ONEframe
Ad carbon calculation framework

3rd Edition - APRIL 2025

Better understand and choose

Methods for calculating the carbon footprint of its communication campaigns

union des marques

Why do we need harmonized methods to calculate the carbon footprint of communication campaigns?

Climate change is happening and is now a reality. The 6th IPPC Synthesis Report published March 20th, 2023, notes its acceleration and its devastating effects on the environment and societies around the world. Decisions made today will define the degradation level of the world for current and future generations. As a consequence, each and every one of us has to strive to mitigate climate change and implement concrete and reliable solutions to control and reduce CO_2 emissions.

This also applies to the communication sector, like any other human activity, which means it has to embark on a more sober trajectory, even if its direct carbon impact is not as high as in other industries. And it can also explore other strong levers to be part of the sustainable transition (see our previous guide: Representation of Eco-responsible Behaviors in Communication).

A large number of companies (brands, creative agencies, media, advertising agencies, productions, unions, etc.) have understood this and have set in motion by creating different tools and frameworks to manage the carbon trajectories of communication tools.

In April 2023, Union des marques has taken a big step publishing the first meta-framework to guide advertisers and brands, share expertise and offer a common basis for a transparent and reliable calculation of multimedia campaign carbon footprint. This work was accomplished in collaboration with the entire inter-professional organization as well as with the expertise of BL Evolution. Resulting from a truly collective effort, it offers a calculation method that feeds – without replacing them – calculators developed internally or by private operators (agencies, consulting firms, SAAS platforms, etc.). It is used to ensure the relevance of applied frameworks. Its objective is to make the data analysis more reliable and to pilot efficiently the emission reduction trajectory, from creation to broadcasting to end of life.

This is an evolving approach, and we are particularly happy to deliver today a new version, updated in 2025 and enriched with the works of the SRP for the press, as well as the updated ADMTV framework for TV. You will also find in it new examples and usage cases.

Of course, this approach cannot be limited to the French territory, and it is part of international projects led by AdNetZero. Union des marques delivered Oneframe as a basis for GMSF projects and is active in the Steering committee that implements it.

Other bricks will be added to Oneframe during the second half of 2025, in order to evolve according to the different methods and to integrate new marketing levers.

Thanks again to all contributors who made it possible.

Jean-Luc Chetrit
General Manager
Union des marques

Sophie Roosen
Brand & Impact Director
Union des marques

Summary

Why the Oneframe initiative?

Method for calculating the carbon footprint of communication campaigns for brands.

Introduction

CALCULATION METHOD FOR THE CARBON FOOTPRINT OF COMMUNICATION CAMPAIGNS FOR BRANDS

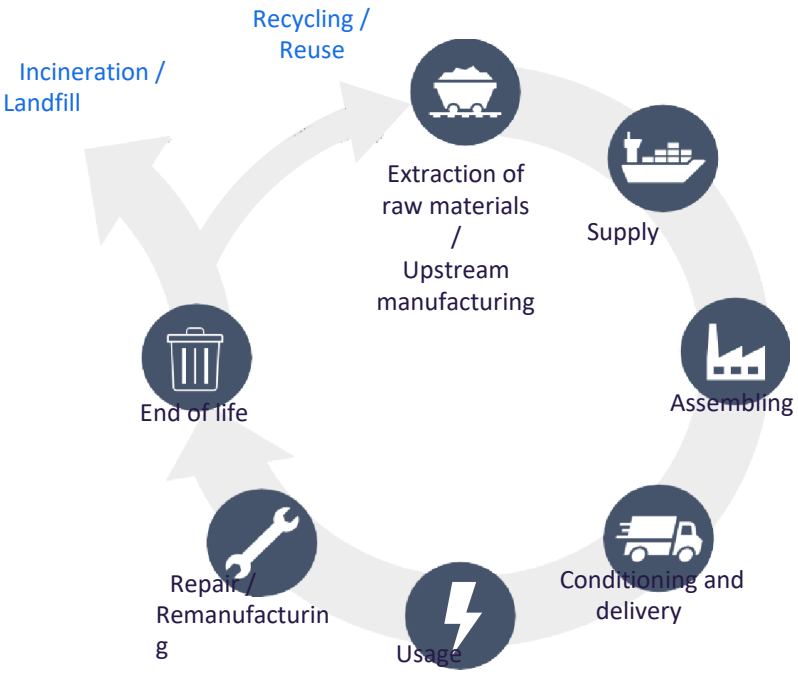
1 Scope, Calculation Method, and Bias

Measurement Indicator of the Carbon Footprint:

The best-known greenhouse gases (GHG) are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and the fluorinated gases, each having a different Global Warming Potential (GWP). This GWP is measured based on the carbon dioxide potential, which allows us to obtain a common unit: the CO2 equivalent (CO2e). The carbon footprint of communication campaigns is calculated based on this measurement.

A distinction is made between:

- **Direct GHG emissions**, i.e. within the direct scope of the studied entity – company, individual, territory – or product.
- **Indirect GHG emissions**, i.e. all emissions generated by the activities of the studied entity – company, individual, territory – or product. This is usually where most emissions are found. It is therefore essential to include the entire product or service lifecycle in the calculation.



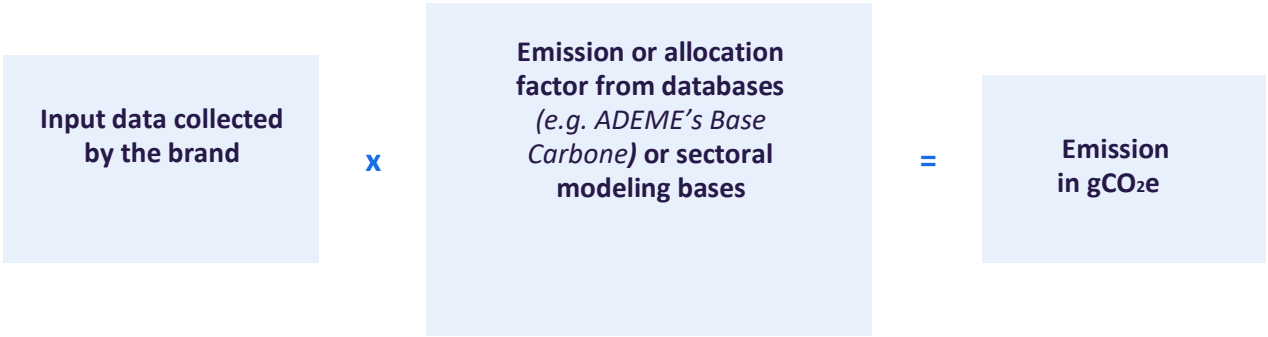
Definition of Key Terms:

- **Functional unit**: a measurement unit that will be used for comparisons. Example: Display of an advertisement to 1000 contacts in a campaign.
- **Operational scope**: Activities included in the calculation regarding the functional unit. A measurement excluding part of this scope could appear more virtuous than a more exhaustive one. It is therefore essential to consider identical scopes so that they can be compared.
- **Scope covering the equipment lifecycle:** Although activities may be considered, they can only be partially included if only a part of their impacts is modeled. This is the case for manufacturing, assembling and distribution phases of display terminals, which are not systematically included in currently available calculators.

- **Input data and assumptions:** Input data are critical for the calculation. As the carbon footprint assessment is based on the analysis of material and energy flows, these input data must be based as much as possible on physical data to obtain a more precise measurement. The use of monetary data – as a last resort – introduces a lot of inaccuracies. When no input data is available, assumptions can be made. The purpose of a framework is notably to be able to harmonize a certain number of assumptions.
- **Allocation factors:** These factors are intermediate assumptions made to allocate a part of the impacts when the equipment included in the scope is shared. Example: Since a computer server can be used for several digital uses and, in particular, for several communication campaigns, it is not possible to allocate (impute) all impacts of a computer server to the studied campaign, and an allocation factor will be used to define the percentage to be considered. The allocation factor can be recommended in PCRs (product category rules) or sectoral frameworks. This is the case for TV or Digital, for instance. The choice of allocation factors can explain some differences in results obtained with currently available calculators.
- **Emission factors:** Input data are then multiplied by emission factors in order to be converted into carbon equivalent.
- **Database:** This is generally the emission factor data source, i.e. ADEME's Base Empreinte (Footprint Database) for France. To harmonize the measurements, it is also essential to document intermediate assumptions such as allocation factors. Documentation can be inhomogeneous or evolve quickly for specific topics (e.g. network energy efficiency).

Calculation Approaches:

- **Organizational approach:** These methods provide the direct and indirect carbon footprints of the organization activities over a year. For example: Bilan Carbone®, GHG Protocol® or Organisation Environmental Footprint (OEF – multi-criteria but makes it possible to calculate the carbon equivalent).
- **Product/service approach:** These methods provide the carbon footprint of a product or a service, for a functional unit defining this service. For example: Empreinte Carbone Produit (ECP – equivalent to the lifecycle analysis focused on carbon impact only), Product Environmental Footprint (PEF – multi-criteria, but makes it possible to calculate the carbon equivalent). In the field of advertising, for example, the impact of a communication campaign roll-out is measured over three months.

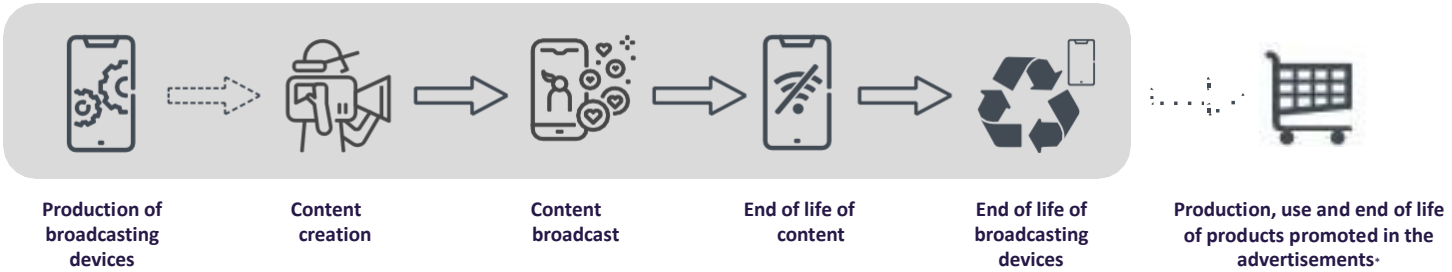


Scope

The Oneframe initiative version that is introduced today covers seven communication media. This corpus is intended to be enriched in future versions.

Legend:
TV
Digital media
Print advertising
Outdoor advertising
Roadshows
Radio
Fairs and events

Calculations are based on the lifecycle of a communication campaign as defined by the ADEME:



Key steps to calculate the carbon balance of communications campaigns:

1 / **Choose the calculation method** according to the communication channel

2 / **Decide** who will perform the calculation

3 / **Collect** data

4 / **Take stock of the** campaign based on the results

· This step is not included in the campaign carbon impact calculation.

Methods to Establish a Carbon Balance:

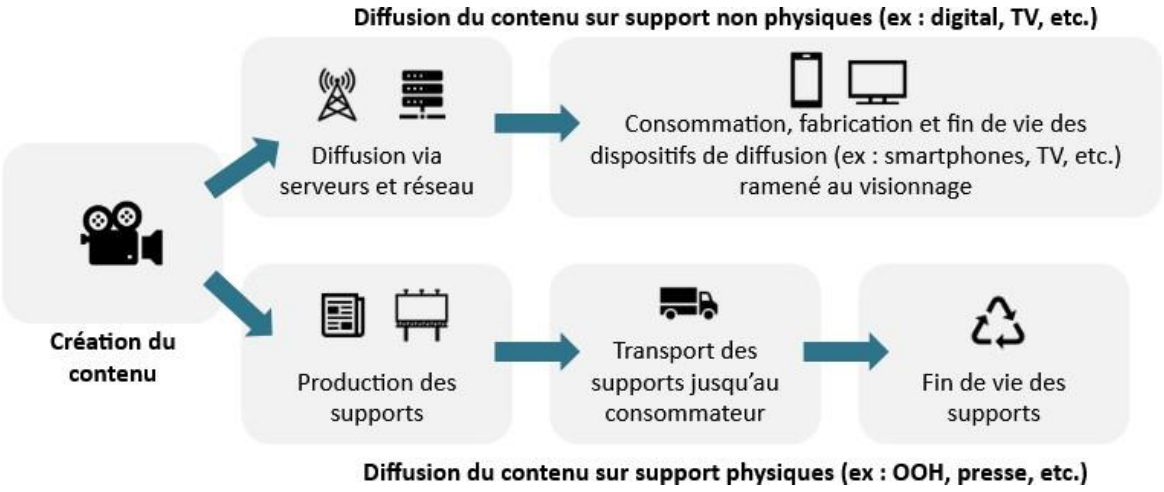
Three work options have been identified: They allow brands to identify the right tools and relevant players that could help them, in order to calculate the carbon footprint of each communication channel and aggregate the results to get an overall assessment.

