SUSTAINABLE OUTDOOR ADVERTISING IN THE CONTEMPORARY CITY *

PUBLICIDAD EXTERIOR SOSTENIBLE EN LA CIUDAD CONTEMPORÁNEA

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JENNIFER GARCÍA CARRIZO

Complutense University of Madrid
Information Sciences Faculty.
Complutense University of Madrid.
jennifergarciacarrizo@gmail.com

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PALABRAS CLAVES

Publicidad exterior, sostenibilidad, pantallas digitales, ciudad, comunicación, publicidad exterior sostenible.



Abstract

Sustainable outdoor advertising emerges in the contemporary city as the way to guarantee the survival of commercial communication in urban spaces. This advertising must be environmentally responsible and have a systematic approach that allows its communicative actions to be integrated architectonically, urbanistically and socially in the urban spaces. In this way, the entire advertising system and the companies adhering to it can behave as corporate citizens.

To this end, advertising agents need to focus on reducing the ecological footprint in order to achieve sustainability over the time of their activity. They also need to ensure that their actions develop cultural and symbolic functions in the urban space, which are integrated and adapted to the environment and generate a shared value for the whole society. In this sense, the aim of this research paper is to develop an action model that, when properly implemented, achieves sustainable outdoor advertising in cities. A model that also contemplates the use of the new technologies and their characteristics in order for the outdoor advertising to adapt to the architecture and regional tastes of each city.

Resumen

La publicidad exterior sostenible se erige en la ciudad contemporánea como la vía para garantizar la pervivencia de la comunicación comercial en los espacios urbanos. Esta, ha de ser responsable medioambientalmente y tener un enfoque sistémico que permita que sus acciones comunicativas se integren arquitectónica, urbanística y socialmente en los espacios urbanos. De esta manera, se consigue que todo el sistema publicitario y las empresas adheridas a él se comporten como ciudadanos corporativos ("corporate citizenship").

Para ello, es necesario que los agentes publicitarios se centren en la reducción de la huella ecológica en aras de alcanzar la sostenibilidad en el tiempo de su actividad. También han de preocuparse porque sus acciones desempeñen funciones culturales y simbólicas en el espacio urbano, se integren y se adapten al entorno y generen un valor compartido para toda la sociedad. Esta investigación establece un modelo de actuación que, implementado adecuadamente, permitirá integrar una publicidad exterior sostenible en las ciudades. Un modelo que, además, contempla el uso de las nuevas tecnologías y sus características con la finalidad de que la publicidad exterior se adapte a la arquitectura y a los gustos regionales de cada ciudad.

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Introduction

In Europe, between two and eight million of billboards are displayed at any time, a figure

that continues to grow. Every two weeks, more than six millions square meters of poster

paper are discarded. This paper is not recycled, the ink is not respectful with the environment

and the glue used is toxic. As a result, outdoor advertisement has disastrous consequences for

the environment and, therefore, it is necessary to find a solution (European Commission, 2014).

Undoubtedly, outdoor advertising has polluting effects related to the consumption of electricity, the

use of chemical substances, such as toxic glue, and the consumption of recycled paper or PVC vinyl, a

toxic substance that contaminates water and other solids (Verde Nieto, 2008). For this reason,, outdoor

advertisement emerges in the urban space as a contaminating factor at the environmental level.

On the one hand, outdoor advertisement, as part of the urban ecosystem, also has polluting effects

on the city that affect the individuals who inhabit it, having adverse effects on their health (stress, mental or

emotional imbalance, distractions in driving...).

On the other hand, a large number of messages also affects urban spaces and their architecture. It distorts

them by invading them through different elements of urban furniture and concealing facades by superimposing

posters and contributing to the deterioration of buildings due to the placement of metallic structures. Thus, the

unlimited installation of outdoor advertisement cause the "alteration of the image and physiognomy of the urban

environment because of the accumulation of raw materials, products, waste,..." (Montesinos Mejía, 2013, p. 4).

All this affects urban spaces and, by extension, its reputation together with that of the city. An uncontrolled

amount of outdoor advertisement caused the city to be perceived as a neglected, polluted, aesthetically eroded

and, by extension, as an unsustainable (Olivares, 2009, p. 261). Therefore, pollution "is becoming an important

element in determining the quality of the urban landscape and the perception and image of cities" (Olivares,

2009, p. 262), as well as its reputation (Villafañe, 2008, p. 10).

