2025

SUSTAINABILITY IN OUT-OF-HOME MEDIA:

An Open-Source Industry Guide

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Open Source Framework for Sustainability in OOH Media

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FORWARD

The world faces an unprecedented climate crisis, with global carbon emissions exceeding 41.6 billion tonnes in 2024, up from 40.6 billion tonnes last year according to the World Meteorological Organization.

This relentless carbon output has driven global temperatures to rise by approximately 1.5°C levels, leading to devastating impacts on ecosystems, economies, and communities. The global cost of climate change damage is estimated to be between $1.7 trillion and $3.1 trillion per year by 2050. This includes the cost of damage to infrastructure, property, agriculture, and human health. This cost is expected to increase over time as the impacts of climate change become more severe if urgent action is not taken.

In this context, achieving Net Zero; a state where the amount of greenhouse gases emitted is balanced by the amount removed from the atmosphere—has become a critical goal for organizations worldwide. It is not just an environmental imperative but a business one, as sustainability increasingly influences consumer behaviour, investor decisions, and regulatory frameworks. The figures are both staggering and mindboggling, it simply means that the industry, organizations and consumers alike need to start making sustainable choices before climate change renegades humanity. So how do we move to a carbon-neutral world effectively and swiftly?

In light of this, our journey toward Net Zero demands that we address the largest sources of carbon emissions, which include energy production, transportation, and industrial activities. Advertising it is estimated that the average person comes across 6,000 to 10,000 messages from brands every day.

A single ad is said to generate 70 tons of CO2 equivalent emissions: the same as what 7 people on average release into the atmosphere in a year.

Estimates are not optimistic. The consultancy fifty-five independent market research company indicate that the digital ecosystem is responsible for 3.5% of all greenhouse gas emissions produced. Moreover, it points out that its annual growth is now higher than that of civil aviation.

The out-of-home (OOH) advertising is responsible for a measurable portion of this. This guidebook offers a framework for the OOH sector to embrace sustainability, reduce its carbon footprint, and align with global efforts to combat climate change.

INTRODUCTION TO SUSTAINABILITY IN OOH MEDIA

ADVERTISING INDUSTRY LANDSCAPE AND IMPORTANCE OF SUSTAINABILITY

Sustainability has shifted from the margins and niche sectors to everyday conversations in boardrooms. The 'onus' to be responsible, be it for the companies or consumers has never been greater.

Across the advertising industry, sustainability has become a core focus as businesses adapt to growing environmental concerns and increasing consumer demand for responsible practices.

From print media to digital advertising, mediums are reassessing their ecological footprint, spurred by the urgency of climate change and the need for responsible resource use. Traditional print media, for example, has moved towards more sustainable practices by adopting recycled paper, reducing chemical inks, and implementing eco-friendly distribution processes. Some have folded and resorted to digital media.

Meanwhile, the digital advertising sector is addressing energy-intensive data centres and high-power consumption from online infrastructure by embracing renewable energy and optimizing ad delivery systems to reduce carbon emissions.

Broadcast media has also made strides, with television networks and radio stations cutting down on energy consumption through more efficient production methods, the use of renewable energy in broadcasting facilities, and promoting content that encourages sustainable lifestyles. Even social media platforms have begun implementing measures such as carbon-neutral server farms and supporting environmental causes through advertising spaces.

As consumers become more attuned to climate-conscious brands, these efforts across media channels signal an industry-wide shift. Sustainability is no longer a niche concern but a mainstream expectation. In this environment, advertisers across all platforms must innovate to reduce their carbon footprints while maintaining reach and impact.

OOH MEDIA AND THE SUSTAINABILITY IMPERATIVE

Within this broader landscape, the out-of-home (OOH) advertising sector faces its unique sustainability challenges and opportunities. The traditional OOH medium, with its reliance on static billboards and printed materials, has historically required significant physical resources, from the materials used in signage construction to the energy consumed in lighting.

Similarly, digital OOH (DOOH) has rapidly expanded, offering high-impact, dynamic messaging but with its own set of environmental concerns, primarily linked to energy consumption and electronic waste.

The industry's push for sustainability in OOH is therefore critical, not only to align with evolving standards in other media sectors but to meet the increasing expectations of consumers, governments, and businesses.

While other advertising channels focus on digital infrastructure and supply chain sustainability, OOH must balance these concerns with the production, installation, and energy demands of large-scale physical formats. However, by integrating energy-efficient technologies, using sustainable materials, and implementing greener business practices, the OOH industry has the potential to set an example for how traditional and digital media can coexist in a sustainable future.

Definition of Sustainability in the OOH Media Industry

Many argue that sustainability in the OOH industry is a term that is used very loosely. While there are 17 Sustainable Development Goals assigned by the United Nations, only one has been the most talked about within OOH circles, which is climate change. Meanwhile, the awareness/perception within the industry has been granular, with a specific focus on profit over purpose.

Parameters of Sustainability in OOH Media:

- Resource Efficiency: Using materials and energy in a way that minimizes waste and conserves natural resources.
- Environmental Responsibility: Reducing the ecological footprint of media operations, from production to disposal.
- Social Impact: Contributing positively to communities and aligning with global sustainability goals.
- Economic Viability: Ensuring that sustainable practices also make business sense, promoting long-term profitability and growth.

ENVIRONMENTAL RESPONSIBILITY IN OOH MEDIA

Carbon Emissions and OOH Media
- Detailed Analysis of Emissions Sources in Classic OOH and DOOH
- Carbon Emission Per Impression Reached

Sustainable Content Creation and Distribution
- Energy-Efficient Fonts and Color Palettes for DOOH
- Recycling and Reuse Practices for Classic OOH

Green Technology Integration
- Advancements in LED Panels and E-Ink for Reducing Energy Usage
- Dynamic Power Management Solutions

Case Studies

UNDERSTANDING CARBON EMISSIONS IN OOH MEDIA

Detailed Analysis of Carbon Emissions Sources in Classic OOH Media

Classic Out-of-Home (OOH) media, such as billboards, posters, and other static displays, traditionally rely on materials and processes that have notable carbon footprints. These include:

- Production and Materials: The use of vinyl, paper, and other non-recyclable materials in large quantities results in significant carbon emissions during their production and disposal.

Understanding the Prevalence of Vinyl in OOH

Vinyl is popular in the OOH advertising industry because it is durable, weather-resistant, and cost-effective. It is widely used in billboards, banners, and large-format displays. However, vinyl's environmental impact is substantial. Made from petroleum, it is not biodegradable and can be difficult to recycle. In Australia alone, about 1.2 million square meters (around 500 tonnes) of vinyl are discarded each year.

To address this, the Vinyl Council of Australia has invested in research to improve recycling methods, particularly focusing on separating PVC from polyester for better reprocessing. As noted in the Vinyl Council's 2015-2018 Recycling Strategy 'there is no recycling if there is no end market'. This underscores the need to create viable markets for recycled materials to support successful recycling efforts.

Usage Statistics: Approximately 500,000 tons of vinyl are produced annually for various industries, with a substantial portion utilized in OOH advertising. The industry's reliance on vinyl creates a substantial waste stream, contributing to landfill overflow and environmental degradation.

Media owners are central to the adoption of sustainable practices in vinyl use. By driving initiatives in vinyl recycling and repurposing, they can significantly reduce the environmental impact of OOH advertising.

Embracing Vinyl Recycling and Repurposing: Case Studies and Industry Adoption

Case Study 1: JCDecaux's Vinyl Recycling Program

JCDecaux, one of the largest OOH advertising companies globally, has implemented a vinyl recycling program that has set a benchmark for the industry. By partnering with specialized recycling companies, JCDecaux ensures that used vinyl materials are processed and repurposed into new products.

- Impact: The program has successfully recycled over 75% of its vinyl waste annually, diverting thousands of tons of material from landfills.
- Cost Savings: This initiative has reduced disposal costs by approximately 20%, demonstrating that sustainable practices can also be economically beneficial.

Industry-Wide Impact and Metrics

Adopting vinyl recycling and repurposing practices across the OOH industry can lead to substantial environmental and economic benefits. Metrics from existing programs suggest:

- Waste Reduction: Industry-wide adoption of vinyl recycling could reduce landfill waste by up to 50% annually.
- Carbon Footprint: Repurposing vinyl into new products reduces the carbon footprint associated with producing new materials, potentially cutting emissions by 30% per product cycle.
- Cost Efficiency: Recycling initiatives can lower disposal costs by 15-25%, depending on the scale and implementation strategy.

How Vinyl Recycling and Repurposing Contribute to a Sustainable OOH Industry

Environmental Benefits

Recycling and repurposing vinyl are critical in reducing the environmental impact of the OOH industry. These practices help conserve natural resources, reduce landfill waste, and lower greenhouse gas emissions associated with vinyl production and disposal.

- **Resource Conservation**: Recycling vinyl conserves raw materials and energy, reducing the need for new plastic production.
- **Waste Diversion**: By repurposing vinyl, the industry can divert significant amounts of waste from landfills, contributing to broader sustainability goals.

Economic and Brand Benefits

In addition to environmental advantages, vinyl recycling and repurposing offer economic and branding benefits. Media owners can reduce operational costs through lower disposal fees and create new revenue streams by selling repurposed products. Furthermore, adopting sustainable practices enhances brand reputation and aligns with the growing consumer demand for environmentally responsible companies.

- **Cost Savings**: Implementing recycling programs can lower waste management costs, improving profitability.
- **Brand Equity**: Sustainability initiatives resonate with consumers, particularly younger demographics who prioritize environmental responsibility in their purchasing decisions.

Recommendations for Media Owners

- **Partner with Specialized Recycling Companies**

Media owners should establish partnerships with companies specializing in vinyl recycling. These partnerships can facilitate the proper disposal and repurposing of vinyl materials, ensuring that waste is minimized and sustainability goals are met.

Action Step: Research and engage with local or national recycling companies that offer services tailored to the OOH industry.

