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

iab.europe   **NEXD**

Country
Estonia

About the Initiative
The solution brought forward by Nexd addresses both performance and environmental impact in digital advertising. By reducing emissions, improving engagement, and aligning with global standards, Nexd sets a high bar for sustainable practices in AdTech, making a significant, scalable, and impactful contribution to the industry's climate goals.

Objective
Nexd's innovative file compression technology optimises ad delivery and significantly reduces carbon emissions across the digital advertising supply chain. Using WebGL and GPU, making the loading of the ads faster, Nexd creates highly interactive, visually rich digital ads while reducing file sizes, which in turn lowers energy consumption and CO_2 emissions from content delivery networks (CDNs), programmatic advertising, and end-user devices.

Relevance

Nexd's approach to lowering carbon emissions is based on the **innovative use of WebGL technology** and GPU rendering. This allows for rich, smooth interactive ad experiences

with significantly smaller file sizes than traditional ads. This technology ensures that **performance and engagement remain high** while reducing emissions from both media distribution and creative rendering processes.

Additionally, Nexd's partnership with **Scope3** brings an added layer of transparency, allowing advertisers to use **science-backed emissions data** to monitor, report, and reduce their ad-serving emissions.

Their tool is already used by agencies, publishers, brands and ad networks in 40+ markets across Europe and APAC transforming their programmatic creatives more sustainable. It is a standard practice in their everyday programmatic campaigns to make their existing assets lighter and to reduce the data transfer from each creative, decarbonising their digital advertising strategy.

As a preparation for campaign setup, clients are able to take a look at the Scope3's Ad Formats and compare their emissions to other solutions on the market. To view this data, it is necessary to log in to the Scope3 portal at: https://scope3.com/ad-formats. Please view a detailed one pager describing their role in the supply chain here: NEXD_Sustainability_Onepager.pdf

Quantifiable Results

The measurable impact of Nexd's file compression technology can be shown through several measures:

- **Up to 5x reduction in CO2 emissions** across the supply chain, which includes content delivery and ad serving. Nexd's solution reduces energy consumption across these stages.
- Nexd calculations are based on Scope3 data which acts as a validation in the AdTech emissions-reducing sector. The partnership allows advertisers to transparently track the **before-and-after comparisons** of their carbon footprint in the Nexd dashboard, showcasing real reductions in emissions and offering a real-life comparison.
- For example, the global emissions from **digital display advertising alone account for 3.8 million metric tons** of CO2 annually. By cutting ad sizes by 5x, Nexd technology can significantly reduce this impact.

- Nexd's [file compression technology](#) also applies to existing HTML5 creatives, which reduces the need to make any additional creatives. However, recreating a similar ad creative allows the reduction to be even bigger.
- The [support document](#) shows what fields are available for clients on their platfrom analytics dashboard.
- [Here](#) is an example Volkswagen's campaign statistics and emissions.
- An Asian case study, which shows snapshots from campaigns, with a link to the specific creative in their platform can be seen [here](#).

Innovation

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Ad Format	Vendor	Device	gCO₂PM by Emissions Framework	
3D cube (horizontal) Desktop 160x600 Web	Nexd	PC	12.77 g	Excluding consumer device
			15.98 g	Including consumer device
3D cube (horizontal) Desktop 728x90 Web	Nexd	PC	10.69 g	Excluding consumer device
			12.89 g	Including consumer device
3D cube (horizontal) Desktop 970x250 Web	Nexd	PC	22.73 g	Excluding consumer device
			30.86 g	Including consumer device
3D cube (horizontal) Mobile 300x250 Web	Nexd	Phone	11.34 g	Excluding consumer device
			12.64 g	Including consumer device
3D cube (horizontal) Mobile 300x600 Web	Nexd	Phone	18.48 g	Excluding consumer device
			21.61 g	Including consumer device
3D cube (horizontal) Mobile 320x50 Web	Nexd	Phone	7.32 g	Excluding consumer device
			7.60 g	Including consumer device

Scalability

Nexd's technology is easily scalable because to start using it and reducing the emissions does not need new big investments. A client can start by compressing their existing creatives and reducing the data usage of those. The easy drag-and-drop tool doesn't need complex skills and almost anyone can learn to use it with ease.

Today, their platform is used by several multinational companies such as GroupM, Publicis, News UK, Dentsu, Appier, Digital Matter. Besides those big names, we have smaller clients across 40+ markets as the tool is scalable regardless of the geographical location.