In this context, it seems necessary to implement a sustainable outdoor advertising in the city, and this is

precisely the object of study of this research.

Outdoor advertisement is considered to be the one that appears both in the urban landscape and in

the rural one. Its main characteristic is that it appears in public places, regardless of whether these are on the

street -outdoor advertising- or in closed spaces, such as the metro -indoors advertisement- (Pacheco, 2000;

Rey, 1997, p. 216; Jornet, 2008). In addition, it is important to point out that, when speaking of digital outdoor

advertisement, reference is made to the communication for advertising purposes that is allocated in digital and

interactive media that can be consumed at any public space (Iruzubieta, 2011).

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Objectives

The main objective of this research is to establish a model that allows the implementation of sustainable

outdoor advertisement in the urban space. In order to do so, it is necessary to determine its characteristics and

conceptualize the term reaching a definition for it.

Method

To achieve the different objectives described, a bibliographic review is carried out with its corresponding

content analysis, based on a documentary research though secondary sources. These are listed in the

bibliography section of this research and they have focused on its fundamental points: urban and advertising

pollution, outdoor advertising, digital screens, social responsibility and sustainability.

In this sense, this research includes the current knowledge with substantive findings, as well as theoretical

and methodological contributions about outdoors advertisement, city and pollution. Using this knowledge, it

has been developed a concept of sustainable outdoor advertising and its several characteristic, which had

been used to develop a useful model to implement this kind of advertising at cities.

1. Concept of sustainable outdoor advertising

The uncontrolled, unlimited and disorderly use of advertising media in the city leads to information

saturation, causing the messages to be ineffective and imperceptible for the target audience. Therefore, its

regulation through the relevant public institutions is essential. This regulation must focus on a responsible and

sustainable management to configure an outdoor advertising that should be developed in the city with a series

of functions. Thus, it should configure a symbiosis together with the city through sustainability.

Sustainable outdoor advertising is that one that is implemented in the city providing social and

environmental benefits for the society in which it is integrated at the same time as it brings an economical

and reputational value for its advertiser. This way allows its perpetuation over time creating shared value for

all agents involved in its implementation. It is an advertisement that not only cares about making urbanites

aware of different environmental values, as green marketing does, but also applies those concepts that they

intend to sell through, for example, the use of environmentally responsible, recyclable and environmentally

friendly displays and the environment in which they are integrated. Thus, not only the content matters (what is

narrated), but also the advertisement formats and displays (how and where it is narrated).

In this situation, digital outdoor advertising is presented as a more respectful alternative to the

environment than traditional outdoor advertising. However, for this digital outdoor advertising to be sustainable,

it is necessary to fulfil a series of characteristics too.

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2. Characteristics of sustainable outdoor advertising

In order to determine the characteristics of sustainable outdoor advertising, it is interesting to resort to the model proposed by Olcese, Rodríguez and Alfaro in their Responsible and Sustainable Business Manual (2008), which establishes five guidelines to be followed by any company seeking legitimacy and justifying itself before society by obtaining a license to operate in it: openness and sensitivity to the environment, creation of value, long-term consideration, innovative capacity and a sense of community (Olivares, 2008, p. 4, 3).

Thus, any company that seeks to be socially responsible, and by extension sustainable (Andreu and Fernández, 2011), must follow these patterns. If these guidelines are transferred from the company to outdoor advertising, it is possible to establish what would be the different foundations that advertisers and other agents of the advertising network (media agencies, companies dedicated to the assembly and operation of street furniture and other advertising media,...) should consider to carry out a sustainable outdoor advertising: integration and adaptation to the environment, creation of shared value, sustainability over time, reduction of the ecological footprint and fulfilment of a cultural and symbolic function in the city.

These five foundations of sustainable outdoor advertising are related to each other by feedback and cannot be understood by themselves. They are to be understood as part of the whole and not as independent guidelines. So, all of these statements or characteristics are interrelated.

2.1. Integration and adaptation to the urban environment

Firstly, all outdoor advertising, to be sustainable, must be integrated into the environment adapting to its needs and playing an aesthetic role in public spaces and their architecture. It is essential to install advertising through urban furniture which is fitted and integrated into the specific features of the environment. In order to do so, it is necessary to design and create elements that cover the needs of each space considering, among others, its scale, the amount of existing media in it and the most suitable materials for being integrated in every urban landscape. In this way, it is intended to avoid breaking with the unity of the urban space and end up by falsifying it (Pacheco Rueda, 2007).