- **Implement In-House Recycling Programs**

Develop and implement in-house recycling programs that encourage the collection and recycling of vinyl materials. This can include setting up dedicated recycling bins at sites and training staff on sustainable practices.

Action Step: Launch a pilot program to assess the feasibility and impact of in-house recycling efforts.

- **Explore Opportunities for Repurposing**

Consider collaborating with fashion brands, designers, and other creative industries to repurpose used vinyl into consumer products. This not only reduces waste but also creates new revenue opportunities and enhances brand visibility.

Action Step: Identify potential partners for collaboration on repurposing projects and explore product development ideas.

- **Educate and Advocate**

Media owners should take an active role in educating clients and the broader industry about the benefits of vinyl recycling and repurposing. Advocacy for sustainable practices can help drive industry-wide change and position media owners as leaders in sustainability.

Action Step**:** Develop marketing materials and case studies that highlight successful sustainability initiatives and share them with clients and industry stakeholders.

Vinyl recycling and repurposing offer a practical and impactful way for media owners in the OOH industry to contribute to sustainability. By adopting these practices, media owners can reduce environmental impact, lower costs, and enhance brand reputation. As the industry moves toward greater environmental responsibility, these steps will be crucial in shaping a sustainable future for OOH advertising.

- Transportation and Installation: Transporting large formats from production facilities to installation sites often involves heavy-duty vehicles, contributing to carbon emissions. Additionally, the manual installation process sometimes involves machinery powered by fossil fuels.
- Lighting: Some classic OOH displays are illuminated at night, requiring a constant energy supply. When this energy is sourced from non-renewable resources, it adds to the overall carbon footprint.

Comparing OOH and Digital Media: A Sustainability Perspective

In the evolving landscape of advertising, digital media has grown exponentially, favored for its precise targeting and adaptability to changing consumer trends. However, from a sustainability standpoint, digital advertising poses significant challenges due to the **high energy consumption required to reach individual consumers**. Data centers powering online platforms, real-time ad delivery, and the continuous streaming of content result in a substantial carbon footprint. On average, the energy required for a single online ad impression far exceeds that of a traditional out-of-home (OOH) advertisement.

Programmatic digital advertising, despite its efficiency in targeting, involves multiple intermediaries, including demand-side platforms (DSPs), ad exchanges, and supply-side platforms (SSPs). This complex ecosystem increases the energy intensity of delivering each impression, making programmatic digital advertising one of the least sustainable forms of media.

In contrast, OOH advertising operates on a shared media model, delivering messages to mass audiences without the incremental energy costs of targeting individuals. While OOH does have its own carbon footprint—primarily from the production and maintenance of physical assets, as well as digital billboards—its overall energy usage is distributed across a wider audience. As such, OOH advertising emerges as a more energy-efficient choice compared to digital media, particularly when sustainability is a priority.

Digital Out-of-Home (DOOH) media, while modern and dynamic, presents a different set of challenges concerning carbon emissions:

1. Manufacturing of Digital Displays: The production of digital screens, often involving materials like glass, metals, and rare earth elements, is energy-intensive. The manufacturing process itself generates significant emissions, especially in facilities powered by fossil fuels.
2. Energy Consumption: DOOH screens require continuous power to operate. Depending on the energy source (e.g., coal, gas, or renewables), the carbon footprint can vary. High-definition screens, in particular, consume more energy, adding to the emissions.
3. Lifecycle and Disposal: The lifecycle of digital screens includes maintenance, upgrades, and eventual disposal. Disposal of electronic waste, if not managed properly, contributes to environmental degradation and increases carbon emissions due to inadequate recycling practices.

Carbon - DOOH Vs Programmatic DOOH

Carbon Consumption in DOOH Advertising: As the DOOH industry strives to reduce its environmental impact, the carbon footprint of ad placements has become a key focus. Two common methods, traditional IO (insertion order) placements and programmatic DOOH, differ in their environmental effects.

Traditional IO-based DOOH relies on manual scheduling, where advertisers reserve specific times and locations in advance. While this approach offers control, it can lead to inefficiencies, such as over-delivery (displaying ads more frequently or during off-peak times), which increases energy consumption and carbon emissions.

Programmatic DOOH, on the other hand, uses automated, data-driven ad placements to reach the right audience at the right time, helping to minimize over-delivery and optimize screen energy usage. However, its real-time bidding and data processing requires significant computational resources, leading to a higher carbon footprint from data transactions and platform interactions.

Despite these initial environmental costs, programmatic DOOH has promising pathways to sustainability. Techniques like supply-path optimization (SPO) reduce intermediaries in ad placements, and energy-efficient screens powered by renewable energy sources further improve sustainability. With AI and data analytics advancing, programmatic DOOH can become even more efficient, enabling each ad impression to maximize impact with minimal energy use. For a sustainable future, both traditional and programmatic methods must adopt greener practices to reduce their carbon footprints.

Carbon Emission Per Impression Reached

A unique aspect of carbon measurement in DOOH advertising is the consideration of carbon emissions per impression reached. Unlike other digital advertising formats where an impression typically equates to a single viewer, DOOH ads are seen by multiple people with each play. This means that the true impact of a DOOH ad is spread across a larger audience, calculating carbon emissions more complex and nuanced.

The latest report by KPMG found that Out of Home (OOH) is the most sustainable advertising platform for brands, operating at the lowest power consumption and producing the least amount of carbon emissions when viewing per impression.

The key factor in this calculation is the impression multiplier, which determines the total number of impressions an ad generates during a given time. However, the calculation of the impression multiplier is still evolving, and in many markets, there is no industry-standard multiplier available at an hourly level. This lack of standardization creates challenges for accurately measuring carbon emissions per impression.

By leveraging hourly impression data, advertisers can strategically schedule their DOOH campaigns to run during periods when the carbon emission per impression is lowest. This approach allows for more efficient energy use and ensures that each impression is as environmentally friendly as possible.

SUSTAINABLE PRACTICES AND SOLUTIONS IN CLASSIC OOH MEDIA

Best Practices for Reducing Carbon Emissions

- Optimizing material usage to reduce waste
- Implementing efficient transportation and logistics
- Using energy-efficient lighting systems
- Adopting sustainable printing practices

When it comes to brands, there are different priority levels within them. When it comes to sustainability, there are two parts to this equation. One of which is their commitment to sustainability, and this will be seen regardless of where they venture into it. The second scenario is when they are forced to comply due to regulatory frameworks.

The full report is accessible here

Case Study

Emirates gave its old advertising billboards in South Africa a new lease of life, transforming the PVC Flex material into hundreds of reusable bags. In an effort to spread the message of sustainability and make a positive impact on local communities, the advertising banners collected from across South Africa were given a second life - the heavy-duty, PVC Flex material was upcycled to produce school bags that were donated to students of Emfundisweni Primary School in Alexandra. A total of 517 square meters of PVC Flex material was collected and sent to Johannesburg, where Emirates commissioned Soweto-based entrepreneur Raymond Phiri of Motion Bags to design and create the bags.

Mr. Phiri and his talented team, with support from Just Bags – another local enterprise, helped bring the vision to life, creating 200 school bags and 125 shopping bags.

More on this can be found <u>here.</u>

Guidelines for Eco-Friendly Design and Production of OOH Media

Eco-Friendly Design: In Classic OOH media, implementing eco-friendly designs includes using minimalist designs that require less material and energy to produce. This also includes choosing locations and formats that maximize visibility while reducing the need for lighting and other energy-consuming enhancements.

Sustainable Production: Employing water-based inks, recycled materials, and low-VOC (Volatile Organic Compounds) adhesives are key practices in the production of eco-friendly OOH media. This reduces harmful emissions during the production process and minimizes waste.

Use of Recyclable and Sustainable Materials

Recyclable Materials: Traditional billboards and posters can be made from recyclable or biodegradable materials. For instance, using PVC-free materials for banners or opting for fabric-based alternatives that can be recycled helps reduce environmental impact.

Sustainable Sourcing: Ensuring that materials used in OOH media are sustainably sourced is crucial. This includes using FSC-certified paper and other materials that guarantee responsible forest management and sustainable production practices.

Overview of Cutting-Edge Technologies that Promote Sustainability

Innovations in Classic OOH media include the use of solar-powered lighting for billboards, which reduces reliance on non-renewable energy sources. Additionally, the development of smart, programmable displays that can adjust their brightness based on the time of day or weather conditions helps in reducing energy consumption.

Experts opined that sustainability should not only be limited to the signage but can also be used to offset carbon emissions and cut down on electricity consumption from its surroundings. For instance, a rainwater harvesting method that would supply water to a garden around the billboard or solar panels that would power a few street lights nearby are still valid sustainable initiatives.

Case Studies of Successful Sustainability Initiatives

Various companies have implemented successful sustainability initiatives in Classic OOH media:

- Modular Design Systems: Some brands have introduced modular designs that allow parts of a billboard or poster to be reused or repurposed for different campaigns, reducing waste.
- Community Recycling Programs: Companies have partnered with local communities to recycle old OOH media materials, transforming them into new products or artwork, thereby extending the life cycle of the materials.

MATERIALS AND DESIGN OPTIMIZATION FOR OOH

Materials and Design Efficiency

- Classic OOH: Posters, Billboards, and Lighting
- DOOH: LED, LCD Panels, Reflective LCD, E-Ink Technology
- Use of Recyclable and Sustainable Materials

Environmental Impact of Classic OOH and DOOH Media

Classic OOH media, such as billboards, posters, and transit advertisements, traditionally relied on paper, vinyl, and other non-biodegradable materials. These materials contribute to environmental degradation, from deforestation and energy-intensive production processes to waste management issues. Additionally, the production and installation of these materials often involve substantial carbon emissions.