Nexd is currently used in several markets across multinational agency corporations, amount of markets marked after the name of the organisation:

- GroupM: 10
- Publicis: 4
- Dentsu: 12
- Omnicom: 3
- Showheroes Group: 12

Also, the tool can be implemented across display, video, and interactive ads with similar emissions-reducing results. This ensures that advertisers across industries can adopt the solution without friction. The ad formats are available to the users of Mediasmart Mobile platform.
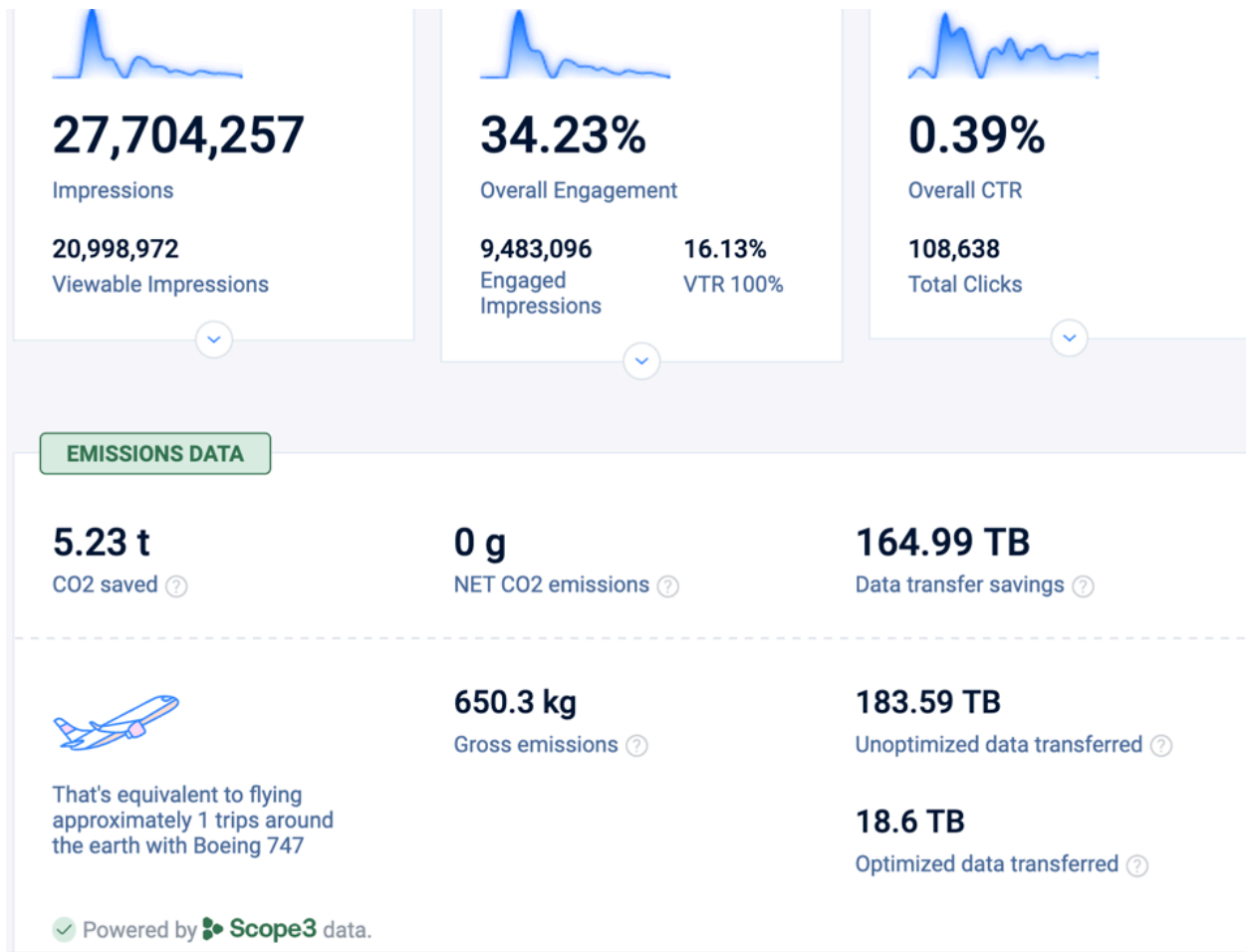
Stakeholder Collaboration

Nexd's emission reduction efforts offer an option to collaborate and lessen carbon emissions for many parties, including:

- Advertisers and agencies looking to meet their carbon-reduction goals and win new clients
- Ad tech platforms seeking sustainable solutions to upgrade their offering
- Publishers who want to offer low-emission creatives to offer to their clients

With clients from each category their tech has allowed them to achieve their goals while reducing their carbon impact. They use Nexd Creative Management platform to set up their campaigns and serve their programmatic ads.