For this reason, different companies, such as Cemusa, hire multiple architects and designers, such as Nicholas Grimshaw, Richard Rogers, Giorgetto Giugiaro or Miguel de Oriol, in order to offer a wide variety of advertising displays with different shapes. In this way, they could be adapted to each specific space (FCC, 2017, p. 37). Thus, different models of advertising columns or public toilets appear according to the needs of each urban space (figure 1).





Figure 1. Advertising columns designed for different urban spaces: historic city centres and innovation city areas. Source: https://goo.gl/75nLXE

These vary in design and shapes depending on the location of the display. For example, different models are used in historic city centres, where more traditional elements are placed, than the ones used in a new area of the city, which usually is a dynamic and modern space where innovation is present through the use of new materials and risky stylistic designs.

However, other factors can also be considered, such as the weather of the place. Thus, the different supports, such as bus shelters, are also adapted to the climate of each urban space for which they are designed: the ones implemented in rainy cities, such as Birmingham (United Kingdom), differ from the ones implemented in cities where the precipitations are less frequent, such as Seville (Spain). In the following example, it can been seen how bus stops in cities in the United Kingdom, where rainfall occurs almost daily, are erected to protect from the splashes of cars (figure 2).



Figure 2. Bus stop designed to protect against rains and splashes of cards, in Birmingham, United Kingdom. Source: https://goo.gl/uMH4Qy.



Likewise, when implementing advertising displays, regional tastes must be taken into account. To illustrate, in Oslo (Norway), where wood is traditionally used in the construction of buildings and is part of the national identity, it is interesting to use it for the seats of bus shelters. In this way, not only is it possible to associate national elements through the display contributing to create an identity in the city, but also a warmer seat than a metal one is provided, which is relevant given the extreme cold in Nordic countries.





Figure 3. Bus stops design with wood in Oslo, Norway. Sources: https://goo.gl/2uNG4W and https://goo.gl/Fxi8TV

These two factors must also be taken into account when implementing other outdoor advertising displays in the city, such as digital screens.

In this sense, as Haeusler (2009) states, there are factors on each continent that should be considered in the implementation of advertising screens in their urban spaces. For example, in Asia, the illuminated spaces are easily accepted, which favours the development of large digital screens (Haeusler, 2009, p. 20). The same happens in America, where advertising saturation is common and large-format screens predominate, especially those that allow interaction at the street level (Haeusler, 2009, p. 124). However, this does not happen in Europe, where it is more common to find small screens at a more intimate scale that, although they are interactive, they do it over long distances. The reason why this happens is because, in Europe, there is a deeper interest in the public space and a greater concern to integrate screens and advertisement displays into the urban landscape (Haeusler, 2009, p. 64).

Regarding Africa, it is necessary to establish that implementing digital screens will be difficult, not only because of the lack of regulation, but also because of the technological development and the climatological conditions of the continent. Nevertheless, there are some urban spaces in which digital screens of high quality have been implemented with a huge economic cost (Haeusler, 2009, p. 173). The same happens in Middle East countries, such as Abudabi, Dubai and Doha, where problems derived from external temperatures arise in desert areas. LED technology only works up to 60 °C and the extreme brightness of the sun leads to an increase in the brightness of the screen that, consequently, increases its operating temperature too. In addition, sand storms damage the material with which the LED is fixed to the building (Haeusler, 2009, p. 172).

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Finally, it should be noted that in Oceania, this type of digital installations tend to be ephemeral and tend to be used mainly in night festivals (Haeusler, 2009, pp. 148-149).

For all these reasons, when any urban advertising display is designed, it must account for the physical space that is going to surround it (Pop and Toft, 2016, p. 407). To sum up, it is necessary that architecture embrace advertising displays, keeping in mind they will be there permanently, even when they are not in use.

2.1.1. Transparent digital screens as a sustainable advertising medium

In recent years, cities and the way in which outdoor advertising is integrated into them has changed. Thus, digital screens have colonized urban landscapes and revitalized them, which has made them need to be completely rethought. The same has happened with architecture, since it is mainly in buildings where digital screens are placed. This is how what we now know as "media architecture" was born (Bauer, 2014). It is an architecture that implements digital screens and different technologies that make the building move and change its colour and shape in order to offer information and integrate itself in the public space.