It is not uncommon to find classic OOH moving to DOOH (Digital Out-of-Home) panels, a move that industry leaders often highlight as a critical step toward sustainability. The shift from traditional, printed billboards to digital displays is driven by several key factors that reduce the environmental impact of OOH advertising. Firstly, digital billboards eliminate the need for vinyl or paper-based posters, which are often discarded after short-term use, contributing to waste. By moving away from these materials, DOOH significantly reduces the environmental burden associated with the production, transportation, and disposal of physical advertising materials.

In addition to reducing material waste, DOOH incorporates energy-efficient technologies such as LED lighting, which consumes far less electricity than older lighting systems. LED displays are more durable, requiring less maintenance and replacement, and they offer greater flexibility, allowing advertisers to update content remotely and instantly. This eliminates the need for physical labor and transportation involved in changing traditional static billboards, further reducing carbon emissions.

Moreover, digital displays can be powered using renewable energy sources like solar or wind, which helps minimize their overall energy footprint. Many advertisers are increasingly adopting such sustainable practices, contributing to the industry's collective effort to lower its carbon impact. Industry leaders argue that this transition not only streamlines operations but also aligns with the global movement towards reducing the environmental footprint of all forms of media.

DOOH makes it possible to reduce material consumption, optimise energy usage, and adopt renewable energy solutions, without it impacting the performance or impact of a campaign. We see media owners adopting this practice all over the world.

Digital Out-of-Home (DOOH) media, while offering more dynamic and targeted advertising opportunities, also poses environmental challenges. The energy consumption of digital screens, the lifecycle of electronic devices, and the need for constant electricity contribute to the carbon footprint of DOOH campaigns. However, DOOH also presents opportunities for more efficient, targeted campaigns that reduce waste and improve resource utilization when managed sustainably.

SUSTAINABLE PRACTICES AND SOLUTIONS FOR DIGITAL OOH MEDIA

Best Practices for Reducing Carbon Emissions

1. Implementing energy-efficient display technologies
2. Optimizing content delivery to reduce power consumption
3. Using smart scheduling to minimize energy use during off-peak hours
4. Adopting renewable energy sources to power DOOH installations

Use of Recyclable and Sustainable Materials

Sustainable Hardware: Digital screens used in OOH should be made from materials that are recyclable and have a lower environmental impact. Manufacturers are increasingly turning to sustainable materials like aluminum and recycled plastics for digital signage.

Guidelines for Eco-Friendly Design and Production of Digital Content

Digital OOH content can be optimized for energy efficiency through minimalist design, which limits complex graphics and animations that require high processing power. By focusing on simplicity, digital displays use less energy, resulting in more sustainable advertising. Additionally, dynamic content that adjusts to environmental factors like time of day or weather can further reduce power usage, as the display brightness and activity are tailored to actual viewing conditions.

Using cloud-based production tools—such as collaborative platforms for video editing or graphic design—can reduce environmental impact, especially when these tools are powered by renewable energy sources. By optimizing file sizes for content, we can also reduce data transfer, cutting down on the associated carbon emissions.

CASE STUDIES OF SUCCESSFUL SUSTAINABILITY INITIATIVES

Coca-Cola's Renewable Billboards:

Coca-Cola has implemented solar-powered digital billboards in various cities, reducing their environmental impact while maintaining high visibility.

Smart Outdoor's Sustainable Campaigns:

This company has implemented energy-efficient digital screens across the UK, using smart technology to optimize display times and minimize power usage, contributing to a reduction in overall carbon emissions.

THE EVOLUTION OF SUSTAINABLE DOOH HARDWARE

Improvements to LED Panels

Recent developments in LED technology have aimed to make these screens more energy-efficient. Companies like Daktronics and others have focused on reducing the power consumption of their existing LED panels. Newer models of LED panels consume significantly less power than those from five years ago, largely due to enhancements in the efficiency of LEDs and the incorporation of smart technology that adjusts brightness based on ambient light conditions. This has reduced energy use by 40% in some cases.

Auxiliary Equipment and Innovations

The integration of auxiliary equipment such as solar panels and the development of new technologies like reflective LCDs have contributed to energy savings. Solar panels, particularly bifacial ones that capture sunlight from both sides, have become more efficient and can now offset a larger portion of the energy consumption of DOOH installations. Reflective LCDs, which use ambient light instead of backlighting, are another innovation that significantly reduces power usage, making them a promising alternative for DOOH displays.

New Technologies like E-Ink

E-Ink technology, traditionally used in e-readers, is now being explored for DOOH applications, particularly in retail settings. E-Ink screens consume power only when the display changes, making them extremely energy-efficient. This technology is gaining traction in retail environments where static or slow-changing images are sufficient, significantly lowering the carbon footprint compared to traditional digital screens.

Sustainable Materials and Manufacturing

Advancements in Sustainable Materials:

- Manufacturers are increasingly incorporating recycled aluminum and bioplastics in the construction of screens and their components.
- OLED technology, where organic compounds are used to create light-emitting layers, is a more sustainable alternative to traditional LED technology, which relies on heavy metals.
- Research into biodegradable substrates for displays is progressing, which could further minimize electronic waste and its associated environmental footprint.

Challenges in Adopting Sustainable Technologies

For media owners considering the adoption of these sustainable technologies, several challenges must be navigated:

- Higher initial costs associated with advanced technologies
- The learning curve involved in integrating new technologies
- Absence of standardized certifications specific to DOOH media
- Potential temporary disruptions in operations as new systems are brought online

Future Hardware Landscape: Energy Consumption Perspectives

Looking ahead, the DOOH hardware landscape is expected to undergo significant transformations aimed at further reducing energy consumption:

- E-Ink technology is poised to play a more prominent role, particularly in environments where static or slow-changing content is sufficient.
- Reflective LCDs are set to become more widespread, especially in applications where ambient light can be harnessed to illuminate the screen.
- Advancements in OLED and other organic materials are likely to dominate the market as sustainability becomes a more critical factor in hardware selection.
- Integration of bifacial solar panels and increasingly efficient energy storage solutions will allow for more installations to operate independently of the grid.

Over the past five years, these combined efforts have resulted in a significant reduction in the energy consumption of DOOH media. Newer LED panels and auxiliary equipment are now capable of reducing energy use by up to 50% compared to older models.

Energy Efficiency

- Power Management Systems in Digital Signage
- Renewable Energy Sources: Solar, Wind, and Green Energy

(Case Study: Malaysia Green Energy for Billboards)

Dynamic Power Management Systems

Dynamic power management systems are playing a critical role in reducing the energy consumption of DOOH displays. These systems leverage real-time data and advanced algorithms to optimize power usage based on environmental factors such as ambient light, temperature, and viewer presence. For instance:

- Toshiba's smart power management technology automatically adjusts screen brightness or turns off displays during low-traffic periods or at night, significantly cutting down on energy use.

- LG's Energy Management System (EMS) optimizes screen power consumption by adjusting brightness and contrast dynamically. This approach not only reduces energy costs but also extends the lifespan of the hardware by preventing the wear and tear associated with continuous high-power operation.

Strategies for Integrating Renewable Energy Sources

- Solar-Powered Billboards: The integration of solar panels to power billboards is a significant step towards reducing the carbon footprint of Classic OOH media. This approach not only cuts down on energy costs but also promotes the use of renewable energy.

SOCIAL IMPACT OF OOH MEDIA

Community Engagement Through OOH
- Leveraging OOH for Social Causes (e.g., Moving Hearts Initiative)
- How OOH Media Supports Positive Social Messaging
- Special Pricing for Environmental and Social Impact Campaigns

Aligning with Global Sustainability Goals
- Supporting ESG-Conscious Advertisers and Initiatives
- Amplifying Messages for Sustainable Brands

Contributing to Local Communities
- Encouraging Responsible Use of Planet Resources Through Media

Certifications & Case Studies
- Social Impact Campaigns Successfully Amplified by OOH Media

Using DOOH to Support Causes
Billboards offer a powerful platform to support causes and charities by giving them valuable exposure through large digital screens. With their ability to capture the attention of wide, diverse audiences in high-traffic areas, billboards can amplify important social messages and humanitarian efforts. By dedicating airtime to these causes, digital billboards can raise awareness, inspire action, and connect people to charities in a highly visible and impactful way, ensuring that vital causes get the recognition and support they need to thrive.

Special Pricing for Environmental and Social Impact Campaigns

Environmental and social impact campaigns can play a vital role in raising awareness and driving action toward global sustainability goals. To encourage more brands to use OOH media for such purposes, media owners can offer special pricing incentives for these campaigns.

- **Discounted Rates for Socially Responsible Campaigns**: Offer reduced rates for brands and organizations that promote sustainability, community engagement, or social causes. These discounts could apply to campaigns advocating for environmental preservation, recycling, climate change awareness, or community-driven initiatives.
- **Tiered Pricing Models**: Develop a pricing structure where campaigns that demonstrate a commitment to sustainability (through the use of green energy, recyclable materials, or low carbon footprints) are eligible for lower rates. For example, companies using renewable energy for their OOH ads could receive a significant discount.
- **Partnership Programs**: Create programs where OOH media owners collaborate with non-profits, environmental NGOs, and social enterprises to provide pro bono or heavily discounted media space. This builds goodwill and shows OOH media's commitment to social responsibility.
- **Green DOOH Initiatives**: For DOOH, offer specialized rates for campaigns that utilize energy-efficient technologies (e.g., LED or e-ink screens). This can be paired with insights showing how energy-efficient campaigns reduce the carbon footprint, further incentivizing advertisers.

Case Study: Moving Hearts can showcase how offering special pricing for social impact campaigns has amplified important messages while also driving business value through increased brand loyalty and positive consumer perception.

Aligning with Global Sustainability Goals

As the world moves towards a more sustainable future, aligning OOH media with global sustainability goals, such as the United Nations' Sustainable Development Goals (SDGs), can position the industry as a responsible and future-focused player.

- **Integration with SDGs**: Highlight how OOH media can contribute to specific SDGs, such as climate action (Goal 13), sustainable cities and communities (Goal 11), and responsible consumption and production (Goal 12).

By aligning campaigns with these goals, OOH media can help advance the global sustainability agenda.