	Option 1 Creation of an ad hoc calculation tool developed internally, and covering all communication channels	**Option 2** Involvement of a third party (e.g. agency, firm, SAAS platform, etc.) that has already developed its own calculation tool	**Option 3** Use of reference calculation tools developed for each channel, and aggregation of the results
Main issues for the brand	**Be able to develop a calculation method in line with existing frameworks.** For this, the brand must have the skills in-house to develop and maintain the tool.	**Ensure that the third-party tool is in line with the scopes and methods of the existing frameworks for each communication channel**, that it allows a unified process for all communication channels, and that it is able to challenge its partner.	**Confirm with each media** that it is able to collect data on each channel, and to organize and consolidate results in a report.
Benefits	**An internal calculator that is modular according to data available** on the brand side and to completed actions. The teams are autonomous.	**No development required, since the tool *a priori* already exists** (e.g. tools developed by agencies).	**Data are collected and processed directly by the requested media.** No tool development required since the impact calculation tools *a priori* already exist for each media (tools developed by the inter-professional association, or directly by the media).
Disadvantages	**Development of a comprehensive tool.** If the brand has no expertise internally, it will need some external support.	**A calculation where result granularity has to be validated according to the tool.** Data are collected and processed by the partner owning the tool. The expertise remains outsourced.	**Since different entities are in charge of the calculations, the brand must use a dashboard** to aggregate impact results as well as business indicators related to the campaign. Granularity may vary depending on the tools that are used.

2 Panorama and Analysis of Calculation Methods from Production to Broadcast

Scope to be Included in Impact Calculations:

For each campaign, the impact calculation must consider all broadcasting channels and media, from the creation of contents to their broadcast.
The diagram below details differences to be considered between physical and non-physical broadcasting media. The way each step is modeled based on the existing frameworks is detailed thereafter.



1 / Content Creation

Content creation refers to all production steps occurring upstream of the campaign roll-out: audio, video, image content. A campaign can include multiple contents resulting from different creative processes. Conversely, the same content can be used for several successive campaigns and broadcasted on several types of media.

Impacts to be measured:

- Transport of equipment and persons (media, teams)
- Consumption of energy and consumables (food, makeup, decors, etc.)
- Use of services and equipment
- Waste production

Studied framework: Ecoprod Carbon'Clap v2

Characteristics of the framework:

- This framework has been **developed by** the Ecoprod association, led by Workflowers with many professionals from the audiovisual, film and advertising production sector. Created in 2012, **it has been updated in 2022 and released March 9th, 2023**. It was recently approved by the CNC.
- Carbon'Clap includes a methodology detailing calculations carried out according to the input data and an open-source measurement tool allowing to assess GHG emissions generated by the content creation.
- This tool is available free of charge and accessible upon registration. A more detailed and customized dashboard is also available as a complement in the member area, for members of the association only. It provides a real-time monitoring assessment.

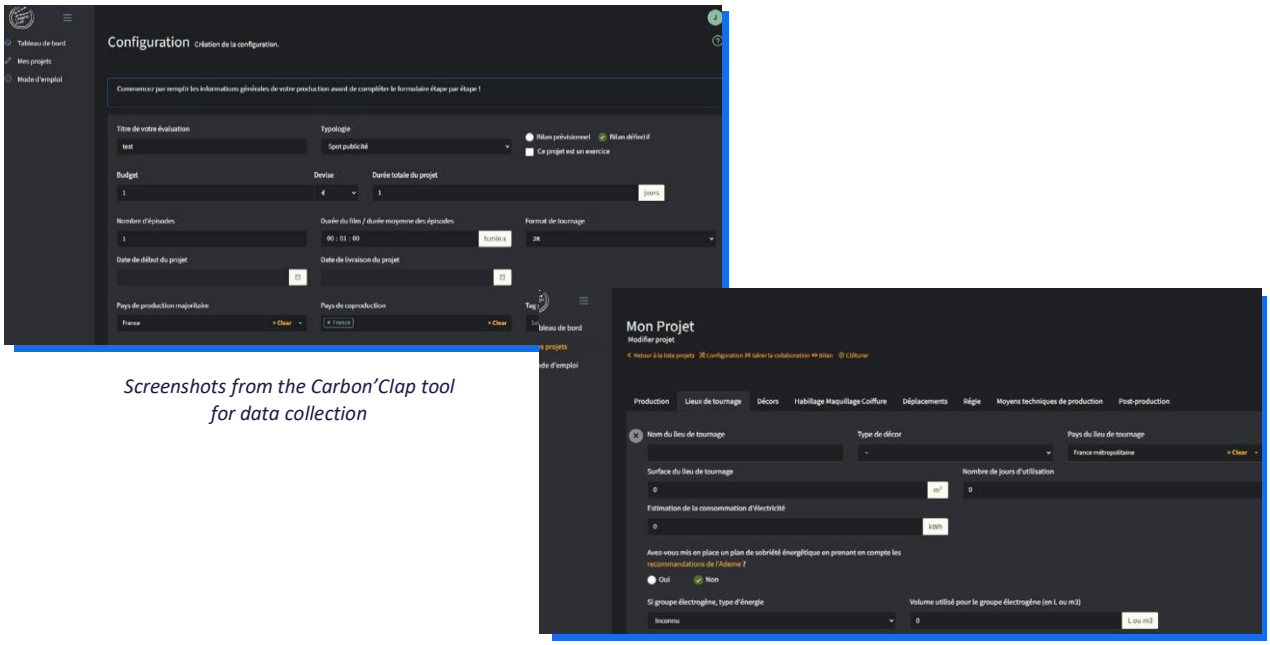
Scope covered by the framework:

- This framework includes the GHG emissions of an **audiovisual, cinematographic and advertising production** that are associated with its manufacturing, from the preparation phase to the ready-to-broadcast status. The animated production will be released in fall 2023.
- Emissions covered in the content creation process are as follows:

- It makes it possible to make a provisional balance upstream of production as well as a final balance with proven data.

	Option 1 Creation of an ad hoc calculation tool developed internally	**Option 2** Use of a partner tool	**Option 3** Use of tools developed by each channel
Choice of the calculation tool	**Use the results** as input data for the Carbon'Clap measurement tool via an API in the calculator developed in-house.	**Partner tool** (to be defined, for example tool developed by the advertiser's agency), including compatibility of scope, modeling and input data to be validated	**Carbon'Clap tool** used by the production teams, to which the brand accesses as a collaborator
Emission or allocation factors to be used	**Carbon'Clap factors and models** from ADEME databases and sectoral data (modeled by Ecoprod)	**Factors and models of the partner tool** (robustness of the sources to be validated)	**Factors and Carbon'Clap models** from ADEME databases and sectoral data (modeled by Ecoprod)
Input data to be integrated	**Production characteristics:** Type of content, length, budget, number of days, country of shooting, production, and post-production, etc.), **Physical activity data** (km traveled by the teams, energy consumed to power the technical means, filming and production locations, produced waste, consumables used) **Monetary data from the production cost estimate** for remaining data (services, insurance, film sets, clothing, hairdressing, makeup, equipment rental and other services) **Campaign recurrence:** Number of campaigns using the content		
Who does organize the input data collection?	Brand's production teams	Partner	Production teams

Where are the main input data collected?	**Production cost estimates and filming activity data available** from the production teams
Output indicators to be monitored by the brand	**Impact of content creation for a campaign** ($kgCO_2ecrea$) – It is interesting to monitor this indicator for each campaign, i.e. by dividing the impact of content production by the number of campaigns for which it will be reused without reshooting. **Impact of content creation per contact reached** by the campaign ($kgCO_2ecrea$/contacts) – The concept of contact depends on each media and will be defined later I**mpact of content creation per € spent** on this creation ($kgCO_2ecrea$/k€) **Impact of content creation per minute of produced content** ($kgCO_2ecrea$/min) **Impact of content creation per day of shooting** ($kgCO_2ecrea$/days)



Screenshots from the Carbon'Clap tool for data collection

APPLICATION EXAMPLE

Brand X carries out a multimedia advertising campaign entitled XX. It has been broadcasted on different radios (NRJ, Sky Rock, Radio Nova, France Inter, etc.) for one year. The advertisement length is 5 seconds (audio provided in the required format by radios). The communication team wishes to calculate the carbon footprint of the radio/audio broadcast of this campaign. The Oneframe methodology thus suggests to turn to the BDR framework. As it is not possible to have direct access to this framework, radio media will have to be requested. Moreover, since a media agency Y has been commissioned for this campaign, this agency holds most of the information defining this campaign: broadcast country, audience, broadcasting radio, etc.

Putting into practice the calculation of the carbon footprint of content creation
Use of a partner tool (option 2)

<table>
<tr><td>Input data to be integrated</td><td>As most input data (travels related to filming, purchases, etc.) are integrated in the agency's calculation tool to which the brand refers, the input data to be collected is only the CO_2 impact of content creation, directly sent by its interlocutor.

To carry out some checks and identify reduction levers, it is interesting to collect details of this measurement provided by item (at least main items).</td><td>Value examples:
• Total CO_2e for filming and production: 20.1 tCO_2e
• Breakdown by emission category:

<table><tr><td></td><td>Emissions (tCO_2e)</td><td>Emissions (%)</td></tr><tr><td>Travel related to filming</td><td>15.2</td><td>76%</td></tr><tr><td>Energy (generators)</td><td>3.1</td><td>15%</td></tr><tr><td>Other items</td><td>1.8</td><td>9%</td></tr><tr><td>TOTAL</td><td>20.1</td><td>100%</td></tr></table></td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="2">Models and allocations are implemented directly in the calculator of the requested agency. The brand must first confirm that these calculations have been carried out on a calculator that complies with the Ecoprod/Carbon'Clap framework.</td></tr>
<tr><td>Who does organize the input data collection?</td><td colspan="2">The brand has appointed someone in charge of the data collection.
This person collected data from the campaign manager in the agency.</td></tr>
<tr><td>Where are the main input data collected?</td><td colspan="2">The agency sends the calculation of the carbon impacts directly to the brand.</td></tr>
<tr><td>Output indicators to be monitored and findings</td><td colspan="2">Indicators to be monitored:
• Impact of creation of campaign content ($kgCO_2ecrea$)
• If provided (ideal): Breakdown of impact ($kgCO_2ecrea$) by emission category
• Impact of content creation per contact reached by the campaign ($kgCO_2ecrea$/contacts) – The concept of contact depends on each media and will be defined later.
• Impact of content creation per € spent on this creation ($kgCO_2ecrea$/k€)
• Impact of content creation per minute of content produced ($kgCO_2ecrea$/min)
• Impact of content creation per day of shooting ($kgCO_2ecrea$/days)
Findings:
• Impacts are mainly related to air travel by the film crew. Think about the filming location, the type of transport, pooling and optimization of production (photos, videos, etc.).
• Using a less carbon-intensive energy source can have a significant impact.</td></tr>
</table>

2 / Digital Advertising

Digital advertising refers to advertisements broadcasted on digital media operated by any type of players: publishing and news, video streaming, retail and services, TV and radio, social networks, etc.

There are various formats and content types: traditional display (image, text), video, audio or native, conventional social (image, photo, text) or video.

Content is viewed on broadcast terminals (smartphones, computers, tablets, TV screens, etc.). It is stored on servers and transmitted via Internet networks (WiFi, 4G, 5G).

PÉRIMÈTRE DU SOCLE COMMUN		V1 (octobre 21)	V2 (avril 23)
ANNONCEURS & AGENCES MÉDIA : Stratégie de communication			
PRODUCTION DU CONTENU : Agence créatives, tournage, etc			
AVANT DIFFUSION & ENVIRONNEMENT PUBLICITAIRE : Commercialisation, media planning, ciblage (DMP), DCO			
ATTRIBUTION DE L'ESPACE PUBLICITAIRE & ANALYTICS (SSP, DSP, ETC.)	FONCTIONNEMENT ADTECH		
	SERVEURS PROGRAMMATIQUES	●	●
	SERVEURS AUTRES*		●
	RÉSEAUX	●	●
DIFFUSION DE LA PUBLICITÉ	FONCTIONNEMENT RÉGIE		
	SERVEURS	●	●
	RÉSEAUX	●	●
	TERMINAUX	●	●
TRACKING TIERS : SOLLICITATION DES SERVEURS ADTECHS ET DES RÉSEAUX			
POST-CLIC : Landing site / app, analytics			

* Les serveurs « autres » renvoient aux serveurs mobilisés pour les usages hors enchères et diffusion (reporting, machine learning, back-end...)