As a consequence of the use of innovative and new materials, this media architecture allows the implementation of new digital technologies in a more sustainable way. This leads to the creation of a shared value among the advertiser and the urban environment. Thus, technologies such as Illumesh, Mediamesh and Only Glass and elnk can be used to configure "transparent facades". They are a kind of LED screens adaptable to any facade that allow light to pass through them and so that the part of the building behind them is visible also when they are switched off (Schreuder, 2010, p. 21).

2.1.1.1. Illumesh and Mediamesh

Illumesh and Mediamesh are two new tools developed by the German company GKD to adapt digital screens to buildings. They combine LED technology with a steel mesh fabric which can be conceived not only as a place to display the media contents but also as a structural element of the building's facade when the screen is turned off (Haeusler, 2009, p. 147). Furthermore, these digital screens are transparent and translucent, thus allowing between 55 and 65% of the light to pass through them. They are also resistant to adverse weather conditions and can withstand hurricane winds of up to 235 km/h (GKD, 2016, p. 5). In addition, the steel mesh in which the LEDs are fitted serves as a system to protect against sun's rays. Therefore, they can be used to control the temperature inside the building. Besides, they increase the building's security through being incombustible, and they can also act as a barrier to protect against people's falls.

The main difference between both systems is that Mediamesh is designed to be used both during the day and the night. This occurs because its technology allows a large number of pixels to be integrated in a relatively small area, which means that the screens can have a high resolution and brightness. Meanwhile,



Illumesh is designed to be used during the night hours. In this technology, the LEDs, instead of being part of the mesh, they can be attached to it, as can be seen in figure 4.





Figure 4. System integration of the LEDs in Mediamesh and Illumesh, respectively. Source: GKD, 2017.

Due to the lower cost of the Illumesh, sometimes both technologies can be used in a complementary way, taking advantage of each of them. So, despite the fact that Mediamesh allows visualizing contents 24 hours a day and offers high resolution images, it is through Illumesh that three-dimensional and holographic effects can be achieved. Besides, on the one hand, Illumesh reduces the installation's cost and is, on the other hand, a more affordable technology that consumes less energy and is easier to maintain (GKD, 2016, pp. 7, 13).

This technology was used at the American Airlines Arena in Miami, thus becoming the first large format transparent and mediated facade to be used in the United States. It consists of 320 square meters of stainless steel mesh with integrated LEDs that offers an optimal image resolution that guarantees bright images, both day and night.

When the NBA's Miami HEAT Group decided to create a pavilion outside their American Airlines Arena, they wanted something that not only drew attention to the arena itself, but also transformed Miami's city centre. The Mediamesh screen, patented by GKD (figure 5), provides visitors with an unobstructed view from the inside, and also a visually appealing digital content can be seen from outside. In addition, thanks to the technology implemented in this kind of screen, it is possible to integrate it in a curved building, as is the case of the American Airlines Arena. At the same time, this screen supports the typical adverse weather conditions at Arena, such as high temperatures and hurricane winds (GKD, 2017).







Figure 5: Mediamesh screen at the American Airlines Arena, Miami. Source: goo.gl/i9AMJd

2.1.1.2. Only Glass

Another technology called Only Glass has also been developed by a German company. This time, screens are configured by a technology that has LEDs in between two crystals, creating an 80% translucent and transparent surface, which means that sunlight can enter inside the building without impediments. This way, these screens can serve, for example, as the building's windows as if they were a common glazing (figure 6). Thus, these digital screens are not just placed on the buildings, conversely, they are part of them. In this way, their facades stop being a passive element in which a monitor that transmits messages has been placed. On the contrary, they play an active role. That is to say, facades turn into a space where digital screens are part of the structure of the building as they have been directly integrated into the elements that configure it (Only Glass, 2016, p. 2).

Thus, the main differentiating feature between this system and Mediamesh or Illuminesh technologies is that, through Only Glass, digital screens can be placed into the building without modifying its aesthetic or structural appearance. Besides, it is possible to place these screens into pre-existing structures as they only imply a 3.5 kilograms per square metre increase in weight (Only Glass, 2016, p. 4).