- **Support for Corporate Sustainability Efforts:** Many global brands are already aligning their business strategies with global sustainability goals. OOH media can actively support these companies by offering creative solutions to help them communicate their sustainability initiatives to the public.
- **Collaborative Industry Initiatives:** Collaborate with other media channels, government bodies, and industry organizations to promote sustainability on a larger scale. This could include participating in cross-industry events, forums, or campaigns focused on sustainability.

Example: Create content that demonstrates how the OOH industry is contributing to SDGs, showcasing global brands using OOH to advocate for sustainable practices.

Supporting ESG-Conscious Advertisers and Initiatives

The rising focus on Environmental, Social, and Governance (ESG) factors is driving brands to invest in media that reflects their corporate values. OOH media owners can provide tailored solutions that cater to ESG-conscious advertisers.

- Attracting ESG-Invested Brands: Many companies are looking to highlight their ESG efforts to consumers. OOH media owners can create packages that cater to brands eager to showcase their eco-friendly practices, social impact programs, or transparent governance models.
- Certification and Credibility: Offer certified "green" or "sustainable" media options. For instance, billboards powered by renewable energy or built from recycled materials could carry certifications that ESG-conscious brands value and seek out.
- Curated Media Packages: Develop targeted OOH campaigns for companies committed to ESG principles, including customized placements in high-visibility areas to promote their initiatives.
- Long-Term Partnerships: Build relationships with companies that prioritize ESG, offering long-term media plans that include visibility for key corporate responsibility campaigns.

Example: Showcase a partnership where a media owner worked with an environmentally-conscious brand, creating a long-term OOH campaign that highlighted the brand's ESG achievements.

Amplifying Messages for Sustainable Brands

- OOH media can play a pivotal role in amplifying the messages of brands that prioritize sustainability, helping them reach a larger, more diverse audience and build a reputation as responsible and forward-thinking.
- Maximizing Visibility for Sustainable Products: Leverage high-impact OOH sites to promote sustainable products and services. These can include energy-efficient technologies, eco-friendly consumer goods, or recycling initiatives. Providing prime locations for such campaigns helps boost their visibility and credibility.
- Storytelling Through OOH: Create compelling visual stories that communicate a brand's sustainability efforts. OOH media has the power to make complex environmental issues easy to understand, helping brands communicate their impact in a visually engaging way.
- Interactive and Engaging DOOH Campaigns: Utilize digital OOH (DOOH) technologies to create interactive campaigns that engage passersby. These could include QR codes that link to sustainability reports, live counters showing carbon emissions saved, or dynamic content that reacts to environmental data.

- Collaborations with Influencers and Advocates: Partner with environmental influencers, thought leaders, or sustainability organizations to co-create content that amplifies the brand's commitment to sustainability.

Case Study: Highlight brands that have successfully used OOH to amplify their sustainability messaging, showing how OOH media helped increase awareness and consumer engagement.

Contributing to Local Communities

OOH media has the unique ability to contribute positively to local communities, not just through advertising but by becoming a platform for promoting causes that benefit society.

1. Supporting Local Causes: Offer discounted or free ad space for campaigns that directly benefit local communities. This could include promoting local environmental initiatives, such as clean-up drives, tree planting, or water conservation efforts.

2. Community-Focused Campaigns: Design OOH campaigns that encourage community participation in sustainability efforts. For example, billboards could feature local recycling efforts, encourage energy-saving practices, or highlight community green spaces.

3. Local Business Support: Provide special pricing or media packages for local businesses that engage in sustainable practices, such as using renewable energy or offering eco-friendly products. This strengthens the relationship between media owners and the local economy.

4. Digital Engagement: Use DOOH technology to create hyper-local campaigns that adapt to specific community needs. For example, real-time air quality updates could be displayed on digital billboards, linking back to local environmental actions.

Case Study: Illustrate an instance where an OOH media owner worked with a local government or non-profit to promote environmental responsibility or social causes, benefiting both the community and the advertisers involved.

CERTIFICATIONS

1. Forest Stewardship Council (FSC)

- What it Certifies: Products made from responsibly sourced wood, paper, and other forest products.
- SEA Companies: Some paper and packaging manufacturers, as well as furniture companies in SEA, are FSC certified. Notable companies include APRIL Group (Indonesia) and SCG Packaging (Thailand).

2. Global Recycled Standard (GRS)

- What it Certifies: Products made from recycled materials, ensuring traceability and environmental best practices in the supply chain.
- SEA Companies: Textile and plastic recycling companies in SEA that may be GRS certified include Ramatex Group (Malaysia) and Far Eastern New Century (Taiwan).

3. ISO 14001

- What it Certifies: A framework for environmental management systems that helps companies minimize environmental impact and comply with regulations.
- SEA Companies: Various manufacturing and logistics companies across SEA, such as Petronas (Malaysia), Siam Cement Group (Thailand), and Semiconductor Manufacturing International Corporation (SMIC, Singapore).

4. Energy Star

- What it Certifies: Energy-efficient products, primarily in electronics and appliances.
- SEA Companies: Many electronics and appliance manufacturers in SEA adopt Energy Star ratings, including Panasonic (Malaysia/Thailand) and Samsung Electronics (Vietnam).

5. Cradle to Cradle Certification (C2C)
- What it Certifies: A product certification for the circular economy that emphasizes sustainability in design, manufacturing, and end-of-life disposal.
- SEA Companies: Growing interest in C2C, but some manufacturing and packaging companies in Thailand, Malaysia, and Indonesia may pursue it.

6. Green Label (Singapore)
- What it Certifies: Products that are environmentally friendly, focusing on low toxicity, resource conservation, and recyclability.
- SEA Companies: This is mainly found in companies producing consumer goods and materials, such as Tetra Pak (Singapore) and Keppel Land (a real estate developer).

ENCOURAGING RESPONSIBLE USE OF PLANET RESOURCES THROUGH MEDIA

OOH media can be a powerful tool to promote the responsible use of the planet's resources, both in its operation and the messages it conveys to the public.
- Educational Campaigns on Sustainability: Use OOH media to educate the public about sustainability. This could include campaigns focused on reducing plastic use, conserving energy, or promoting renewable resources.
- Sustainable Media Practices: Lead by example by implementing and promoting sustainable practices in the production and display of OOH media. Media owners can showcase how they are minimizing waste, reducing energy use, and recycling materials.
- Collaborations with Environmental Groups: Partner with environmental organizations to co-create public awareness campaigns about the responsible use of resources, such as water conservation or sustainable farming practices.
- Highlighting Sustainable Innovations: Use OOH media to spotlight innovations in sustainability, such as new recycling technologies, green energy developments, or local sustainability heroes who are making a positive environmental impact.

Case Study: A series of billboards that successfully encouraged community members to participate in a local water-saving initiative, showcasing measurable impacts like reduced water usage.

ECONOMIC VIABILITY OF SUSTAINABLE OOH

Cost Efficiency and Resource Utilization
- Media Inventory Utilization: From 60-70% and the Potential to Increase Revenues
- Resource Costs: P&L Breakdown for Media Owners (Including Rental, Capex, and Operational Costs)
- Sustainability Costs: Examples of Cost-Effective Solutions like LED Lamps vs. Green Energy

New Business Models for Sustainable OOH
- Green DOOH: Attracting Environmentally-Conscious Advertisers (e.g., Pledge 50)
- Special Pricing for Green Companies (e.g., Recycling, Renewable Energy)

Economic Break-Even Analysis
- Estimating the Impact of Sustainable Practices on Revenue and Costs
- Incremental Revenues from Sustainable Products and Services

Case Study: Economic Analysis
- Analyzing Costs and Revenue from Green DOOH in Malaysia

Cost Efficiency and Resource Utilization
Operating costs for a billboard media company combining Classic OOH (Out of Home) and DOOH (Digital Out of Home) generally include key recurring expenses like energy, media production, reusable materials for billboard construction, and ongoing maintenance.

1. Energy Costs: Energy consumption is significant, especially for DOOH, which involves powering digital screens and lighting 24/7. These costs vary depending on the location and type of display (LED or LCD) but are often higher than traditional OOH. Reports suggest energy costs for DOOH can make up a large part of the ongoing operating expenses due to constant screen usage and lighting requirements.
2. Media Production: For Classic OOH, production typically involves printing on vinyl, paper, or other materials, while for DOOH, digital content production (like animations or videos) requires specific software and design teams. The production costs for Classic OOH are material-intensive but more static, whereas DOOH content can be refreshed regularly, incurring continuous creative costs.
3. Reusable Materials for Construction: Incorporating reusable or eco-friendly materials could increase upfront construction costs but reduce long-term material expenses. For instance, using materials like sustainable wood or recycled metals for billboard structures can lower environmental impact. Reports from companies like Clear Channel indicate that adopting reusable materials often ties in with sustainability goals and circular product development strategies, leading to eventual savings in material costs by avoiding one-time use products.
4. Maintenance: Maintenance for Classic OOH involves periodic checks and repairs of physical structures, while DOOH requires both hardware maintenance (e.g., replacing screens or components) and software updates. Additionally, cleaning and ensuring operational efficiency are ongoing maintenance tasks for both formats. The adoption of reusable materials can influence maintenance schedules, potentially reducing the frequency of replacements or repairs, especially if more durable materials are used.

If the company shifts toward using reusable or sustainable materials, initial costs could rise, but over time, these materials might lower recurring construction and disposal costs. Moreover, adopting energy-efficient technologies (e.g., low-power LED displays) can mitigate rising energy expenses in DOOH formats.

For example, listed companies like oOh!media and JCDecaux invest heavily in sustainability, and their operating models show a growing shift toward energy-efficient digital displays and the use of reusable materials to meet sustainability targets. This not only affects costs but also contributes to brand reputation and alignment with environmental regulations. While these initiatives might raise initial capex, long-term operational savings can be realized by reducing waste and energy consumption.