▭ Hors périmètre ● Prise en compte de l'utilisation uniquement ● Prise en compte de l'ensemble du cycle de vie

Impacts to be measured:

- The entire lifecycle (manufacturing, energy consumption and end of life) of servers, networks, and terminals involved in the broadcasting of advertisements.
- The entire lifecycle (manufacturing, energy consumption and end of life) of servers, networks, and terminals of third-party players for selling programmatic broadcasting space. To assess mainly interactions of DSPs and SSPs included in the programmatic chain, to be accounted for according to the number of implemented "active paths" and optimizations made – See the detailed framework for more information.

Framework studied for this media:

- SRI & Alliance Digitale framework for the calculation of the carbon footprint generated by digital campaign broadcasting, V2 (04/2023).

Characteristics of the framework:

- This framework was co-developed with players involved in the digital broadcast chain, led by the Syndicat des Régies Internet (SRI). It is based on the latest methodological standards (PCR ADEME) and has been submitted to a consistency study with other frameworks on the same topic.
- The framework includes a methodological guide that defines the principle and the scope of the carbon footprint calculation for a digital campaign, as well as a database with average factors allowing an impact calculation based on data.
- It is open-source and updated on a regular basis regarding the scope considered and emission factors used.

Scope covered by the framework:

- Manufacturing, use and end of life of servers and networks used for space allocation (full lifecycle).
- Manufacturing, use and end of life of servers and networks used for broadcasting advertising content to the user terminal (full lifecycle).
- Manufacturing, use and end of life of user terminals (full lifecycle). Their weight is particularly significant in the overall footprint of a digital advertising.

This framework was mainly developed in collaboration with players in traditional display and video. It is therefore the most suitable for these formats, but it is compatible with the other ones.

	Option 1 Creation of an ad hoc tool by the brand	**Option 2** Use of a partner tool	**Option 3** Use of tools developed by each channel
Choice of the calculation tool	**Calculator developed internally using the calculation mechanics and the database of SRI & Alliance Digitale.** Use of SRI & Alliance Digitale database, which provides models for the market and specifiable data with default averages according to three levels of precision. A priori, the brand will only be able to retain the lowest level of precision (level 1, maybe 2). It will have to see with media involved how to get a more precise calculation.	**Partner tool** (to be defined) (e.g. tool developed by the advertiser's agency), including compatibility of scope, modeling and input data to be ideally validated with an external audit of the tool.	**Tools developed by the digital media** for each broadcast media – The brand will be able to select the few media to be requested, which account for 80% of its printing volumes for the campaign. Its advantage: Availability of more granular elements that are specific to the digital media chain (e.g. optimization of active paths, etc.)
Emission or allocation factors to be used	**Average factors and modeling from the SRI & Alliance Digitale database** for data in common with the market and level 2 and 3 default data.	**Partner tool factors and modeling** (SRI & Alliance Digital compatibility to be validated)	**Third-party tool factors and modeling** (SRI & Alliance Digital compatibility to be validated)
Input data to be integrated	**By format broadcasted during the campaign** • Total number of prints • Breakdown of prints by country (%) • Breakdown of prints by broadcast terminal type (%) • Content viewing time (time of exposure for the display and length of the spot x completion rate for the video) • Weight of broadcast content (KB) • Over-the-counter mode of sale without competition or programmatic		
Who does organize the input data collection?	Internal team of the brand	Partner	Media or agencies concerned
Where are the main input data collected?	**Main data are found in the campaign reports.** Possibility of dynamic collection for some elements, via analytic tools.		
Output indicators to be monitored by the brand	**Total impact of digital broadcasting (kgCO_2edigital)** • Breakdown of impact (kgCO_2edigital) by digital third-party and by digital phase (servers – programmatic, networks – programmatic, servers – broadcasting, networks – broadcasting, terminals – broadcasting) • Breakdown of impact (kgCO_2edigital) by phase of digital broadcasting lifecycle (manufacturing and end of life, use) • Impact of digital broadcasting per contact reached by the campaign (gCO_2edigital/1000contacts) – for digital, contacts are defined by the number of prints. • Impact of digital broadcasting per € spent on this broadcast (kgCO_2editigal/€) • Impact of digital broadcasting per second of broadcast content (tCO_2edigital/s)		

APPLICATION EXAMPLE

Brand X carries out a multimedia advertising campaign entitled XX. It is broadcasted for one year on several digital channels:

- **Pure player websites** (Leboncoin…) / Display (native format)
- **Press media** (20 min, Le Monde, Point…) / Display (header)
- **Digital TV media websites** (TF1, M6) / 30-second video pre-roll
- **Social Networks** (Facebook, Instagram, Youtube) / 20-second video.

The communication team wishes to calculate the carbon footprint of the digital broadcast for this campaign. It has a tool built on the SRI measurement framework, with a level 2 granularity as defined, thus allowing a good measurement granularity.

Since a media agency Y has been commissioned for this campaign, this agency holds most of the information needed for a proper calculation of the impacts.

<table>
<tr><th colspan="3">Putting into practice the calculation of the carbon footprint of digital broadcast
Creation of an ad hoc tool by the brand (option 1)</th></tr>
<tr><td>Input data to be integrated</td><td>Level 1
• Total number of prints
• Breakdown of prints by broadcast terminal type (%)
• Content viewing duration in s (time of exposure for display and length of the spot x completion rate for the video)
• Weight of broadcast content (KB)
• Number of campaigns in programmatic or in over-the-counter sale mode
Level 2
• Breakdown of prints by country (%)
• Breakdown of prints by network (fixed/mobile) (%)</td><td>Examples of values
• 200 million prints including 50 million in static (display) and 150 million in video (different lengths)
• Breakdown: 55% smartphones, 35% PCs, 10% tablets.
• As far as display is concerned, exposure duration cannot be collected, and it is estimated with a market average of 10 seconds. Completion rate is not monitored, and it is modeled 100% on videos (default value).
• Weight of display formats: 100 KB
• Weight of display formats: Modeled with an average bitrate of 1.1Mb/s, allowing video lengths to be considered.
• 100% programmatic
• Breakdown of prints by country: 50% France, 25% country of broadcast (%) Belgium, 10% Spain, 10% Poland, 3 % Italy, 1% Romania, 1% Luxembourg.
• 90% of broadcast on fixed network, 10% on mobile.</td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="2">Models and allocations are implemented directly in the brand’s calculator, in line with the SRI recommendations:
• The impact of servers and networks is estimated according to the used bandwidth (proportional to the weight of formats and the number of prints)
• The impact of terminals is estimated according to the time of use of terminals (proportional to the weight of formats and the number of prints)
The emission factors used are those aggregated by the SRI V2.1. standard. The brand has therefore updated its calculator.</td></tr>
</table>

Who does organize the input data collection?	The brand has appointed someone in charge of the data collection. This person collected data from the campaign manager in the agency.
Where are the main input data collected?	Main data are present in the campaign reports: The agency has sent campaign reports per country, which included, among other things, digital data (number of prints per country, breakdown of terminals, etc.). The weight of created content was measured directly on files sent by the creative agency. Missing data have been estimated by the brand managers (exposure time).
Output indicators to be monitored and conclusion	**Indicators to be monitored:** • **Total impact of digital broadcasting (kgCO_2edigital)** • Breakdown of impact (kgCO_2edigital) by digital third-party, by digital phase (servers – programmatic, networks – programmatic, servers – broadcast, networks – broadcast, terminals – broadcast) • Breakdown of impact (kgCO_2edigital) by phase of digital broadcasting lifecycle (manufacturing and end of life, use) • Impact of digital broadcasting per contact reached by the campaign (gCO_2*edigital/1000contacts) – for digital, contacts are defined by the number of prints* • **Impact of digital broadcasting per € spent on this broadcast (kgCO_2editigal/€)** • **Impact of digital broadcasting per second of broadcast content (tCO_2edigital/s)** **Findings:** • In this campaign, manufacturing of terminals is the major source of carbon impact. To reduce the weight of the campaign, measurement of the exposure time must be more precise, and unnecessary prints have to be reduced. • The network impact is also significant. Optimization can be found on the video quality. • Lastly, encouraging over-the-counter sale modes can limit the use of servers and networks before broadcasting.

3 / TV advertising

TV advertising refers to advertisements broadcasted on media and TV platforms: live (linear, segmented, and live digital TV), deferred or on demand (BVOD).

Broadcast media are viewed on broadcast terminals (mainly televisions), stored on servers, and transmitted via Internet networks (DTTV, satellite, IPTV, segmented TV, WiFi, etc.).

Impacts to be measured:

- Energy consumption
- Production

Framework studied for this media:

- ADMTV frameworkV2 (2025)

Characteristics of the framework:

- This framework was co-developed with the involvement of ADMTV member TV media, TV broadcasting channel players and carbon impact measurement players, led by the national union for television advertising (ADMTV, Alliance Des Médias TV & Vidéo). It is based on the most recent methodological standards (RCP ADEME) and on the technical expertise of players in the sector. It is also built with the digital framework of the SRI / Alliance digitale (Digital Carbon Framework).
- The framework includes a guide that defines the scope of calculation as well as the models used to calculate the carbon footprint of a TV campaign, and a database with average factors allowing an impact calculation based on input data.
- It is available exclusively to ADMTV members. The framework is integrated into a tool developed by DK and used by all ADMTV member media to calculate the carbon impact of their campaigns. ADMTV recommends using DK API for carbon calculations. Indeed, this platform is a turnkey tool for systematic and reliable measurements:

Based on a strong methodology complying with national and international frameworks

- A model fed by confidential and average data from publishers and media for increased reliability
- A unique tool that cross-analyses ADMTV data with campaign data for a reliable measurement, available directly via an API
- Regular revisions and updates of data and methodological assumptions, which are directly implemented in the DK tool.

Scope covered by the framework:

The scope takes into account servers and networks that are used when broadcasting advertising content on the user terminal.

Following data are included in the calculation:

- Manufacturing, use and end of life of user terminals (full lifecycle).
- Their weight is particularly significant in the overall footprint of a digital advertising.
- Manufacturing, use and end of life of servers and networks (full lifecycle).

Lifecycle phases	Servers	Networks	Terminals
Upstream (manufacturing, distribution)	Included	Included	Included
Usage	Included	Included	Included
End of life	Included	Included	Included

<table>
<tr><th></th><th>Option 1
Creation of an ad hoc tool by the brand</th><th>Option 2
Use of a partner tool</th><th>Option 3
Use of tools developed by each channel</th></tr>
<tr><td>Choice of the calculation tool</td><td colspan="2">Since used databases are only partially available in open-source, brands, agencies, or other players wishing to develop their own multichannel tool will have to:

a. Integrate the results of the common tool developed by the ADMTV directly into the input data of their own calculator (paid access – DK platform license); collection is possible via a dedicated API.

b. Exchange with the ADMTV the access to a part of data from average media owning the ADMTV. Some data, such as impact values of terminals, servers and digital networks are available free of charge, which will allow to rebuild the calculation mechanics based on a freely accessible methodology
(see previous link to ADMTV framework).

Case a. involves using a gross carbon result, with no granularity, in its own calculator. In this case, the option to collect via an API could allow a more efficient automatic processing if tools are interconnected (to be implemented).

Case b. requires some background work to rebuild used data, in order to make the calculator compatible with the framework.</td><td>Call upon TV media that have access to the common ADMTV tool (DK platform) or their own tool.
Option 3 remains the most precise and up-to-date option (media specific models are considered), but it requires a separate processing for each media – which is inefficient for advertisers.
The brand will be able to select some media to be requested, which account for the biggest portion of printing volumes for the campaign.
The advantage is the possibility to have media channel-specific data with a higher granularity (e.g., real average rate, etc.).</td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="2">In case a., factors and models are managed directly by the third-party tool (no access to the emission factors of the ADMTV database).
Case b. requires some background work to rebuild used data, in order to make the calculator compatible with the framework (access must be requested).</td><td>Factors and models are managed directly by the third-party tool (results of the common ADMTV tool; No access to emission factors in the ADMTV database).</td></tr>
<tr><td>Input data to be integrated</td><td colspan="3">Per format of broadcasted spot, during the campaign in linear TV, digital, BVOD and/or segmented TV
GRP4+ audience of the spot (and then a conversion between GRP and total audience)
Number of broadcasts of the spot
Spot length
Note: Country of broadcast is not requested. The current TV calculator has been developed for France. An adaptation is under development for other countries, but it requires confirming the breakdown of broadcast networks (DTTV, satellite, etc.).</td></tr>
</table>

Who does organize the input data collection?	Brand	Partner	Media concerned
Where are the main input data collected?	The media or their DK partners must specify if the advertiser or its partner wishes a direct integration of the tool results.		
Output indicators to be monitored by the brand	**Indicators recommended by ADMTV:** • **Total impact of TV broadcast (kgCO_2etv)** • **Breakdown of TV broadcast impact by digital third-party (kgCO_2etv)** • **Breakdown of impact by lifecycle phase (manufacturing and end of life of servers, networks and terminals, use of servers, networks, and terminals) of TV broadcast (kgCO_2etv)** • **TV broadcast impact per contact reached by the campaign** (gCO_2etv/1000contacts) – *For TV, contacts are defined by the 4+ audience of the spot* • **Impact of TV broadcast per actually viewed second (kgCO_2etv/second viewed)** – *Indicator allowing a weighting by completion and visibility*		

APPLICATION EXAMPLE

Brand X conducts a multimedia advertising campaign entitled XX. It has been broadcasted on different TV channels (TF1, TMC, F2, F3, M6, W9, C8, BFM, L'Equipe, etc.) for one year.