Figure 6: Only Glass Screens. Source: www.youtube.com/watch?v=j82Gc9nkpsk&t=6s

Furthermore, this technology is implemented through a 4 millimetres circuit board that, when compared to the other systems listed above with 10 or 14 millimetres thickness, make it the thinnest in the world. For all these reasons, integrating this technology into buildings to configure facades, has three fundamental benefits (Only Glass, 2016, p. 4):

- The transparency and translucency of these screens is between 80 and 95%, which makes them almost imperceptible to the human eye when they are turned off, therefore not distorting the original facade.
- 2. The circuit is integrated into two insulating glasses which protect the electronic part of the screen. This fact not only facilitates the cleaning of the facade, but also makes the screen more resistant to adverse weather conditions.
- 3. Only Glass offers a high resolution image quality up to 2,500 pixels per square metre. However, in order to make these screens as sustainable as possible, both in environmental and economic terms, it is necessary to consider the distance at which they are going to be observed. In this sense, their resolution can be modified using a lower density of LEDs that would make them cheaper and more efficient (Only Glass, 2015, p. 4).

2.2. Cultural and symbolic function

Outdoor advertising must be adapted to the environment and interact and communicate with it reflecting the habits and customs of the society. It should take into account the thoughts of the inhabitants of the city where it is located, echoing their culture, traditions, ethical and religious values, political ideas, etc. In this way, outdoors advertisement can develop a cultural and symbolic function. Besides, it could be achieved thanks to

the ability of outdoor advertising to configure landmarks, which are erected as symbols and points of reference in large cities. Some examples are the mythical billboards and advertising signs of Picadilly Circus, in London, or the neons of Las Vegas (Marchán and Rodríguez, 2006, p. 39). They are spaces that have acquired a huge influence and symbolism for the dwellers of their cities. In fact, their removal would awake a "nostalgia mood because they are understood as part of the urban imagination" (Salcedo, 2011, p. 22). In this way, these advertisement displays can become symbols that are able to configure spaces of desire for visitors, at the same time as they make the city a dream world that becomes an object of desire and enjoyment that must necessarily be visited to be lived (Baladrón, 2007).

2.3. Shared value

Sustainable outdoor advertising has to create shared value for society and the advertiser (Porter and Kramer, 2011). Not only must bill stickers win, the entire society, the landscape and the whole environment must have a reward. In this sense, the relation has to be conceived as a "win to win" process where the advertising is at the service of the brand, the environment and citizens and, by extension, the society and the whole city where the ads are developed. Thus, different urban furniture displays, such as bus shelters, serve to integrate advertising, to provide information to the public transport user, to protect the citizen from the weather and to provide a waiting place. At the same time, they also contribute to the conservation of the environment and the cleaning of the city by facilitating, for example, the installation of glass containers or batteries attached to them (Pacheco, 2004, pp. 122-129).

Therefore, sustainable outdoor advertising can be achieved through different advertising displays that, apart from an advertising function, fulfil an informative, environmental and, by extension, social function too. For this reason, new displays of outdoor advertisement contributing and generating value for the city in which they are integrated must be constantly developed. This is how innovative displays appear as a prototype which incorporates some feature, functionality or innovation that gives them an added value. This is the case of the European eco-Board implemented in London by Ricoh, the first ecological billboard in Europe, "that is illuminated only when it has managed to accumulate enough energy captured through its 5 windmills and its 96 solar panels" (Flores, 2011).

2.4. Reduction of the ecological footprint

Through the investment in Research and Development (R&D) done by some companies dedicated to the world of outdoor advertising, displays that are respectful of the environment emerge. In this way, it is possible to reduce the environmental footprint of outdoor advertising and to make it sustainable over time. Actually, it cannot be denied that cities are consumers of energy, water and territory or spaces, but "we must work to reduce their pollution and to offer a better quality of life in their urban spaces. All of that leads to make them more sustainable" (Fariña and Hernández, 1999, p. 6).



Therefore, it is essential to take advantage of natural resources and renewable energies learning to manage advertising waste by giving them a second life. All of that, without forgetting the use of recycled materials to configure outdoor ads and displays, as is the case of Cemusa, which states that "the 98% of the manufacturing materials of [its urban] furniture is recyclable" (2015).

In addition, it is interesting to apply eco-design principles in the creation of environmentally friendly ads and displays (JCDecaux, 2017) or using ecological and diverse materials, such as snow, sand or clean graffiti. Furthermore, it also could be interesting to implement materials that are both ecological and have positive effects on the environment. This is the case, for example, of the campaign carried out by Shiseido in Madrid, "Beauty anti-pollution". In it, the beauty brand placed different advertisements in bus shelter or displays that allowed, thanks to titanium dioxide, to disintegrate CO2. In that way, it was possible to reduce pollution in the city as the same way that 1,000 trees would make: eliminating up to 85% greenhouse gases, such as methane and nitrogen dioxide (Shiseido, 2015) (Figure 7).