The operating costs of billboard media companies, which include energy, media production, maintenance, and materials (excluding rental, salaries, equipment, and travel), can typically range from 15-25% of revenues. This percentage depends on the blend of Classic OOH (Out-of-Home) and DOOH (Digital Out-of-Home) formats and the degree of digital transformation within the company. Here's a contrast of these costs across different markets and companies:

Operating Cost Patterns in Global OOH Advertising Markets:

Global Players: For large international companies, operational expenses (such as energy, materials, production, and maintenance) typically range from 17-22% of revenues. With an increasing focus on digital billboards and sustainable technologies, these companies are investing more in energy-efficient and reusable materials to support their extensive portfolios.

Developed Markets (e.g., USA, Europe, Australia): In developed markets, operating costs often form around 18-25% of total revenue. The shift toward digital out-of-home (DOOH) advertising and sustainable practices is driving a need for higher energy efficiency and investments in long-lasting, eco-friendly materials.

Developing Markets (e.g., India, Malaysia): In regions with lower energy costs and less extensive digital infrastructure, operational expenses tend to be lower, around 15-20% of revenue. However, as DOOH networks expand in these markets, there is a growing focus on energy-efficient technologies to keep costs manageable.

Impact of Adopting Reusable Materials

If a company adopts reusable materials, the initial capital expenditure may increase, but operating costs related to construction and media production would likely decrease over time. Estimates suggest these costs could drop by 10-15%, leading to long-term savings on maintenance and material procurement.

These figures provide a useful benchmark for understanding how different companies in the OOH and DOOH industries manage their operating costs relative to revenue, particularly as sustainability becomes a more significant factor.

Green DOOH: Attracting Environmentally-Conscious Advertisers (e.g., Pledge 50)

The rise of Green Digital Out-of-Home (DOOH) opens a new frontier for OOH media owners looking to attract environmentally-conscious advertisers. By integrating sustainable practices into DOOH offerings, such as using renewable energy sources, recyclable materials, and energy-efficient technology, OOH companies can appeal to brands committed to reducing their environmental impact.

- **Pledge 50 and Industry-Led Sustainability Initiatives**: Initiatives like Pledge 50—where advertisers commit to reducing 50% of their environmental impact by a certain date—are becoming more common. Media owners can align with these initiatives by ensuring their DOOH platforms meet eco-friendly standards, such as using solar power or reducing energy consumption through LED technology. This alignment makes OOH media a go-to channel for advertisers that want to highlight their green credentials.
- **Energy-Efficient Screens:** By investing in energy-efficient displays (e.g., LED or e-ink technology), DOOH platforms can cut down on power usage significantly while also offering a selling point to advertisers. Positioning Green DOOH as a sustainable alternative to traditional digital advertising screens can draw in businesses that prioritize sustainability.
- **Highlighting Low Carbon Footprints:** Green DOOH campaigns can quantify and showcase their reduced carbon footprints. For example, brands can use billboards to display live data, such as the carbon savings made by using green technologies. This provides transparency and added value to environmentally-conscious brands.
- **Partnerships with Green Brands:** Green DOOH initiatives can forge strategic partnerships with companies that already have robust sustainability goals. This could include renewable energy firms, electric vehicle manufacturers, and other businesses that want to promote sustainability through their advertising efforts.

Case Study: Economic Analysis
- Analyzing Costs and Revenue from Green DOOH in Malaysia

Special Pricing for Green Companies (e.g., Recycling, Renewable Energy)

To incentivize environmentally-friendly practices and attract green companies in industries like recycling, renewable energy, and eco-friendly consumer goods, OOH media owners can offer special pricing tailored to their sustainability goals.

- Pricing Discounts for Sustainable Brands: Introduce a pricing model where companies involved in green initiatives (such as solar energy providers or recycling companies) receive discounts on OOH campaigns. These discounts could be tied to their sustainability practices or the amount of renewable energy they use in their operations.
- Eco-Certified Discounts: Brands that can verify their operations as sustainable (through certifications like LEED, FSC, or ISO 14001) could qualify for additional pricing incentives. This not only helps environmentally-friendly brands access more affordable advertising but also encourages companies to pursue green certifications.
- Volume-Based Discounts for Recycling Initiatives: Offer special rates for companies running large-scale recycling campaigns or circular economy businesses. This could include promoting eco-friendly products, advocating for recycling awareness, or encouraging the reduction of single-use plastics.
- Subsidized Rates for Renewable Energy Projects: Support renewable energy firms, like solar or wind companies, with subsidized pricing for their OOH campaigns. By offering reduced rates for companies that contribute to renewable energy adoption, OOH media can promote environmental responsibility while gaining new business.

Example: A renewable energy company receives a 20% discount for its OOH campaign in exchange for committing to power the digital screens with solar energy.

Economic Break-Even Analysis

Sustainable OOH business models require careful financial planning to understand when investments in green technology will pay off. Economic break-even analysis can help media owners determine when the upfront costs of sustainable practices will be recouped and start contributing to profits.

- Investment in Green Infrastructure: The initial investment in green infrastructure (such as solar-powered billboards, low-energy screens, and recyclable materials) may be significant. Break-even analysis can help determine how long it will take to recover these costs through special pricing for green advertisers and incremental revenue from eco-friendly initiatives.
- Energy Savings Calculations: Implementing energy-efficient technologies (like LED or e-ink screens) can significantly reduce operational costs over time. Break-even analysis can project when energy savings will cover the cost of upgrading traditional billboards to sustainable options.

- Revenue Gains from Green Advertisers: As more companies seek to align their brands with sustainability, the demand for Green DOOH solutions is expected to rise. Factoring in the anticipated increase in revenue from green advertisers helps calculate how long it will take for sustainable practices to become profitable.
- Amortizing Green Investments: By amortizing the costs of green technology over a number of years, OOH media owners can spread out the investment and align it with long-term advertising contracts. This ensures that the break-even point is realistic and achievable without putting too much pressure on short-term finances.

Example: A break-even analysis shows that upgrading to energy-efficient LED billboards will pay off in five years, after which the lower energy costs result in ongoing savings and profitability.

Estimating the Impact of Sustainable Practices on Revenue and Costs

When adopting sustainable practices, OOH media owners need to evaluate both the potential revenue gains and cost implications to ensure the new model is financially viable. Sustainable practices can influence these factors in several ways.

- Revenue Impact from Green Advertisers: As businesses increasingly prioritize sustainability, media owners can expect higher demand from brands that align with green practices. This could lead to increased bookings, long-term advertising contracts, and higher overall revenue.
- Reduced Energy Costs: Implementing energy-efficient systems (such as LED screens powered by renewable energy) can significantly reduce operating costs over time. This reduction in costs directly contributes to higher profit margins once the initial investment is recouped.
- Increased Initial Investment: Sustainable practices often require a higher upfront investment. However, these costs can be balanced against expected savings and incremental revenue from environmentally-conscious brands. Estimating these cost implications can help media owners decide on the appropriate level of investment and pricing models.
- Long-Term Profitability from Sustainability: Sustainable practices tend to yield greater profitability over the long term. By projecting cost savings from reduced energy consumption and increased revenue from green advertisers, media owners can estimate when they will start seeing a positive return on investment.

Example: A digital billboard operator estimates a 15% annual increase in revenue due to demand from eco-conscious brands while reducing operating costs by 30% due to energy-efficient technology.

Incremental Revenues from Sustainable Products and Services

Sustainable OOH models offer the potential for incremental revenues by providing specialized products and services that cater to environmentally-conscious brands. These opportunities include:
- Premium Green Advertising Packages: Offer advertisers premium packages that include placement on solar-powered or energy-efficient digital billboards. Advertisers can pay a premium for the opportunity to showcase their commitment to sustainability through media that aligns with their values.

- Custom Sustainability Campaigns: Develop specialized campaigns that allow brands to promote their sustainability efforts, such as live feeds of their environmental data or interactive features that engage consumers around eco-friendly actions (e.g., real-time energy-saving statistics on DOOH screens).
- Collaborations with ESG Leaders: Partner with companies that are recognized as leaders in ESG (Environmental, Social, and Governance) and offer them exclusive, high-visibility OOH platforms. This could include long-term collaborations or special campaign themes that highlight sustainability milestones.
- Green Certifications for Media Campaigns: Media owners can offer "green certifications" for campaigns run on energy-efficient screens or those utilizing sustainable practices. Brands willing to pay for this additional certification will gain credibility among consumers and stakeholders.
- Revenue from Data-Driven Green Campaigns: Leverage DOOH platforms to collect and provide data on consumer engagement with sustainability-related campaigns. This data can be monetized by offering insights to brands, allowing them to refine their strategies and improve campaign performance.

Example: Media owners can evaluate the financial benefits of sustainable advertising by considering key metrics like energy cost reduction and potential revenue gains from eco-friendly initiatives. A simple framework might look like:

Impact = REC (Reduction in Electricity Costs) + IGG (Incremental Gain from Green Grid)

Costs: Calculate potential savings through REC, focusing on reduced electricity costs from energy-efficient billboards.

Revenue Gains: Assess IGG by exploring the added value generated from eco-conscious features (e.g., sustainability tracking, green certifications) that appeal to brands.

This formula provides a starting point for analyzing the economic viability of sustainable advertising options, enabling media owners to tailor calculations to their specific operational data.

MEASUREMENT AND TECHNOLOGY SOLUTIONS FOR SUSTAINABILITY

Carbon Footprint Measurement Protocols
- Tools and Software for Tracking Carbon Footprints in OOH Media
- Industry-Standard Protocols for Accurate Carbon Reporting

Energy-Efficient Technologies
- Dynamic Power Management Systems in DOOH
- Use of AI and Programmatic Automation to Optimize OOH Campaigns and Reduce Carbon Footprint

Technology for Resource Efficiency
- New Hardware Innovations: E-Ink and Sustainable Manufacturing Processes
- Future Trends in Reducing Energy Consumption for Digital Billboards

Methods for Calculating and Tracking Carbon Footprints

Calculating the carbon footprint of both Classic OOH and DOOH media involves a systematic approach:

- Scope 1, 2, and 3 Emissions: These categories help in identifying direct and indirect emissions.