The length of the advertisement is 40 seconds (video provided in the required format by channels). The communication team wishes to calculate the carbon footprint of the TV broadcast of this campaign. Oneframe methodology thus advises using ADMTV framework.

As there is no possible direct access to this framework, TV channels will have to be called upon.

Moreover, the media or agency Y, which has been commissioned for this campaign, holds most of the information necessary for a proper calculation of impacts.

Practical application of the carbon footprint calculation for TV broadcast
Use of tools developed by each channel (option 3)

<table>
<tr>
<td>Input data to be integrated</td>
<td>As most input data (audience, broadcast duration, etc.) are integrated in the media and/or agency calculation tool to which the brand refers, there is only one input data to be collected: CO_2e impact of TV broadcast sent by its interlocutor (possibly by channel). This impact will be integrated by the brand alongside other media.

To conduct some checks, it is interesting to collect as well:
• The details of this measurement provided by the media/agencies: by country, by digital third-party, by broadcasting mode
• The campaign GRP by country (possibly by channel), or ideally the audience
• CO_2e impact for 1000 contacts (possibly by channel)</td>
<td colspan="4">Value examples:
Total CO_2e of the TV broadcast over the period considered: 150 tCO_2e over 1 year
Breakdown by country (audience and impact) over the period considered
<table>
<tr><td></td><td>France (all channels)</td><td>Belgium (all channels)</td><td>Luxembourg (all channels)</td></tr>
<tr><td>Audience (millions)</td><td>139</td><td>100</td><td>50</td></tr>
<tr><td>Carbon impact (tCO_2e)</td><td>38.9</td><td>36.0</td><td>36.1</td></tr>
<tr><td>Impact for 1000 contacts (gCO_2e/ 1000 contacts)</td><td>280</td><td>360</td><td>722</td></tr>
</table>
</td>
</tr>
<tr>
<td>Emission or allocation factors to be used</td>
<td colspan="4">Modelings and allocations are implemented directly in the calculator of involved players. However, the brand must first confirm that calculations are made on a calculator that complies with the ADMTV framework, preferably the DK API and/or tool.</td>
</tr>
<tr>
<td>Who does organize the input data collection?</td>
<td colspan="4">The brand has appointed someone in charge of the data collection. This person collected data from the campaign manager in the agency.</td>
</tr>
<tr>
<td>Where are the main input data collected?</td>
<td colspan="4">The media or DK must be asked if the advertiser or its partner wishes a direct integration of the tool results.</td>
</tr>
</table>

Output indicators to be monitored and findings	**Indicators recommended by ADMTV:** • Total impact of TV broadcast ($kgCO_2etv$) • Breakdown of TV broadcast impact by digital third-party ($kgCO_2etv$) • Breakdown of impact by lifecycle phase (manufacturing and end of life of servers, networks and terminals, use of servers, networks, and terminals) of TV broadcast ($kgCO_2etv$) • TV broadcast impact per contact reached by the campaign (gCO_2etv/1000contacts) – *For TV, contacts are defined by the 4+ audience of the spot* • Impact of TV broadcast per actually viewed second ($kgCO_2etv$/second viewed) – *Indicator allowing a weighting by completion and visibility* **Findings:** • Impacts are approximately equally distributed across the different countries, but for very different audiences. • The choice of countries is a strong optimization lever. • It is considered to favor shorter formats in order to reduce direct impact

4 / Print advertising

Print advertising refers to printed advertisements in any type of printed press, identified in four families for paid press and two families for free press.

Paid press:

- Regional daily press
- National daily press
- Magazine
- Regional weekly press

Free press:

- Free information press
- Brand magazine

Advertisements in press also include digital versions, i.e., versions in PDF format or for e-readers (epub, etc.).

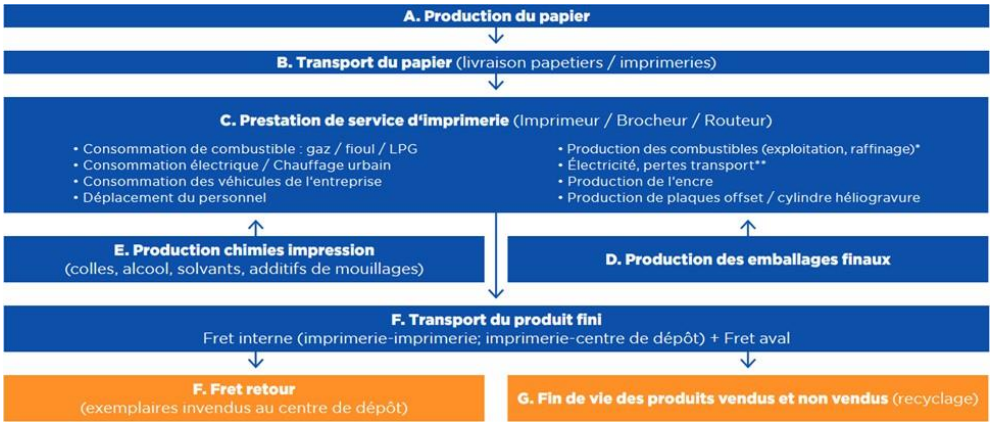
Insertion size varies from one advertisement to another.

Impacts to be measured in print press:

The 13 variables of the INTERGRAF framework must be taken into account in the carbon footprint of paper press. The SRP wished to integrate the end of life of sold or unsold products into these parameters.

The scope of impacts to be measured thus includes the following phases:

- Production (paper, inks, conditioning, etc.)
- Services of the printing company
- Transport
- End of life of products



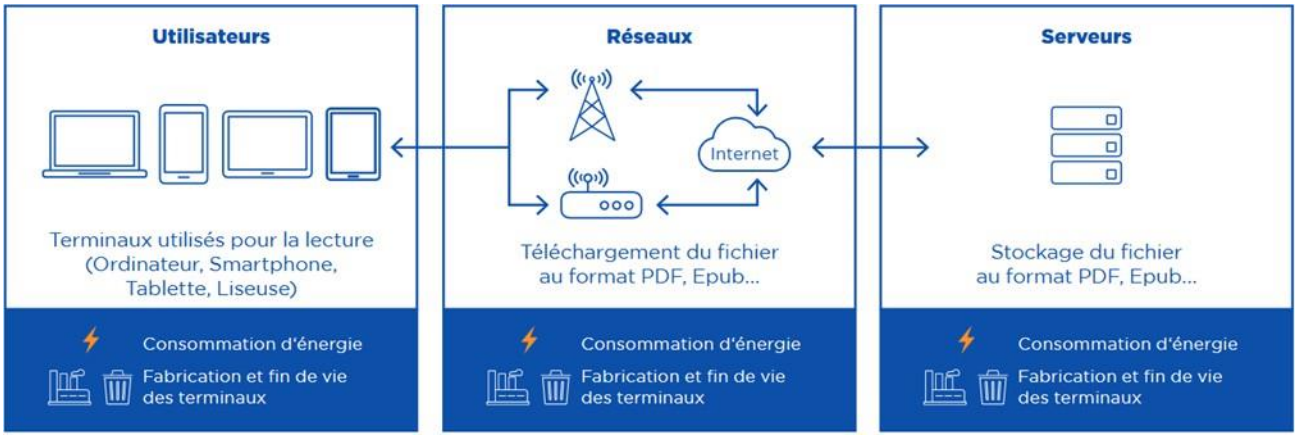
((Table translation))	
A. Paper production	
B. Paper transport (delivery from paper maker / printing company)	
C. Printing service (printing company / binder / router)	
. Consumption of fuels: gas / oil / LPG . Power consumption / urban heating . Consumption of company vehicles . Staff travel	. Production of fuels (extraction and refining) . Electricity, transport losses . Ink production . Offset plate production / printing cylinder
E. Printing chemistry production (glues, alcohols, solvents, dampening additives)	**D. Final packaging production**

F. Finished product transport Internal freight (printing company-printing company / printing company-storage center) + downstream freight	
G. Return freight (unsold copies returned to storage center)	**H. End of life of sold and unsold products (recycling)**

Impacts to be measured in digital press:

The scope to be taken into account for measuring the impacts of digital press includes the whole service production chain: users, networks, and servers.

In each part, impacts are measured for the entire life cycle: upstream phase (material extraction, assembly, distribution), energy consumption and end of life.



((Image translation))

Users	Networks	Servers
Terminals used for reading (computer, smartphone, tablet, e-reader)	Downloading of file in PDF, Epub or another format	Storage of file in PDF, Epub or another format
Energy consumption Terminal manufacturing and end of life	Energy consumption Terminal manufacturing and end of life	Energy consumption Terminal manufacturing and end of life

Framework studied for this media:

SRP: framework for the calculation of the carbon footprint generated by press campaigns, V1 - September 2024

SRP framework was co-developed with Eco Impact SEPM (for magazine press) V2 (07/2022).

It is also based on: INTERGRAF Recommendations on CO_2 emissions calculation in the printing industry V2.1 - 2021

Characteristics of the framework:

- This framework was co-developed with CSR professionals of SRP advertising media in collaboration with the SEPM (Syndicat des Editeurs de Presse Magazine), the APIG (Alliance de la Presse d'Information Générale), and the ACPM, under the leadership of the SRP.
- The SRP carbon framework relies on the 13 variables of the European Intergraf recommendations for the paper part, and on the SEPM framework for the magazine press. For its digital part, it uses the SRI / Alliance digitale framework.

- The framework includes a methodological guide explaining the scope of calculation, the models used to calculate the carbon footprint, practical application examples and a database offering average values for carbon footprint calculations. This database also includes average values of carbon impact per page and per type of press.
- It is available in open-source on the SRP website and designed in particular for advertising media, advertising agencies and any other player of the advertising market, which assess carbon footprints.
-

<table>
<tr><th></th><th>Option 1 Creation of an ad hoc tool by the brand</th><th>Option 2
Use of a partner tool</th><th>Option 3
Use of tools developed by each channel</th></tr>
<tr><td>Choice of the calculation tool</td><td colspan="2">Brands, agencies, or other players wishing to develop their own multichannel tool will be able to use the SRP framework to unify their calculation practices in press.

Thanks to this methodology, these players (from the industry or external) can create and check their calculator compliance.

Regarding data, they will have the choice between:
• Using the averages per type of press that are available in the SRP database.
• Using input data of media and the database supplied by the SRP to set default average values in the calculator.

Case a. involves using a gross carbon result, with no granularity, in its own calculator.
Case b. requires some background work to collect data from media to be entered in the calculator.</td><td>Call upon media that have access to the SEPM tool (magazine press) or their own calculator, in line with the SRP.

Option 3 remains the most precise and up-to-date option (media specific models are considered), but it requires a separate processing for each media – which is inefficient for advertisers.
The brand will have to choose the media to be called upon, which account for the highest volume of prints / broadcasts / investments for the campaign.
The advantage will be the possibility to have more granular and specific items.</td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="3">The emission or allocation factors that must be used are listed in the database and implemented directly in the media tool.</td></tr>
<tr><td>Input data to be integrated</td><td colspan="3">Campaign data: advertising format, number of pages, number of prints, number of digital versions, information regarding copies (press family, sizes)
Publisher specific data: used papers (paper mill location, paper weight), printers/binders (conditioning, ink, energy, etc.), distance traveled</td></tr>
<tr><td>Who does organize the input data collection?</td><td>Media concerned</td><td>Partner</td><td>Media concerned</td></tr>
<tr><td>Where are the main input data collected?</td><td colspan="3">Data related to campaigns are very often available in campaign reports. Remaining data are available from the publisher.</td></tr>
</table>

Output indicators to be monitored by the brand	**Total impact of press campaign ($kgCO_2eprint$)** Breakdown of impact by paper life cycle phases (paper production, transformation, printing and binding, transport, end of life) of print distribution ($kgCO_2eprint$) Breakdown of impact by digital life cycle phase (manufacturing, usage, end of life) of print distribution ($kgCO_2eprint$) **Impact of print distribution per contact (audience) reached by the campaign ($gCO_2eprint/1000contacts$)** – *number of readings is integrated in the audience: Thanks to this method, one gets the total number of press contacts.*

APPLICATION EXAMPLE

Brand X conducts a multimedia advertising campaign entitled XX. It is rolled out for four months on different paper and digital media.

The advertisement is presented in a half-page format. The communication team wishes to calculate the carbon footprint of the press distribution of this campaign. Oneframe methodology thus advises using the ADMTV framework and the SRP database.

