability efforts within the industry, and the impact of AI — primarily Gen AI — use on emissions and sustainability. As one of the company's global social impact pillars, GumGum cares deeply about sustainability and playing its role in conserving resources and reducing their carbon emissions.

Continuous Adaptation

The Assertive Yield Traffic Shaping system's frequent synchronisation ensures dynamic adjustment to network conditions, supporting continuous efficiency improvements in bidstream emissions management.

Adherence to Standards

GumGum's emission calculations initially aligned with the SRI/Alliance Digitale (IAB France) digital media emissions measurement framework, ensuring that reporting follows established industry standards and benchmarks. Since the initial release of Global Media Sustainability Framework (GMSF), Cedara has migratedplans to migrate all of its clients to the GMSF standard.

Conclusion

Through this initiative, Cedara, GumGum and Assertive Yield have set a high standard in digital advertising sustainability, demonstrating how AI-driven solutions can enhance performance while significantly reducing carbon emissions. Their efforts contribute to a more environmentally responsible advertising ecosystem, paving the way toward a carbon net-zero future.

Contact

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If you would like to know more about IAB Europe's Pan-European Case Study Programme or how you can participate in our work, please contact Colombe at michaud@iabeurope.eu.