    Scope 1 includes direct emissions from owned or controlled sources.
    Scope 2 covers indirect emissions from the generation of purchased electricity.
    Scope 3 includes all other indirect emissions in the value chain.
    (e.g., transportation and waste disposal).

- Life Cycle Assessment (LCA): This method assesses the environmental impacts associated with all stages of a product's life, from raw material extraction through materials processing, manufacture, distribution, use, repair, maintenance, and disposal or recycling.
- Carbon Accounting Tools: Tools such as the Greenhouse Gas (GHG) Protocol provide frameworks for businesses to measure and manage their carbon emissions. They offer guidelines on reporting and strategies to reduce the carbon footprint.
- Continuous Monitoring: Implementing real-time monitoring systems can help track the energy consumption of DOOH screens, allowing companies to adjust operations and reduce emissions dynamically.

Industry-Standard Protocols for Accurate Carbon Reporting

As sustainability becomes a core focus, the advertising industry is called to adopt standardized protocols for accurately measuring and reporting carbon emissions from campaigns. Transparent and credible carbon reporting not only allows brands to quantify their environmental impact but also supports their efforts toward carbon neutrality.

Carbon Footprint Calculation: To promote consistency, advertising platforms—particularly Digital Out-of-Home (DOOH)—should follow standardized methods for calculating carbon footprints. This involves accounting for the full lifecycle of a campaign, from production and material sourcing to billboard energy consumption. However, a key challenge is ensuring access to comprehensive data across all phases, which can vary significantly depending on vendors and technology.

- Adherence to Global Standards: Established protocols like the Greenhouse Gas (GHG) Protocol and ISO 14064 offer frameworks for accurate emissions reporting and verification. Aligning with these global standards helps OOH companies meet regulatory requirements and satisfy client expectations. However, compliance with these standards can require significant investment in resources and specialized tools, which may be a barrier for smaller media owners.
- Third-Party Audits for Accountability: Engaging independent auditors to verify carbon emissions strengthens credibility and ensures brands can trust reported data. This level of accountability is especially valued by advertisers seeking eco-friendly media partners. A potential obstacle here is the additional cost and complexity of regular audits, which may challenge smaller operations or those new to sustainable practices.
- Carbon Offset Programs: Beyond accurate reporting, companies can offset their carbon emissions by investing in projects that absorb or reduce CO2, such as reforestation or renewable energy initiatives. Offering carbon-neutral campaigns not only appeals to environmentally conscious clients but can also enhance a company's brand image. However, some critics argue that offset programs should not replace efforts to reduce emissions at the source.

Example: A DOOH network adheres to GHG Protocol standards and partners with an independent environmental auditor to provide verified carbon reports to their clients.

Energy-Efficient Technologies

Energy-efficient technologies play a crucial role in reducing the environmental impact of OOH advertising, especially in the digital space. These technologies not only cut down on energy consumption but also contribute to long-term cost savings for media owners.

- LED Displays: Modern digital billboards increasingly use LED technology due to its lower energy consumption compared to older fluorescent or neon lighting. LED screens are more energy-efficient, have a longer lifespan, and provide brighter, clearer images, reducing the need for frequent replacements and repairs.
- Solar-Powered Billboards: Incorporating solar panels into digital billboard infrastructure is a growing trend, especially in areas with abundant sunlight. Solar-powered billboards drastically reduce reliance on grid electricity, helping companies lower their carbon footprint while demonstrating a commitment to sustainability.
- Battery Storage Systems: Pairing billboards with energy storage systems allows them to store excess solar power for use at night or during cloudy weather, making these installations even more sustainable.
- Energy-Efficient Lighting: For non-digital billboards, switching to LED lighting for illumination or using motion-sensor-based lighting systems can reduce energy consumption significantly by only lighting the billboard when it detects nearby movement.

Example: A city implements energy-efficient digital billboards powered by solar energy, reducing electricity costs by 40% annually while cutting CO_2 emissions.

Dynamic Power Management Systems in DOOH

Dynamic Power Management (DPM) systems can greatly reduce the energy consumption of digital billboards by optimizing how and when power is used. These systems ensure that billboards only consume energy when needed, minimizing waste.

- Automated Brightness Control: One of the key features of DPM systems is the ability to adjust screen brightness based on ambient light conditions. During the day, the screens may require more power to remain visible, but at night, they can automatically dim to save energy without sacrificing clarity.
- Time-Based Power Management: Billboards can be programmed to power down or enter a low-power mode during off-peak hours or when advertising content isn't being displayed, reducing unnecessary energy use.
- Data-Driven Power Allocation: By analyzing traffic patterns and audience engagement data, DPM systems can determine the optimal times for maximum screen brightness and power usage, improving both energy efficiency and advertising effectiveness.

Example: A DOOH network integrates dynamic power management, reducing energy consumption by 30% without compromising the quality of advertisements.

Use of AI and Programmatic Automation to Optimize OOH Campaigns and Reduce Carbon Footprint

Artificial Intelligence (AI) and programmatic automation are revolutionizing the OOH industry by optimizing ad placement and reducing waste. These technologies can also significantly minimize the carbon footprint of OOH campaigns.

- Targeted Ad Delivery: AI algorithms analyze real-time data, such as traffic, weather, and consumer behavior, to determine when and where ads should be displayed. This eliminates the need for 24/7 ad display, cutting down on power consumption and ensuring that the content is only shown when it is most relevant to the target audience.
- Optimizing Campaign Timing: AI tools can predict the optimal times to run campaigns based on audience presence and engagement, reducing unnecessary screen usage during low-traffic periods. This not only saves energy but also improves the effectiveness of campaigns by ensuring ads reach the right audience at the right time.
- Energy-Saving Through Data-Driven Insights: AI-powered analytics can recommend the most energy-efficient ways to execute campaigns by forecasting electricity demand and usage patterns for digital displays. As a result, advertisers and media owners can optimize both their marketing impact and energy consumption.
- Programmatic Ad Buying: Through programmatic systems, ads can be dynamically purchased and delivered with precision, reducing over-delivery or unnecessary repetition. This leads to more efficient use of billboard space, saving energy, and maximizing the return on advertising investment.

Example: A campaign powered by AI reduces the energy use of digital billboards by only running ads during high-traffic periods, cutting energy consumption by 25%.

Technology for Resource Efficiency

Technological innovations are central to improving resource efficiency in the OOH advertising sector. From more durable materials to smarter waste management, these technologies ensure that media owners and advertisers can minimize their environmental impact while maintaining effectiveness.

- Recyclable Materials in Advertising Displays: Using materials that can be easily recycled at the end of their life cycle, such as certain plastics, metals, and composites, helps reduce the environmental burden of billboard production. In addition, many newer advertising panels are designed to be disassembled and recycled more efficiently.
- Water and Waste Management Systems: For billboards in outdoor environments, integrating water harvesting and recycling systems can be an effective way to manage natural resources more sustainably. Additionally, waste management technologies can ensure that advertising materials are reused or recycled at the end of a campaign.
- Durable, Sustainable Materials: Billboards and digital displays made with sustainable, long-lasting materials such as biodegradable plastics or metals sourced from recycled materials can extend the life of advertising infrastructure, reducing the need for frequent replacements.

Example: A DOOH network introduces new advertising panels made from 80% recyclable materials, drastically reducing landfill waste at the end of each campaign.

New Hardware Innovations: E-Ink and Sustainable Manufacturing Processes

E-Ink technology, along with advancements in sustainable manufacturing processes, is pushing the OOH industry toward more eco-friendly solutions.

- E-Ink Displays: E-Ink, a reflective display technology, consumes far less energy than traditional LED displays since it only uses power when changing the content on the screen. These displays are particularly suitable for static, long-term ads where high-energy usage isn't necessary, making them an ideal solution for sustainable OOH platforms.

- Sustainable Manufacturing: Embracing sustainable manufacturing processes that use fewer resources, reduce emissions, and minimize waste is key to reducing the environmental impact of OOH hardware production. Companies can adopt greener production methods, such as using renewable energy in factories, to create more eco-friendly billboards and displays.

- Modular Billboard Components: Designing billboards with modular components can allow for easier repairs and upgrades, extending the lifespan of the hardware and reducing the need for complete replacements. This modular approach is also more resource-efficient and less costly in the long term.

Example: An urban OOH company switches to E-Ink displays for low-power static advertising, reducing electricity usage by 90% compared to traditional LED displays.

Future Trends in Reducing Energy Consumption for Digital Billboards

The future of energy-efficient digital billboards will be shaped by technological advancements and innovative solutions that drive further reductions in energy consumption while maintaining high-quality visuals and audience engagement.

- AI-Driven Energy Optimization: Future digital billboards will leverage AI and machine learning to dynamically adjust power usage in real time based on environmental factors, audience data, and even advertising demand. These systems will be fully automated, allowing for more precise energy management.
- Next-Gen Solar Power Integration: The integration of next-generation solar technology into digital billboards will enable them to store more energy and function independently from the electrical grid. Improved battery technologies will also allow solar-powered billboards to operate even during low sunlight conditions.
- Transparent LED Displays: The use of transparent LED technology offers a way to reduce the energy needed for visual displays while maintaining striking, eye-catching designs. These displays use fewer materials and can be incorporated into existing structures without requiring a dedicated frame or large energy draw.
- Bio-Based LED Displays: Research into bio-based materials is likely to lead to new types of energy-efficient, biodegradable screens, which could eventually replace traditional LED and LCD displays, offering both lower power usage and reduced environmental impact.