This framework provides data that are averaged by type of press and can be used without calling upon the media.

Moreover, a media agency called Y, which has been commissioned for this campaign, holds most of the information necessary for a proper calculation of the impacts. It will be able to calculate these using the SRP framework with its own data.

Practical application of the carbon footprint calculation for print distribution
Use of tools developed by each channel (option 3)

Input data to be integrated

Since most of the input data (number of printed pages, paper weight, etc.) are integrated into the media and/or agency tools to which the brand refers, the only input data that have be collected are the CO_2e impact of paper and digital press distribution, sent directly by its interlocutor (possibly by type of press).

If the solicited player has not calculated the CO_2 impact of its distribution, average values by type of press are available in the SRP database. However, it will be necessary to collect input data such as number of pages, audience, type of press, etc.

To conduct some checks, it is interesting to collect as well:

- Details of this measurement provided by the media/agencies: by country and by media
- Number of prints
- CO_2e impact for 1000 contacts (possibly per media)

Value examples:

- Total CO_2e for paper press distribution over the period considered: 45 tCO_2e for one year
- Total CO_2e for digital press distribution over the period considered: 30 tCO_2e for one year
- Breakdown by country (print and impact) over the period considered

	France (all media)	Belgium (all media)
Prints (millions)	25.9	5.0
Carbon impact (tCO_2e)	37.0	8.0
Impact for 1000 prints (gCO_2e/1000 prints)	1,430	1,600

Emission or allocation factors to be used

Modelings and allocations are implemented directly in the calculator of involved players. However, the brand must first confirm that calculations are carried out on a calculator complying with the SRP framework.

Who does organize the input data collection?

The brand has appointed someone in charge of the data collection. This person collected data from the campaign manager in the agency. The agency collected information from media using its calculator, in line with the SRP methodology. If no information can be collected, the brand can use the average values per type of press that are available in the SRP framework.

Where are the main input data collected?

Data, excluding carbon impact, are present in the default campaign reports, which are transmitted by the agency.

The carbon impact calculation is sent directly to the brand by the requested media/agencies. If these carbon data are not available, the SRP database provides average data per type of press.

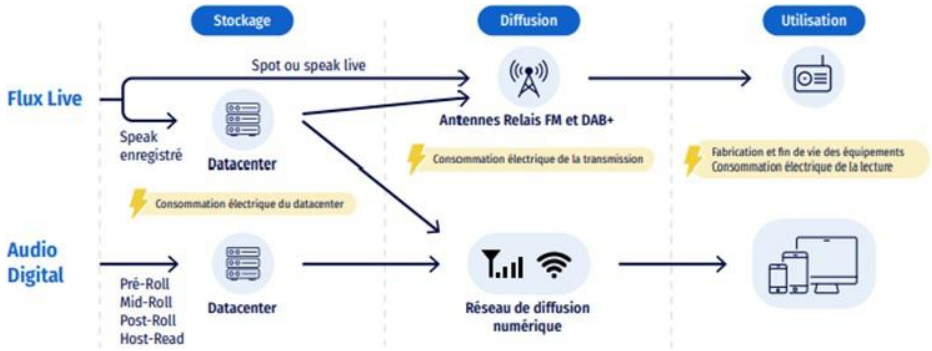
Output indicators to be monitored and findings	**Indicators to be monitored:** • Total impact of paper and digital press distribution ($kgCO_2eprint$) • If provided (ideal): Breakdown of impact by life cycle phase of the paper medium (paper production, transformation, printing and binding, transport, end of life) of print distribution ($kgCO_2eprint$) • If provided (ideal): Breakdown of impact per lifecycle phase of digital medium (manufacturing, use, end of life) of press distribution ($kgCO_2eprint$ ext) • If provided (ideal): Impact of paper and digital press distribution per contact reached by the campaign ($gCO_2eprint/1000contacts$) – **Findings:** Impacts are mainly proportional to the number of prints / distribution / investments. It is important to obtain more details about the optimization levers from the media: a priori, paper type and weight, management of unsold volumes, etc. For most media, this optimization task is accomplished in collaboration with press publishers.

5/ Radio Advertising

Radio advertising refers to advertising broadcasted live on the radio media as well as its digital variants. Broadcasted content is audio content only with varying lengths.

Content is listened to via broadcast terminals (radio sets, smartphones, computers, etc.), partially stored on servers, and transmitted through broadcast networks (radio network – FM and DAB+, digital networks – fixed and mobile).

Impacts to be measured:



Framework studied for this media: Bureau de la radio framework, V1 (03/2023)

Characteristics of the framework:

- The radio advertising sector, including the nine national advertising media of France (Altice Média Ads and Connect, Lagardère Publicité News, M6 Publicité, NRJ Global, TF1 PUB, Kétil, Nova Régie, Radio France Publicité et Skyrock Public), has established a workforce coordinated by the Bureau de la Radio in order to define a footprint measurement (expressed in tCO2e) for the broadcasting of a radio and audio advertising service.
- This framework was co-developed in collaboration with players of the carbon footprint measurement (including the DK company and the Association Bilan Carbone), led by the Bureau de la Radio (BDR). It is based on the Bilan Carbone methodological standard and on the technical expertise of players in the sector, as well as on works carried out by the SRI & Alliance Digitale in their framework for 'digital'. The framework includes a guide that defines the scope of calculation as well as the models used to calculate the carbon footprint of a radio campaign and a database with average factors allowing an impact calculation based on input data.
- It is available under this link, and accessible via the nine media.
- The framework is integrated in a tool used by all member media in France, developed by DK, allowing media to calculate the carbon impact of their campaigns.

Scope covered by the framework:
The scope takes into account:

- **The storage** of advertising creation in datacenters
- **The spot broadcasting** via FM and DAB+ relay antennas or a digital broadcasting network
- **The use** i.e. the audience listening to the advertising via radio or digital receiving terminals.

Framework data are updated on a regular basis. For example, it already integrates the scope of the SRI V2 framework for 'digital' (released in June 2023). To date, programmatic is integrated in the calculator, under the SRI V1 methodology. A study is underway to adjust the modeling for the radio media.

Data considered in the common calculator are listed below:

	Serveurs	Réseaux satellite	Réseaux web	Réseaux antennes relais FM	Terminaux Radio	Terminaux Autoradio	Terminaux numériques
Fabrication	À venir	Données indisponibles	Exclu	Données indisponibles	Inclus partiellement	Données indisponibles	Inclus
Utilisation	Inclus	Données indisponibles	Inclus	Inclus	Inclus	Données indisponibles	Inclus
Fin de vie	À venir	Données indisponibles	Exclu	Données indisponibles	Inclus partiellement	Données indisponibles	Inclus

	Servers	Satellite networks	Web networks	FM relay antenna networks	Radio terminals	Car radio terminals	Digital terminals
Manufacturing	**Coming soon**	**Data not available**	**Excluded**	**Data not available**	**Partially included**	**Data not available**	**Included**
Usage	**Included**	**Data not available**	**Included**	**Included**	**Included**	**Data not available**	**Included**
End of life	**Coming soon**	**Data not available**	**Excluded**	**Data not available**	**Partially included**	**Data not available**	**Included**

<table>
<tr><th></th><th>Option 1
Creation of an ad hoc tool by the brand</th><th>Option 2
Use of a partner tool</th><th>Option 3
Use of tools developed by each channel</th></tr>
<tr><td>Choice of the calculation tool</td><td colspan="2">Since used databases are only partially available in open-source, brands, agencies, or other players wishing to develop their own multichannel tool will have to:
a. Integrate results of the common tool developed by the BDR directly into the input data of their own calculator (paid access – DK platform license). Collection is possible via a dedicated API.
b. Negotiate for an access to a part of data from average media owning the BDR. Some data, such as values of terminal, server and digital network impacts are available free of charge, which will allow to rebuild the calculation mechanics based on a freely accessible methodology (see above for the link to the BDR framework).
Case a. involves using a gross carbon result, with no granularity. The data collection via an API could allow a more efficient automatic processing in the case of interconnected tools (to be implemented).
Case b. requires some background work to rebuild used data, in order to make the calculator compatible with the framework.</td><td>Request to radio media accessing the common BDR tool (DK platform) or their own tool.
Option 3 remains the most precise and up-to-date option (media specific models are considered), but it will require a separate processing for each media – which is inefficient for advertisers. The brand will be able to select some media accounting for the largest portion of broadcast volumes for the campaign. The advantage will be the possibility to have media channel-specific data with a higher granularity (e.g. average rate, etc.).</td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="2">In case a., factors and models are managed directly by the third-party tool (no access to the emission factors in the BDR database).
In case b., factors and models have to be rebuilt with freely available data and BDR averages, for which access must be requested.</td><td>Factors and models are managed directly by the third-party tool (results of the common BDR tool; no access to emission factors in the BDR database).</td></tr>
<tr><td>Input data to be integrated</td><td colspan="3">Per format of spot broadcasted during the campaign
Allocation mode (over-the-counter or programmatic)
Weight of the advertising content (KB)
Total audience of the spot
Advertising content length (in s.)
Note: Country of broadcast is not requested. For the time being, the radio calculator has been developed for France. An adaptation is under development for other countries, but it requires confirming the breakdown of broadcast networks.</td></tr>
<tr><td>Who does organize the input data collection?</td><td>Brand</td><td>Partner</td><td>Media concerned</td></tr>
</table>

Where are the main input data collected?	Request must be made to the BDR, the media or the DK partner if the advertiser or its partner wishes to integrate the tool results directly.
Output indicators to be monitored by the brand	• **Total impact of radio broadcasting (kgCO_2eradio)** • **Breakdown of impact by digital third-party (kgCO_2e)** • **Breakdown of impact by lifecycle phases** (manufacturing and end of life of servers, networks and terminals, use of servers, networks, and terminals) of radio broadcast (kgCO_2eradio) • **Radio broadcast impact per contact reached by the campaign** (gCO_2eradio/1000contacts – For radio campaigns, contacts are defined by the 13+ audience of the spot. • **Impact of radio broadcast per € spent on this broadcast (kgCO_2eradio/€)** • **Impact of radio broadcast per second of broadcast content (tCO_2eradio/s)**

APPLICATION EXAMPLE

Brand X carries out a multimedia advertising campaign entitled XX. It has been broadcasted on different radios (NRJ, Sky Rock, Radio Nova, France Inter, etc.) for one year.

The advertisement length is 5 seconds (audio provided in the required format by radios). The communication team wishes to calculate the carbon footprint of the radio/audio broadcast of this campaign. The Oneframe methodology thus suggests to turn to the BDR framework. As it is not possible to have direct access to this framework, radio media will have to be requested. Moreover, since a media agency Y has been commissioned for this campaign, this agency holds most of the information defining this campaign: broadcast country, audience, broadcasting radio, etc.

Practical application of the carbon footprint calculation for radio broadcasting Use of tools developed by each channel (option 3)	
Input data to be integrated	Since most of the input data (audience, broadcast duration, etc.) are integrated in the media and/or agency calculation tool to which the brand refers, the input data to be collected is only the $CO2_e$ impact of radio broadcast. This information is sent directly by its interlocutor (the media concerned). If the assessed campaign is a multimedia campaign, the brand will consolidate this impact with the impacts of other media. To determine the follow-up indicators, the data below have to be collected from the media: • **Impact measurement** provided by the media, detailed by country, by digital third-party, by broadcasting mode • **Audience by country** for the campaign (possibly by radio) • $CO2_e$ impact for 1000 contacts (possibly by radio)
Emission or allocation factors to be used	Modeling and allocations are implemented directly in the indicated common calculator.
Who does organize the data collection?	The brand has appointed someone in charge of the data collection. This person must call upon media directly or through other agencies. Note: Although it is preferred by the BDR and its members, this option requires to send the request to the media concerned, or to use the API of a proprietary tool.
Where are the main input data collected?	Data are collected directly by the media, which transmit the carbon impact calculation directly to the brand through the potentially requested agencies. If tool can communicate directly (API), this is done automatically.
Output indicators to be monitored and findings.	**Indicators to be monitored:** • Total impact of radio broadcasting ($kgCO_2$eradio) • If provided (ideal): Distribution of the radio broadcasting impact per digital third-party ($kgCO_2$eradio) • If provided (ideal): Breakdown of impact by lifecycle phases (manufacturing and end of life of servers, networks and terminals, use of servers, networks, and terminals) of radio broadcasting (kgCO2eradio) • If provided (ideal): Radio broadcast impact per contact reached by the campaign (gCO_2eradio/1000contacts) – • Impact of radio broadcast per € spent on this broadcast ($kgCO_2$eradio/€) • Impact of radio broadcast per second of broadcast content (tCO_2eradio/s) **Findings:** • There is a lack of data on radio broadcast specific networks and on radio terminals (car radios are excluded). • However, it is possible to draw the first conclusions: To reduce the direct impact, it is considered to prefer shorter formats, and to target less impacting networks and terminals.