A leading UK publisher saved 16.17 tonnes of CO_2 last year with NEXD—a savings equivalent to driving a diesel car around the Earth three times. Meanwhile, the client has been able to significantly speed up campaign turnaround times and double ad performance through interactivity. Going green doesn't require additional investments; it's possible to achieve wins in both performance and sustainability.

A Telco brand's new launch campaign saved CO_2 equivalent to flying 1x trip around the earth with a Boeing 747.

27,704,257
Impressions

20,998,972
Viewable Impressions

34.23%
Overall Engagement

9,483,096
Engaged Impressions

16.13%
VTR 100%

0.39%
Overall CTR

108,638
Total Clicks

EMISSIONS DATA

5.23 t
CO2 saved ⓘ

0 g
NET CO2 emissions ⓘ

164.99 TB
Data transfer savings ⓘ

That's equivalent to flying approximately 1 trips around the earth with Boeing 747

650.3 kg
Gross emissions ⓘ

183.59 TB
Unoptimized data transferred ⓘ

18.6 TB
Optimized data transferred ⓘ

✓ Powered by ● Scope3 data.

Snapshot of campaign results from a leading UK publisher

The report shows carbon savings across all their clients since 22nd April 2024 when the calculations started using Scope3 data.

Sustainability Beyond Decarbonisation

Nexd sustainability enhancing AdTech does more than just reduces the carbon footprint. Educating their users and wider digital advertising community about the role that various elements and activities within the advertising ecosystem have on creating emissions through content on this blog. The company is encouraging responsible media practices that promote the use of smaller creatives for data efficiency that also have high-performance, reducing the need to serve additional ads.

Here are some of the educational posts shared publicly:

- https://www.nexd.com/blog/nexd-sustainability-measurement-now-powered-by-scope3-data/
- https://www.nexd.com/blog/how-to-incorporate-esg-goals-into-your-brand-campaigns/
- https://www.nexd.com/blog/egs-reporting-for-the-advertising-industry/
- https://www.nexd.com/blog/the-environmental-footprint-of-digital-advertising/
- https://www.nexd.com/blog/how-does-compressing-creatives-lessen-the-co2-footprint/

See dedicated landing page for sharing information on advertising sustainability here.

Continuous Adaptation

Nexd is already the only AdTech provider with unique technology that puts it miles ahead of the competition at the current stage. However, as new standards and methodologies for emissions tracking are developed, Nexd is looking to keep in line with ad **tech innovations**.

Sustainability is a core value for Nexd as a company. They have been focusing on delivering the message of carbon savings from smaller creative files since 2020. As years have passed, it has become a mutual value for the whole advertising industry. Organizations have come together to agree on best practices and standards in saving carbon emissions.

They had their own sustainability calculation in place using a custom formula and public data from respectable organisations. This formula was used between September 2022 to April 2024. Since 22nd of April 2024 they have been using CO_2 emissions saving calculations based on Scope3 data.

- Here's the support document announcing their CO_2 saving feature announcement.
- And here the announcement for their collaboration start with Scope3.

Their ad serving is rated as sustainable by The Green Web Foundation. Nexd partners with Scope3 to validate its CO_2 savings for programmatic creatives. Nexd have their B Corp application in progress and they are working on getting their EcoVadis score.

Adherence to Standards

Nexd submitted a commitment letter for SBTi to ensure they are committed to doing their part in keeping the climate warming up to 1.5°C and are awaiting for it to be processed.

To prove how Nexd's platform contributes to lowering the carbon emissions in the advertising industry according to the Global Media Sustainability Framework (GMSF), they are able to provide the following documents upon request:

- Performance testing Nexd's ad formats with traditional/comparative ad formats to allow for accurate benchmarking
- The data they use to validate from their emission savings from their tool are powered by Scope3
- They implement continuous improvement in reporting to assess the user engagement and carbon savings from campaigns ran on their platform

Nexd are currently not using Cedara's carbon measurement platform to prove their commitment to Socially Responsible Investment (SRI), however, they are considering it for the future.

Conclusion

Nexd's approach addresses both performance and environmental impact in digital advertising. By reducing emissions, improving engagement, and aligning with global standards, Nexd sets a high bar for sustainable practices in AdTech, making a significant, scalable, and impactful contribution to the industry's climate goals.

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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.