Example: Future digital billboards using AI-driven energy systems combined with transparent, low-power LEDs reduce energy consumption by 50% compared to current technologies.
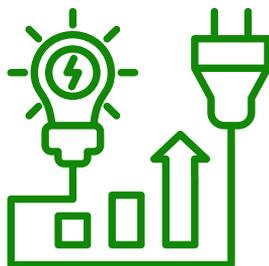
STAKEHOLDER COLLABORATION AND ENGAGEMENT

Roles and Responsibilities of Key Stakeholders
- Media Owners, Agencies, Advertisers, and Industry Associations
- Collaboration Strategies for Promoting Industry-Wide Sustainability

Building a Sustainability-Driven Culture
- Engaging Stakeholders to Align with Global Sustainability Goals
- Attracting ESG-Conscious Advertisers and Partners

Consumer Awareness and Participation
- Encouraging Consumers to Engage with Sustainability in Advertising

Stakeholder Collaboration and Engagement

Sustainability is also a communication challenge. How do we communicate this urgency to save the planet, to also prioritize the planet and not only profit, and the impact of it today and for future generations? The question then is, how do we best disseminate this knowledge and information to be seamlessly consumed by all? How do brands use this to emphasize their brands' positioning?

Roles of Different Stakeholders

Advertisers
- Set sustainability goals for their OOH campaigns.
- Demand eco-friendly OOH solutions from media owners and agencies.
- Allocate budgets for sustainable practices and technologies.

Media Owners
- Invest in energy-efficient and sustainable OOH infrastructure.
- Develop and offer green OOH products and packages.
- Implement waste reduction and recycling programs for OOH materials.

Agencies
- Act as intermediaries, bridging advertisers' sustainability goals with media owners' capabilities.
- Develop expertise in sustainable OOH practices and technologies.
- Provide consultancy on reducing the environmental impact of OOH campaigns.

Industry Associations
- Establish industry-wide sustainability standards and best practices.
- Facilitate knowledge sharing and collaboration among stakeholders.
- Advocate for policies supporting sustainable OOH practices.

Strategies for Fostering Collaboration and Engagement

- Create a Sustainability Task Force: Establish a cross-industry group with representatives from all stakeholder categories to drive sustainability initiatives.
- Organize Regular Sustainability Forums: Host events for stakeholders to share experiences, challenges, and best practices in sustainable OOH.
- Develop Shared Sustainability Metrics: Create a common set of KPIs for measuring and reporting sustainability progress across the industry.
- Implement Collaborative Pilot Projects: Encourage partnerships between stakeholders to test and showcase innovative sustainable OOH solutions.
- Establish a Knowledge Sharing Platform: Create an online resource for stakeholders to access and contribute to sustainability-related information and case studies.

Building a Culture of Sustainability within the Industry

- Education and Training: Provide sustainability workshops and certifications for professionals across the OOH industry.
- Recognition and Awards: Establish industry awards to celebrate outstanding achievements in sustainable OOH practices.
- Integration into Business Processes: Encourage the incorporation of sustainability considerations in all aspects of OOH operations and decision-making.
- Supplier Engagement: Extend sustainability requirements to suppliers and partners throughout the OOH value chain.
- Transparency and Reporting: Promote open communication about sustainability efforts and progress to foster accountability and drive continuous improvement.

Greenwashing is a real concern among stakeholders, be it brands, agencies, or media owners. Even though a billboard might be classified as zero-emitting, the campaign that goes on that screen is advocating twice the amount of carbon emissions through the use of its services and products.

To ensure that brands and agencies do not get into this rut is to ensure that there is reason enough for both media owners and consumers to feel that they are not only benefitting from sustainability but that it has a real impact on surrounding communities.

ROADMAP TO NET-ZERO OOH

Step-by-Step Framework for Reducing Carbon Footprint
- Creating a Sustainability Roadmap for Media Owners and Advertisers
- Curating Products and Packages for Energy-Efficient Sites

Carbon Offsetting and Trading Credits
- Opportunities for Offsetting Carbon Through Carbon Credits

Programmatic Automation
- Using Data and Impressions to Minimize Campaign Carbon Footprint

Monitoring Sustainability Progress
- Tracking Progress at Campaign, Site, and Stakeholder Levels

Products and Packages Curating Energy-Friendly Sites

Achieving net-zero in OOH advertising means balancing the total carbon emissions produced by the industry with an equivalent amount of carbon removed from the atmosphere or offset through sustainable practices. This process involves reducing emissions at every stage of the advertising lifecycle, from content creation to media placement, and investing in carbon offset projects to neutralize remaining emissions. Below is a step-by-step framework for media owners and advertisers to reduce their carbon footprint and work towards a net-zero future:

Offsetting Carbon Through Carbon Trading Credits

Carbon offsetting is an essential strategy for achieving carbon neutrality in the OOH advertising industry. Here's how to effectively use carbon trading credits:

- Understanding Carbon Trading: Carbon trading allows companies to buy and sell carbon credits to offset their emissions. One carbon credit typically represents one ton of carbon dioxide (CO_2) removed from the atmosphere or prevented from being emitted.
- Calculate Your Carbon Footprint: Begin by accurately calculating the carbon footprint of your OOH advertising campaigns. This includes emissions from energy usage, transportation, material production, and other operational activities.
- Identify Offset Opportunities: Once you know your carbon footprint, determine how many carbon credits you need to purchase to offset your emissions. Look for verified carbon offset projects that align with your sustainability goals, such as reforestation, renewable energy projects, or methane capture initiatives.
- Select High-Quality Carbon Credits: Not all carbon credits are equal. Choose credits from projects that are verified by reputable standards, such as the Verified Carbon Standard (VCS), Gold Standard, or Climate Action Reserve. Ensure the projects are additional (would not have happened without the sale of credits), permanent, and have measurable impact.
- Integrate Carbon Offsetting into Campaigns: Incorporate carbon offsetting into your OOH campaigns by purchasing the necessary credits to offset the carbon emissions associated with each campaign. This can be a key selling point for eco-conscious clients.
- Communicate Your Efforts: Transparently communicate your carbon offsetting efforts to clients, stakeholders, and the public. Highlight the impact of the offset projects you support and how they contribute to global carbon reduction efforts.
- Monitor and Report: Regularly monitor the performance of the carbon offset projects you support and report on their impact. Use this data to demonstrate the effectiveness of your carbon offsetting strategy and to make informed decisions about future offsets.
- Continuous Improvement: Carbon offsetting should be part of a broader strategy to reduce emissions. Continuously look for ways to minimize your carbon footprint before relying on offsets. This includes adopting more energy-efficient practices, using sustainable materials, and optimizing logistics.

Products and Packages: Curating Energy-Friendly Sites

Selecting energy-friendly sites is a critical aspect of creating sustainable OOH advertising campaigns. Here's how to curate sites that minimize energy consumption and environmental impact:

- **Site Selection Criteria**: Prioritize energy-efficient sites, such as those that utilize renewable energy sources (solar, wind) or are equipped with energy-saving technologies like LED lighting. Assess the energy profile of potential sites before making a selection.
- **Energy-Efficient Lighting**: Choose sites that use LED lighting or other low-energy alternatives. LED lights consume less energy and have a longer lifespan compared to traditional lighting, reducing both energy costs and maintenance. In the past, billboards relied on floodlights and in some places still do, but now we see a shift towards LED lighting, which is drastically changing the electricity consumption as well as our awareness of the impact these have on the environment.
- **Sustainable Materials**: Opt for sites that use sustainable or recycled materials in their construction and maintenance. This includes using eco-friendly paints, sustainable frames, and recyclable display materials.
- **Proximity to Renewable Energy Sources**: Select sites that are located near or connected to renewable energy grids. Sites powered by solar, wind, or other renewable sources significantly reduce the carbon footprint of your advertising campaign.
- **Smart Site Management**: Use smart technologies to manage energy usage at your sites. Smart lighting systems, for example, can adjust brightness based on time of day or weather conditions, further reducing energy consumption.

- **Site Certification**: Look for sites that have been certified by recognized sustainability standards, such as LEED (Leadership in Energy and Environmental Design) or BREEAM (Building Research Establishment Environmental Assessment Method). These certifications indicate a commitment to sustainability and energy efficiency.
- **Collaborative Partnerships**: Work with site owners and developers who are committed to sustainability. Collaborate to implement energy-saving measures and explore opportunities for joint initiatives that enhance the environmental performance of the sites.

Programmatic Automation and Use of Impressions Data to Reduce Campaign Carbon Footprint

- **Precision Targeting**: Programmatic technology allows for precise targeting of audiences, reducing the need for widespread, blanket campaigns. By focusing on the most relevant audiences, you can reduce the number of ads served and minimize energy consumption.
- **Data-Driven Decision Making**: Use impressions data to analyze the effectiveness of your campaigns. By understanding when and where ads perform best, you can optimize ad delivery, reducing wasted impressions and associated energy use.
- **Dynamic Content Delivery**: Implement dynamic content that changes based on real-time data, such as weather, time of day, or audience demographics. This reduces the need for multiple static ads, cutting down on the resources needed for campaign production and deployment.
- **Optimized Ad Scheduling**: Schedule ads during periods of peak engagement to maximize impact while minimizing energy use. Programmatic tools can help identify optimal times for ad delivery, reducing the need for continuous or redundant displays.
- **Automated Reporting and Analysis**: Automate the reporting and analysis of campaign performance to reduce the resources required for manual tracking. Automated systems can provide real-time insights into campaign effectiveness and environmental impact, allowing for quick adjustments.
- **Integration with Renewable Energy**: Programmatic platforms can be integrated with sites powered by renewable energy, ensuring that the delivery of digital ads is as sustainable as possible. Prioritize these sites in your campaign planning.
- **Client Collaboration**: Work with clients to set sustainability goals for their campaigns. Use programmatic tools to meet these goals by reducing unnecessary impressions and focusing on high-impact placements.
- **Continuous Optimization**: Regularly review impressions data to identify further opportunities for reducing the carbon footprint of your campaigns. Use insights to refine targeting, content delivery, and scheduling strategies.