6/ Outdoor Advertising (OOH & DOOH)

Outdoor advertising refers to campaigns on billboards (out-of-home, OOH) or screens (digital-out-of-home, DOOH).

In outdoor advertising (OOH), contents are photos or images printed on tarpaulins or posters, that have different distribution modes (glued poster, dedicated street furniture, vehicles, etc.). The advertising content is printed on a medium (poster) that is then transported where it must be displayed, collected and, in most cases, recycled. This furniture, which is sometimes dedicated to advertising, has its own lifecycle (manufacturing, transport and installation, maintenance, end of life), and its operation may also need energy (light, rotation, etc.).

In digital outdoor advertising (DOOH), content can be videos or fixed images broadcasted on dedicated indoor and outdoor screens.

Impacts to be measured:

- OOH – Lifecycle of posters and of their distribution media
- DOOH – Lifecycle of advertising billboards

Framework studied for this media:

AdOOHc calculator, factors updated in June 2022

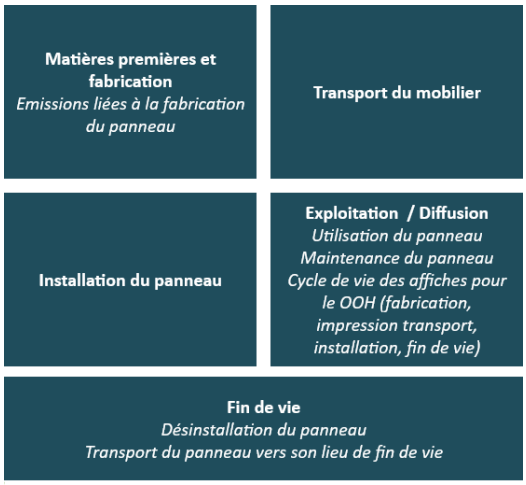
Characteristics of the framework:

- This framework was **co-developed** with the four main French players in outdoor advertising, supported by the Axionable firm and led by the **Union de la Publicité Extérieure (UPE).** Emission factors and models integrated in the calculator have been created based on ACVs of the four main French players in outdoor advertising, in compliance with the ISO 14040 standard.
- The framework includes a methodological note detailing the scope considered, processed formats and methodological choices, as well as a calculator for measuring the GHG emissions of OOH and DOOH campaigns.
- The calculator is available in open-source. **It is fed and updated on a regular basis,** according to the latest impact data of the portfolio of billboards and formats available to UPE members.

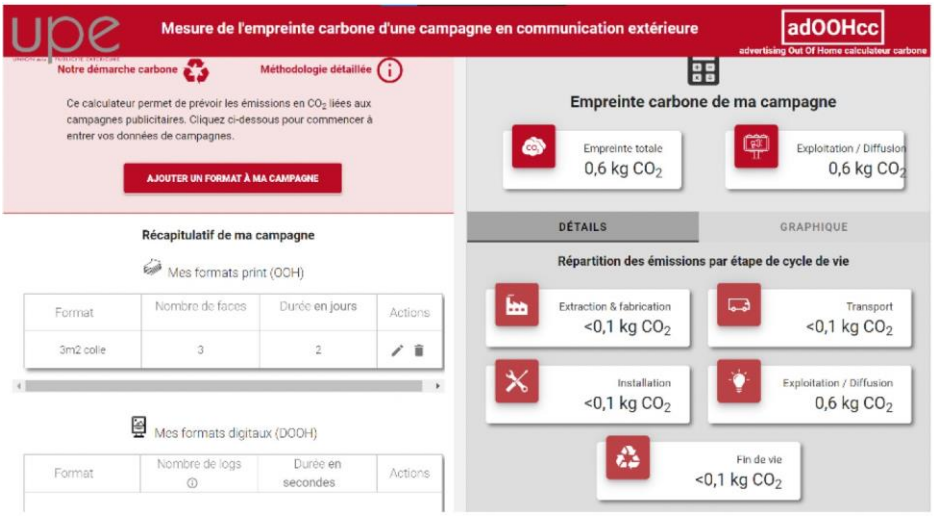
Scope covered by the framework:

- This framework covers 14 OOH advertising formats in different sizes: dedicated furniture with or without light, scrolling or not, glued, on a bus, on a fixed column, as well as two medium-sized digital formats (DOOH): indoor and outdoor.
- It takes into account the entire lifecycle of billboards (DOOH) and posters (OOH), from the extraction of raw materials to the end of life.

It does not take into account the creation of content displayed on billboards.



	Option 1 Creation of an ad hoc tool by the brand	Option 2 Use of a partner tool	Option 3 Use of tools developed by each channel
Choosing the calculation tool	Ask the UPE for an access to the API of the adOOHcc tool. Develop the calculator in-house, based on the average factors from the models of the tool.	Partner tool (to be defined) (e.g. tool developed by the advertiser's agency), with compatibility of scope, modeling, input data to be validated (or which uses directly the dedicated API).	AdOOHcc (UPE's tool) can be used directly by the brand
Emission or allocation factors to be used	Average factors from UPE's adOOHcc tool	Partner tool factors and models (UPE compatibility to be validated)	Average factors from UPE's adOOHcc tool
Input data to be integrated	**Display type:** OOH or DOOH display **OOH: Poster format, number of sides, campaign duration** DOOH: **Screen type** (indoor or outdoor), **number of logs** (number of displays), **spot length**		
Who does organize the data collection?	Brand	Partner	Brand
Where are the main input data collected?	Main input data are present in campaign reports.		
Output indicators to be monitored by the brand	**Total impact of outdoor broadcasting (kgCO_2ext)** Breakdown of impact by lifecycle phases of billboards and posters (manufacturing, transport, installation, operation/distribution, end of life) **for outdoor distribution (kgCO_2ext)** **Outdoor distribution impact per contact reached by the campaign.** (gCO_2eOOH-DOOH/1000contacts) – for OOH and DOOH, contacts are estimated based on prints/logs. **Impact of outdoor distribution per € spent on this distribution (kgCO2ext/€)** **Outdoor distribution impact for the entire duration of the distribution (kgCO_2ext/s or days** for DOOH or OOH)		



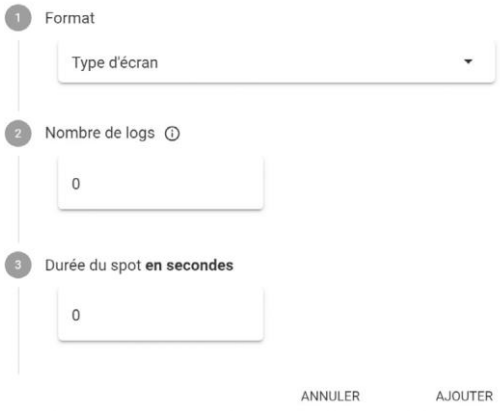
Screenshot from UPE's adOOHcc tool

APPLICATION EXAMPLE

Brand X carries out a multimedia advertising campaign entitled XX. A 12-month campaign is rolled-out in Belgium (DOOH).

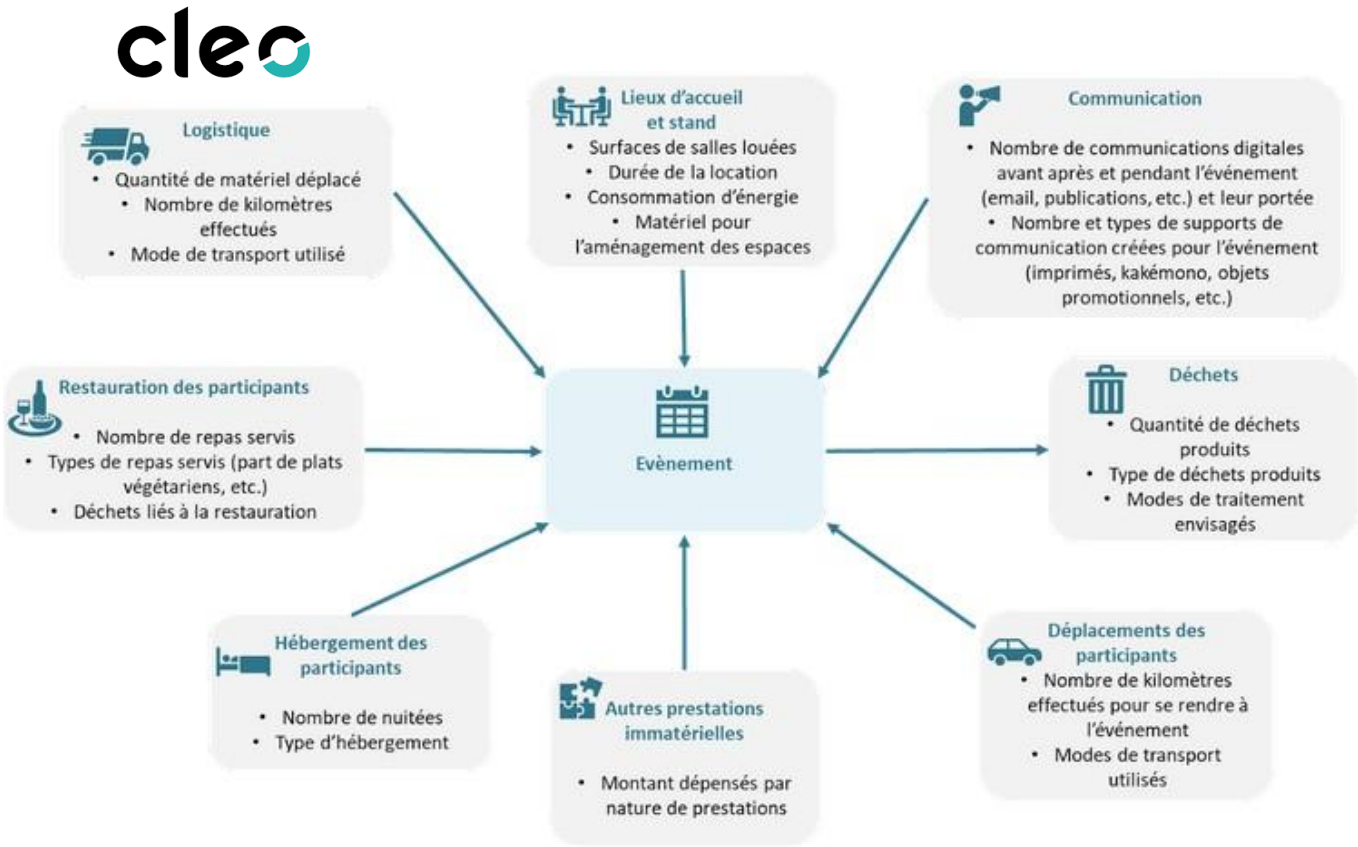
The advertisement is displayed in a digital format (2 m²) – animated film of 10 seconds on 200 screens of approximately 100''. The communication team wishes to calculate the carbon footprint of the DOOH distribution of this campaign, and chooses to use UPE's calculator. The brand can access directly to this tool.

Moreover, the media agency Y, which has been commissioned for this campaign, holds most of the information necessary for a proper calculation of the impacts.

<table>
<tr><th colspan="3">Practical application of the carbon footprint calculation for OOH & DOOH distribution
Use of tools developed by each channel (option 3)</th></tr>
<tr><td>Input data to be integrated</td><td>Data requested by the UPE calculator
 
</td><td>Value examples:
• Display type: any weighted outdoor DOOH format
• Number of logs: 400 000 logs over one year
• Spot length: 10 s.</td></tr>
<tr><td>Emission or allocation factors to be used</td><td colspan="2">Models and allocations are implemented directly in the UPE calculator. However, the aggregated modeling on all formats brings just a little granularity in the analysis.</td></tr>
</table>

Who does organize the input data collection?	The brand has appointed someone in charge of the data collection. This person collected the data from the campaign manager in the agency and entered them in the UPE calculator.
Where are the main input data collected?	The required data (logs, spot length) are found in the default campaign reports that are transmitted by the agency.
Output indicators to be monitored and findings.	**Indicators to be monitored:** • Total impact of outdoor broadcasting ($kgCO_2ext$) • **Breakdown of impact per lifecycle phases of billboards and posters (manufacturing, transport, installation, operation/distribution, end of life) of outdoor distribution (kgCO2ext)** • If provided (ideal): Impact of outdoor distribution per contact reached by the campaign (gCO_2**eOOH-DOOH/1000contacts) – for OOH and DOOH, contacts are assessed based on number of prints/logs.** • **Impact of outdoor distribution for the entire distribution duration ($kgCO_2$eext/s or day for DOOH or OOH)** • Impact of outdoor distribution per € spent on this distribution ($kgCO_2$eext/€) Findings: • Impacts are mainly proportional to the number of logs. It is important to obtain from the media more details about the optimization levers: a priori billboard type, spot length, etc.

7/ Trade Fairs, Events, and Roadshows



Framework studied for this media:

CLEO Carbone methodology (November 2023 version)

UNION FRANÇAISE DES MÉTIERS DE L'ÉVÉNEMENT

Characteristics of the framework

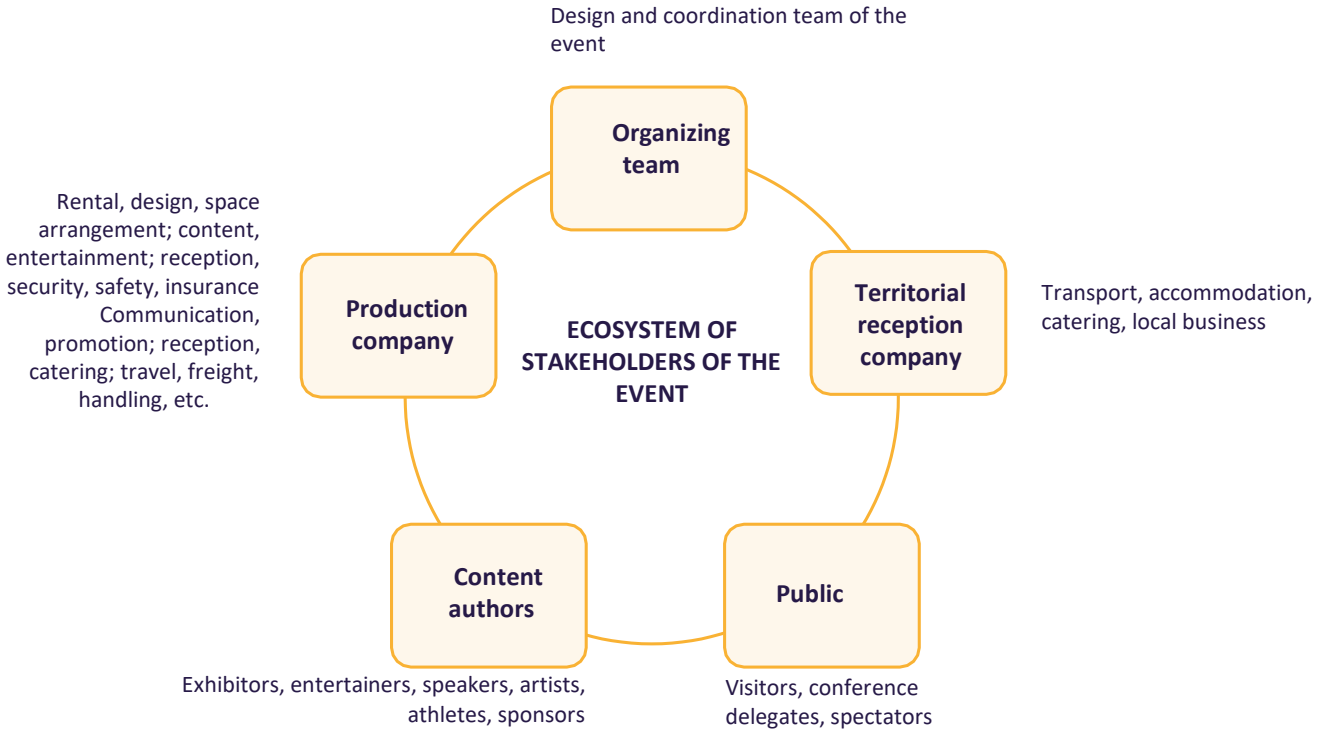
- This framework was co-develop with the involvement of a scientific committee comprising partners and institutional stakeholders, professionals in the event industry, and sectoral stakeholders as well as third-party developers who are experts in carbon calculation, led by the Union Française des Métiers de l'Evènement (UNIMEV) and the Comité Régional du Tourisme Paris Région. It offers templates for five typologies of event professions, as well as one template for corporate carbon balance. These templates define the main impacting items of the activity. They remain flexible, in order to ensure that the calculation is as close as possible to the real situation: for example, it is possible to add an impact that is not mentioned in the template, by selecting an emission factor in one of the numerous available certified databases.
- The framework relies on the Bilan Carbone and GHG Protocol methodologies as well as on the ISO 14061 standard and certified databases such as DEFRA, base ADEME, Agribalyse, Exiobase, etc.

Scope covered by the framework:

- Type of professions covered: event organizers, site managers, booth designers, caterers, multi-technical providers.
- Type of events covered: fairs and exhibitions, congresses, seminars, sporting events, artistic exhibitions and shows, conferences, forums, etc.

- **Scope covered:**

- Travel of participants
- Accommodation of participants
- Space arrangement
- Intangible services
- Water
- Other items
- Freight transport
- Catering for participants
- Communication
- Energy
- Waste



The Événement association currently develops an event framework that will be available in 2024 and integrated in the next version of the guide.

	Option 1 Creation of an ad hoc tool by the brand	**Option 2** Use of a partner tool	**Option 3** Use of tools developed by each channel
Choice of the calculation tool	Since used databases are only partially available in open-source, brands, agencies, or other players wishing to develop their own multichannel tool will have to: a. Integrate results of the common tool developed by Cleo Carbone directly into the input data of their own calculator (paid access – Kabaun platform), b. Negotiate in order to check the compatibility of their modeling with the CLEO Carbon calculator. Some data, such as values of terminal, server and digital network impacts are available free of charge, which will allow to rebuild the calculation mechanics based on a freely accessible methodology (publication pending). *Case a. involves using a gross carbon result, with no granularity, in its own calculator.* *Case b. requires some background work to rebuild used data, in order to make the calculator compatible with the framework.*		CLEO Carbone tool of the UNIMEV (paid access - Kabaun platform)
Emission or allocation factors to be used	Average factors and specific models for each event, from the UNIMEV's CLEO Carbone tool.	Factors and modeling of the partner tool	Factors and modeling of the CLEO Carbone tool
Input data to be integrated	**General information about the event:** Dates, duration, country, number of participants, budget **Travels**: Number of visitors and staff, place of origin, mode of transport **Locations**: Energy consumptions, furniture and materials used for booths, waste production **Logistics**: Distance and quantities of transported material and consumables **Catering**: Meals served, and waste produced **Accommodation**: Number of nights accounted for **Communication**: Data related to digital, print, TV campaigns, etc. and dedicated to the event, production of goodies and consumables **Other services**: Amounts spent		
Who does organize the data collection?	Advertiser	Partner	Media concerned

Where are the main input data collected?	Physical information is available as direct monitoring during the event or from providers and suppliers (reception room, caterer, transport service provider, etc.). Information, in particular monetary one, is available in various quotes established for the event
Output indicators to be monitored by the brand	**Total impact of the event (kgCO_2eevent)** Breakdown of event impact by emission type (travels of visitors and staff, communication, furniture, energy, waste, catering, logistics, other services) **(kgCO_2eevent)** **Event impact by contact reached (gCO_2eevent/1000contacts) –** *In the framework, contacts are all visitors if the brand is the event organizer, or the portion of visitors met during the event if the brand is only a participant* **Event impact by € spent (kgCO_2eevent/€)** **Event impact for its entire duration (kgCO_2eevent/days)**

APPLICATION EXAMPLE

Brand X organizes an event in France. This event takes place on site that is already set in the tool. Hundreds of visitors are expected.

The communication team wishes to calculate the carbon footprint of the brand participation to this event. The Oneframe methodology thus suggests using the CLEO Carbone calculator. Moreover, the media agency Y, which has been commissioned for this campaign, holds most of the information necessary for a proper calculation of the impacts. Since the calculator can be accessed on demand, the brand will have to ask for it to the UNIMEV (or ensure the agency already has access to it).

Practical application of the carbon footprint calculation for an event Use of tools developed by each channel (option 3)	
Input data to be integrated	Data to be collected are: **Travels of employees and staff, and visitors to go to the event** • Number of employees going to the event • Number of persons in the staff (entertainers) working on the event • Number of visitors • Event reach (local, international) • Distance traveled by employees • Distance traveled by the staff • Portion of visitors coming from the town of event • Portion of visitors coming from the country of event • Portion of visitors coming from the continent of • Portion of visitors coming from the rest of the world **Event place/booth** • Surfaces dedicated to the event • Event opening hours • Amounts spent on rented material/ bought/constructed for the event (furniture, machine, computing/technical equipment, etc.) • Portion of reused furniture and equipment after the event • Energy consumed for heating / air conditioning • Energy efficiency of the rented site **Catering** • Amount spent for cleaning, accommodation, purchase **Logistics for the event** • Amount spent for transport (logistics upstream and downstream) for the • Number of travels for national, the event (upstream and downstream • Mode of transport **Communication** • Amount spent on communication on the digital media • Amount spent on communication on the physical media (goodies, POS advertising, • Number of prints for event campaigns • Number of prints for worldwide campaigns • Number of other digital communications (e.g. emails, etc.) • Number of visits on the Internet site and other digital media (e.g. app) • Number of promotional materials published papers • Number of typical promotional objects product goodies • Number of POS type temporary material/ products • Portion of reuse of theses supports **Other services for the event** • Other amounts spent on services for the event (e.g. insurance, caterer/food security, etc.) • Number of meals served • Portion of vegetarian meals • Portion of used dishware
Emission or allocation factors to be used	Emission factors are implemented directly in the CLEO calculator. The impact of visitor travels is distributed proportionally to the brand participation
Who does organize the data collection?	The brand has appointed someone in charge of the data collection. This person collected the data from the event manager in the agency and entered them in the calculator.
Where are the main input data collected?	Data related to the booth and catering may be included in datasheets/quotes. Data related to travels of the staff and employees must be monitored. Data related to the fair (participation, etc.) may appear on the event website, in particular if an extra-financial balance is made, and they must be requested to the organization. Data related to communication appear on reports generated by the agency for the event.

Output indicators to be monitored and findings.	**Indicators to be monitored:** • **Total impact of the event (kgCO_2eevent)** • Breakdown of event impact by emission type (travels of visitors and staff, communication, furniture, energy, waste, catering, logistics, other services) **(kgCO_2eevent)** • **Event impact by contact reached (gCO_2eevent/1000contacts) –** *In the framework, contacts are all visitors if the brand is the event organizer, or the portion of or the portion of visitors met during the event if the brand is only a participant.* • **Event impact by € spent (kgCO_2eevent/€)** • **Event impact for its entire duration (kgCO_2eevent/days)** **Findings:** • Travel of visitors is the major source of carbon impact. To reduce and manage this impact, local events as well as organizations facilitating the use of less-carbon-emitting modes (encouraging public transport services, measuring precisely the place of origin of visitors). • Other points to work on: encouraging vegetarian food, using second-hand material/equipment for booths, preferring carrier with a low-carbon policy, optimizing brand employee travels, etc.

3 Usage case

dentsu

Comparative analysis of the weight of carbon of a communication campaign using the calculator developed by dentsu and Oneframe recommendations.

Adhering to this approach for transparency and harmonization of methods, the dentsu agency wished to compare the carbon balance results of its calculator (developed with Axionable) with the Oneframe methodology. To this end, an advertiser of the agency conducted a comparative analysis of the carbon balance from a real communication campaign rolled out in 2023.

Analysis scope

• Campaign studied covers the following:

Media	Volume of "contact"
TV	476 M
Radio	424 M
Digital	7 M

Collected elements were analyzed and assessed by BL Evolution.
Modeling was controlled for the following media: TV, Digital, Radio.

• Note:

- The studied campaign covers volumes varying from one media to another: television and radio reach 60 to 70 times more contacts than digital methods.
- The weight of TV content is higher than the weight of digital content.

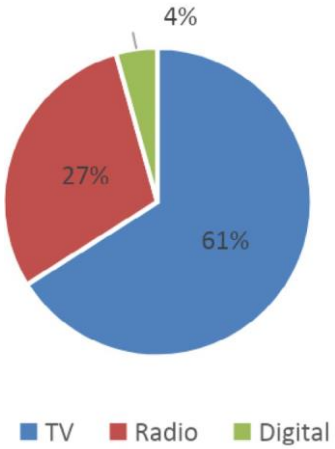
The type of used data also varies from one media to another:

- Digital impact is assessed based on open-source averages from the SRI V2.1 standard combined with default assumptions, such as Internet search time equivalent to a display print (3s). The advertising space allocation is included in the calculation, as well as manufacturing and end of life of servers and networks.
- For TV, calculation results are obtained from the tool of the inter-professional organization ADMTV (DK platform), which is based on average data of TV media.
- For radio, the process is roughly the same: Calculation results are obtained from the tool of the inter-professional organization Bureau de la Radio (DK platform), which is based on average data of radio media.