Monitoring Progress on Carbon Reduction on Campaigns, Sites, and Stakeholder Business

Continuous monitoring of carbon reduction efforts is vital for achieving sustainability goals in the OOH advertising industry. Here's how to effectively monitor progress:

- **Establish Key Metrics**: Define clear metrics for tracking carbon reduction across your campaigns, sites, and stakeholder businesses. These metrics may include energy consumption, carbon emissions, waste production, and the use of sustainable materials.
- **Use Technology for Monitoring**: Implement digital tools and platforms that provide real-time data on energy usage, carbon emissions, and other sustainability metrics. Technologies such as IoT sensors, energy management systems, and carbon accounting software can automate the monitoring process.
- **Regular Reporting**: Set up a regular reporting schedule to track progress against your sustainability goals. Reports should include data on carbon emissions, energy efficiency improvements, and the impact of offsetting efforts. Share these reports with stakeholders to maintain transparency.

- **Benchmarking**: Compare your performance against industry benchmarks and best practices. Benchmarking helps identify areas where you are leading or lagging in sustainability efforts and provides insights for continuous improvement.
- **Stakeholder Engagement**: Engage with stakeholders, including clients, partners, and suppliers, to monitor their sustainability efforts. Encourage them to adopt similar carbon reduction practices and share their progress to create a collective impact.

COMPARING OOH WITH OTHER MEDIA CHANNELS

OOH and Carbon in Context

A 2023 study conducted by KPMG, commissioned by Outsmart, reveals that Out-of-Home (OOH) advertising is one of the most carbon-friendly media options available in the UK. According to the findings, OOH accounts for only 3.3% of the total power consumption in UK advertising, despite representing 3.8% of the advertising spend. More impressively, OOH contributes less than 3.5% of the overall carbon footprint associated with advertising activities in the UK.

This sustainability is largely attributed to the control OOH media owners have over their entire supply chain and operations. Media owners such as Clear Channel, Global, JCDecaux, and Ocean Outdoor have implemented numerous initiatives to minimize their carbon footprints. These include the use of energy-efficient lighting, optimizing logistics routes, and increasing recycling rates. Such practices not only reduce the immediate environmental impact but also position OOH as a leader in sustainable advertising.

The report also highlights the potential of OOH to further reduce its carbon footprint, particularly in the area of Digital Out-of-Home (DOOH) advertising. As the industry evolves, there is a growing focus on maximizing the efficiency of DOOH campaigns, such as by using impression multipliers that accurately reflect the number of viewers per ad play. This approach ensures that carbon emissions are calculated per impression, offering a more accurate measure of an ad's environmental impact.

In comparison to other media channels like online, TV, radio, and print, OOH emerges as the most environmentally responsible choice for advertisers, making it a compelling option for brands looking to reduce their carbon footprints without sacrificing reach or impact.

The study attributed the lower carbon footprint of OOH media to several factors:

Energy Efficiency of Modern Displays:
- Advances in technology have led to the development of more energy-efficient digital screens. These displays use less electricity, especially when compared to older, less efficient technologies used in other forms of media.
- Many digital screens are now powered by renewable energy sources, further reducing their carbon footprint.

Shared Impressions:
- OOH media reaches multiple viewers simultaneously with each ad play, spreading the carbon cost of the advertisement over a larger audience. This results in a lower carbon emission per impression when compared to media like TV or online ads, where impressions are often individual and one-to-one.

Longevity and Durability:

- Traditional OOH formats, such as billboards and posters, have a longer lifespan compared to digital ads that may only be visible for a few seconds online. This longevity reduces the need for frequent content updates and production, leading to lower overall emissions.

Minimal Production and Distribution Costs:

- OOH media typically involves less material production and transportation compared to print media. With fewer physical components required and reduced logistical demands, the carbon emissions associated with production and distribution are significantly lower.

Defending OOH Media's Carbon Efficiency

The findings can be defended by examining the full lifecycle of OOH media. From production to deployment, OOH media, particularly in its digital form, requires less energy-intensive processes than other media types. The shared impression model, where a single ad is viewed by multiple people at once, dramatically reduces the carbon cost per viewer. Additionally, the ongoing advancements in display technology and the increasing use of renewable energy in powering digital screens further solidify OOH media's position as the most carbon-friendly option.

Moreover, the durability of OOH formats means that once an ad is placed, it continues to deliver impressions over an extended period without the need for frequent updates or replacements. This contrasts sharply with digital and print ads, where content often needs to be refreshed, leading to higher energy consumption and waste.

Overall, the combination of energy efficiency, shared impressions, and minimal production demands makes OOH media a leading choice for advertisers committed to reducing their carbon footprint while maintaining effective reach.
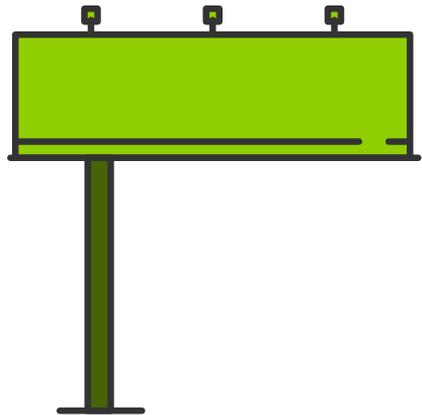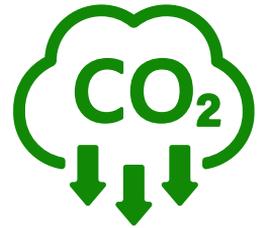
FUTURE TRENDS IN SUSTAINABLE OOH

Emerging Technologies in Sustainable OOH
- Future Hardware and Software Innovations
- Predictions for Energy Consumption and Efficiency in the OOH Industry

Preparing for the Future
- Anticipating Future Challenges and Opportunities in Sustainable OOH

Emerging Trends and Technologies in Sustainable OOH

The Out-of-Home (OOH) media landscape is rapidly evolving, with sustainability taking center stage. Emerging technologies are driving this transformation, making OOH media not just a platform for advertising but a key player in the global push toward environmental responsibility. Digital billboards, powered by renewable energy sources such as solar and wind, are becoming increasingly prevalent. These innovations reduce the carbon footprint of advertising while maintaining high visibility and engagement.

Moreover, programmatic advertising is revolutionizing the way campaigns are delivered. This technology allows advertisers to target audiences more precisely, reducing wastage and ensuring that messages reach the right people at the right time. The use of AI and data analytics further enhances this by optimizing content in real time based on environmental conditions, such as weather or traffic flow, to maximize impact while minimizing resource use.

Predictions for the Future of the Industry

As sustainability becomes a non-negotiable factor in business operations, the OOH industry is likely to see a surge in green certifications and regulations aimed at reducing the environmental impact of advertising. Future OOH media will likely integrate even more with smart city infrastructure, utilizing IoT (Internet of Things) to create dynamic, responsive advertising that is both eco-friendly and highly effective.

We can also expect a shift towards more eco-conscious materials in the production of physical billboards and signage. Recyclable and biodegradable materials will replace traditional ones, making the entire lifecycle of OOH media more sustainable. Additionally, the circular economy will play a larger role, with media owners finding ways to repurpose old signage, contributing to a reduction in waste.

Preparing for Future Challenges and Opportunities

The future of sustainable OOH media presents both challenges and opportunities. One major challenge will be the initial cost of transitioning to more sustainable practices and technologies. However, this is balanced by the long-term savings and brand value gained from being an early adopter of green technologies. Companies that invest in sustainable OOH now will likely reap significant rewards in terms of consumer trust and loyalty as environmental consciousness continues to rise.

To prepare for these future trends, industry players should focus on research and development in sustainable technologies and materials. Collaboration across the industry will be crucial in setting new standards and sharing best practices. Additionally, staying ahead of regulatory changes and consumer expectations will be key to maintaining a competitive edge.

In conclusion, the future of OOH media is bright, with sustainability at its core. Those who embrace these trends will not only contribute to a healthier planet but also position themselves as leaders in a rapidly evolving industry.

APPENDICES

Glossary of Key Terms

- Carbon Footprint: The total greenhouse gas emissions caused directly and indirectly by an individual, organization, event, or product.
- Net-Zero: Achieving a balance between the amount of greenhouse gas emissions produced and the amount removed from the atmosphere.
- Circular Economy: An economic system aimed at eliminating waste and the continual use of resources.
- Green OOH: Out-of-home advertising solutions that prioritize environmental sustainability.
- Programmatic OOH: The use of automated technology to buy, sell, and deliver outdoor advertising.

List of Resources and Tools

1. Carbon Calculators:
   - OAAA Carbon Calculator
   - Ecovadis Sustainability Assessment Platform
2. Sustainability Reporting Frameworks:
   - Global Reporting Initiative (GRI)
   - Sustainability Accounting Standards Board (SASB)
3. Energy Efficiency Tools:
   - Energy Star Portfolio Manager
   - ISO 50001 Energy Management System
4. Life Cycle Assessment Software:
   - SimaPro
   - GaBi Software
5. Sustainable Supply Chain Management:
   - EcoVadis
   - Sedex

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ABOUT THIS DOCUMENT

Moving Hearts, the ESG initiative of Moving Walls, hosted "Media for a Better World: A Roadmap Towards Sustainable OOH Media," an event dedicated to shaping a sustainable future for the Out-Of-Home (OOH) advertising industry. The event brought together industry leaders, brands, agencies, media owners, and associations in a collaborative effort to push the boundaries of sustainability in OOH advertising.

The event, fueled by research commissioned by Moving Walls and conducted by the Asia School of Business (ASB), offered a comprehensive view of the industry's environmental challenges and opportunities. The ASB study laid the groundwork for an open-source roadmap to achieving net-zero in OOH advertising, focusing on accessible, non-disruptive solutions that meet both marketing and environmental goals.

The event also saw the formation of a Regional Review Board, The board comprises representatives from regional associations and the apex body for OOH, who were tasked with steering the industry toward sustainable practices. Together they created this playbook as a guide for the OOH industry.

Powered by:

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