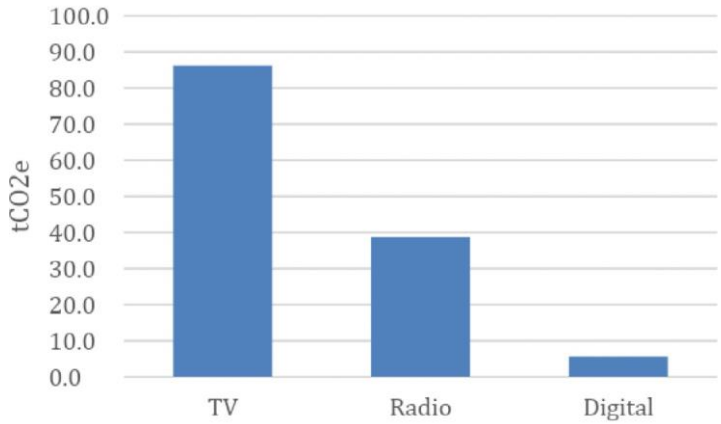
The assessed global footprint of the campaign calculated using the framework is 130 tCO_2e. This carbon weight comes mainly from emissions associated with the TV and radio spots.*

Results of comparative study

Breakdown of emissions per broadcasting mode



Absolute impact per media



Comparison of specificities of digital and TV impacts:

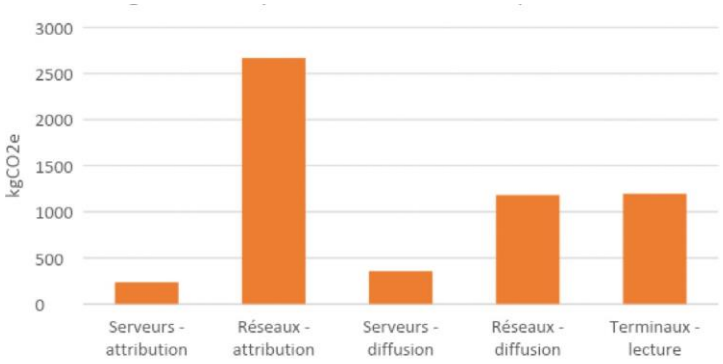
Due to the use of a broadcasting network (DTTV, satellite) for TV, server and network impacts are proportional to the number of broadcasts, which means independent from the audience. Therefore, the network share in the total TV impact is relatively low when compared to the terminal share, because the number of broadcasts is low when compared with reached audience.

In the case of digital and OTT, each viewing (unicast) induces one server call and one network transfer per connected terminal, which creates a correlation between the number of reached contacts and the generated carbon footprint.

Finally, there is an advertisement space allocation modeling only for digital methods, and its impact is mostly due to network solicitations. In the case of programmatic, this step can largely influence the balance, and it depends directly on the number of active paths implemented on sites (here, the default SRI value is used). There is no modeling for segmented TV impact.

* Results of this campaign are specific to its breakdown, and they must not be used for generalization of other campaigns with different characteristics.

TV – analysis of contributions by third party
Digital – analysis of contributions by third party



((Image tranlations))							
Servers	Networks	Terminals	Servers – allocation	Networks – allocation	Servers – distribution	Networks - distribution	Terminals - reading

Regarding servers, the scope of frameworks goes beyond the sole storage function and uses a modeling created through the server solicitations (content transmission) for the allocation and broadcasting steps.

For terminals, life cycle is fully taken into account for the three media. The result depends directly on the strong assumptions used to define the emission factors, such as daily use or lifetime of each terminal.

Findings from the carbon balance comparison

- **Results demonstrate the consistency of calculation modes. Therefore, the tool used to measure carbon impact of dentsu's media campaign is in line with the Oneframe approach of Union des marques.**

Both entities discussed in particular the weight allocated to terminals. Indeed, there was a focus on impact values of terminals, where harmonization represents a key challenge to collectively advance the market.

A discrepancy has been identified and explained for radio, the scope of which is different. The difference is mainly linked to the inclusion of carbon impact of content broadcasting on car radio by dentsu (estimated at one third of the sector by Médiamétrie). For the time being, it is not included in the Bureau de la Radio's framework. It is thus relevant to model it if there is no data available in the framework, as is currently the case.

As with any carbon footprint calculation, an uncertainty coefficient remains in the results. In fact, used data are called "level 1 data", meaning that a high number of assumptions have to be made for carbon footprint calculation. But this does not alter the value of findings mentioned above.

Usage case

Carbon footprint of multimedia campaigns for Oasis and Schweppes.

Suntory, a member company of Union des marques participating in the Faire program, chose to calculate the 2021 and 2022 campaigns carbon footprint of its Oasis and Schweppes brands using Oneframe methodology. Suntory intended to create, based on this reference year, a strong, reliable, and transparent basis for its multimedia campaigns in order to then define a reduction trajectory over time.

Calculation was carried out by BL Evolution team during the last quarter of 2023. It confirms the relevance of approaches shared in Oneframe for the carbon footprint calculation of advertisers' communication campaigns.

Analysis scope

The carbon footprint calculation includes different types of content used for the campaigns:

- Media broadcasting channels: digital, TV, OOH/DOOH, print, cinema
- Brand content: content developed for broadcasting on the brand assets
- Production of advertising content: content produced for broadcasting on the media
- Influence: mainly digital
- Brand physical events
- Results do not include goodies, as these represent a very marginal portion and the obtained data granularity remains hardly usable.

The entire life cycle of campaigns has been taken into account, from content production to broadcasting to end of life of broadcasting devices. In particular:

- For a digital campaign, the life cycle includes the phases of advertising space allocation, storage, broadcasting, and use of the advertising spot. Here, we find the three "digital thirds": servers, networks, and terminals.
- For a print campaign, global impact of the media life cycle is used.
- For events or production, travels and expenses are included in the carbon footprint calculation.

In this study, the following calculation frameworks are used according to Oneframe recommendations:

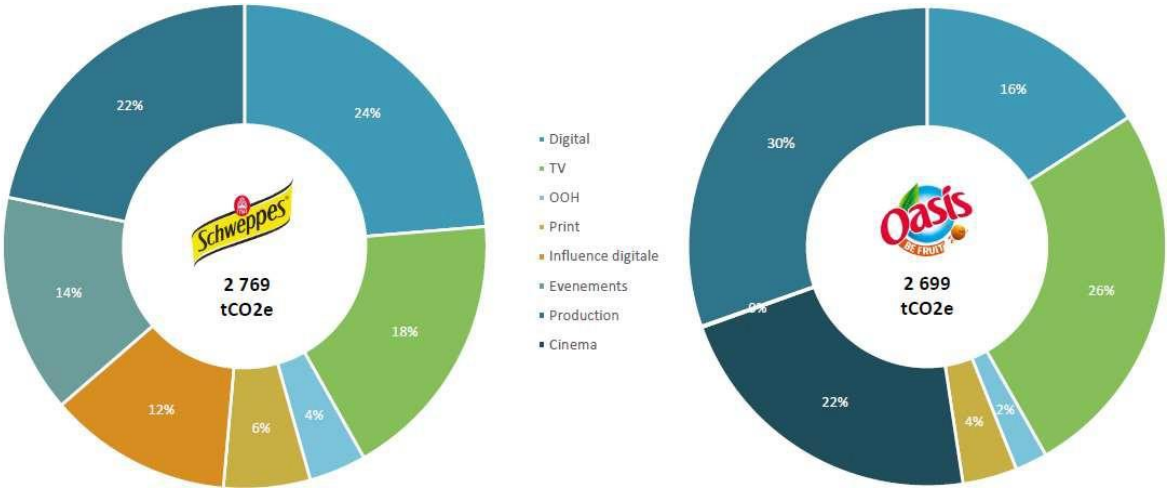
- SRI/Alliance Digital framework for Digital and Influence activations
- ADMTV framework for the TV media part
- SEPM framework for the Print part
- UPE framework for the OOH/DOOH part

Studied campaigns are defined according to the following scope:

Media	Schweppes - Volume of "contacts" 2022	Oasis - Volume of "contacts" 2022
Digital	194 M	536 M
TV	1,753 M	2,619 M
Magazine	26 M	18 M
OOH/DOOH	512 M	59 M

Results

Carbon footprint of Schweppes and Oasis campaigns is respectively 2,769 tCO_2e and 2,699 tCO_2e for 2021 and 2022 (aggregated).



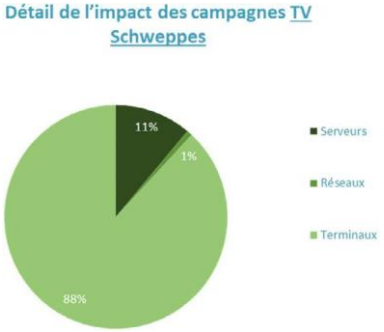
For both brands, main sources of emissions are Digital, TV and advertising production. For Oasis, cinema also accounts for a significant portion of the carbon footprint, whereas events are the fourth source of impact for Schweppes.

Given the lack of input data, the impact of production has been estimated and most of it comes from services. These have been assessed using a monetary ratio, which partly overestimates the results.

Close-up on Schweppes footprint: TV, Digital and Influence

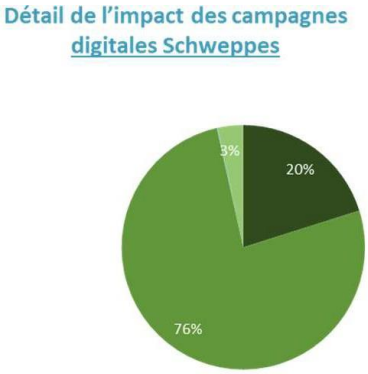
Focus on TV media

88% of the "TV broadcast" impact is due to viewing of the campaign on television. The particularly low impact of networks is due to the broadcasting mode (satellite, DTTV, etc.). In fact, with this mode, the audience volume has no influence on the impact.



Focus on Digital media

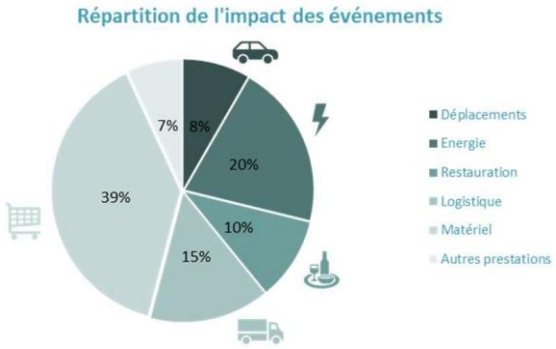
As opposed to what was observed in TV media, here, networks account for the majority of impact of this item. The cause is the significant weight of the broadcasted content (video of 132 Mb/spot in average, with some long spots) and the allocation mode of advertising space requiring a lot of resources, calling upon many third parties and additional servers and networks (programmatic allocation mode). The extremely low impact of the terminal part is due to a low completion rate.

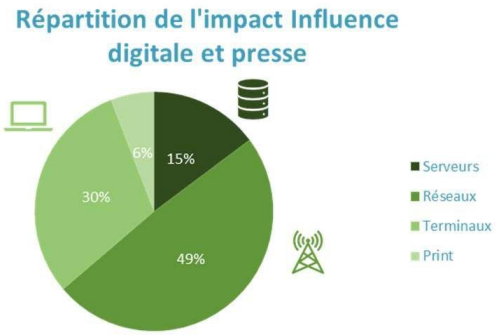


Focus on events and influence

Two different frameworks have been used in Oneframe:

- UNIMEV framework for the event part
- SRI/Alliance Digitale framework for the digital Influence part





BL Evolution has worked on the following basis:

- Assumptions on the travel mode and number of kilometers traveled are based on the AACC (Association des Agences-Conseils en Communication) calculator, which offers a modeling. Total impact of visitor travels attributed to the campaign is proportional to the total length of the last film show.
- Remaining impact of cinema is mostly due to the energy consumption of the theater during broadcasting of the spot.

Lessons learned and recommendations

Carbon footprint calculations made it possible to identify several reduction levers for this footprint. Areas for improvement have also been identified, to allow a more accurate measurement of the footprint, and to monitor implemented actions.

Given the nature of their activities, production and events combine identical courses of actions. It is possible to act on purchases by encouraging rentals, extending the equipment lifetime, reusing, or calling upon more responsible providers. The question of needs also has to be addressed, for more sobriety. Some levers have been identified in the area of travel: reducing the number of people traveling, reducing the distance covered,

or limiting carbonated modes of transport such as planes or combustion vehicles. For events, it is important to give some thought to the number of targeted people and the chosen location, which must be accessible with soft means of transport (train, carpool, etc.).

For media (TV, digital, or press campaigns), carbon footprint is directly related to the audience. Thus, levers for sobriety, optimization and targeting of the number of reached contacts need to be identified. Furthermore, one of the levers is to work on the format size. For digital and influence campaigns, special attention should be paid to the weight and length of videos. On press media, impacts are proportional to the size of inserts as well as to the type of paper and printing, despite greatly varying results and incomplete transparency on this media. Lastly, another identified lever is challenging the broadcaster.

oneframe

Ad carbon calculation framework