Figure 7. Bus stop with an ecological outdoor advertising thanks to its air purifier power, installed in Madrid. Source: www. wewotion.com/portfolios/case-shiseido-beauty-anti-pollution

However, to achieve a sustainable outdoor advertisement, the use of ecological and environmentally responsible products is necessary throughout the whole process. Such products must be implemented in the ads and display materials, but also in their maintenance and cleanliness, as well as in the way in which, for example, the person responsible for placing outdoor advertising travels to the place. In this sense, the entire business structure must be considered, taking into account the processes of manufacturing, implementation and maintenance of outdoor advertising. Thus, it is necessary to support the display maintenance and cleanliness with ecological products that do not contain detergents, using recycled or rain water. Besides, ecological fuels together with low consumption vehicles or propelled by non-polluting energies (ecodriving) must be used to facilitate the employees travels in order to placing and maintaining the different advertising displays, as companies like JCDecaux (2014, pp. 44-49) already do.



Therefore, remodelling of existing advertising media is necessary to incorporate technical advances that reduce electricity consumption and implement the use of renewable energy sources without reducing quality standards (JCDecaux, 2017). In this sense, it is interesting to implement displays and ads that respect the urban environment, such as digital screens. These screens, despite their high initial price compared to traditional outdoor advertisement, offer great autonomy and high long-term economic savings: up to 80 and 90% of energy could be save thanks to the reduction of repairs and the greater energy efficiency of LED screens (Muñíz, 2013, p. 253).

Nevertheless, even more ecological than LED screens, would be those that implement electronic ink, electronic paper or "e-paper". This technology allows creating flat screens, as thin and light as a paper, with a flexibility that allows them to be rolled. They are "bistable", which means that they only consume energy when the content, the "ink" that is projected in them, change. Undoubtedly, this makes them much more efficient environmentally speaking, since they do not emit light, but rather reflect the one of the environment. In fact, even if the power supply is removed, the image projected at that moment remains (eInk, 2017). In addition, it is possible to visualize them from any angle, even with sunlight. Clearly, these screens substantially reduce consumption compared to LED screens, offering a higher resolution (Haeusler, 2009, p. 199).

In addition, although they are generally used in black and white, since 2016 it is possible to produce them in colour through a multipigment system.

However, these screens present problems being used as outdoor advertising displays because of their slow update speed, their huge cost of production in colour and their size availability: the largest available surface is currently 42 inches (elnk, 2017). All these reasons make it a difficult technology to be implemented on large outdoor advertising displays and facades. Nevertheless, it is easily applicable to outdoor advertisement mupis and urban furniture that can be used as outdoor advertising displays, such as bus shelters, benches or bins.



Figure 8. Kiosk in Boston's Town Hall Square with a 32 inch elnk screen. Source: www.displays.gds.com/gds-brings-innovative-e-paper-signage-to-boston-city-hall-plaza

In fact, this technology has been implemented, for example, by Global Display Solutions in a kiosk in Boston's Town Hall Square through a 32-inch screen that, thanks to its small energy expenditure, is fully maintained through the sunlight (figure 8). This is an example of an element of urban furniture that has integrated a sustainable outdoor advertising system. Not only does it add value to the urban space by integrating information in it, it also is a system that reduces the ecological footprint having a low impact on the environment, which makes it, at the same time, sustainable over time (Boston City Government, 2016).

2.5. Sustainability over time and systematic approach

Sustainable outdoor advertising must be conceived with a systematic approach (Olcese, Rodríguez and Alfaro, 2008, p. 30) in which the entire implementation process is taken into account, including its design, production, preparation and distribution. Thus, not only advertisement displays can cause aesthetic and public disorder in the city (Pacheco, 2007, p. 75), but also the way in which they are implemented, distributed, maintained and modified has an impact on the urban space. A systematic approach is needed to balance these feedback loops, which are usually ignored because they have not short-term consequences but, over time, they manifest themselves in all their harshness. This vision has much to do with long-term orientation and, by extension, with sustainability over time (Olcese, Rodríguez and Alfaro, 2008, p. 31).

Thus, the last characteristic that outdoor advertisement has to achieve to be sustainable is to have a long-term approach, since, in last instance, its main goal is to be sustainable in time and to remain in urban and public spaces achieving a symbiosis with them.

Conclusions

To sum up, there is a clear need to create a sustainable outdoor advertising that respects the environment, the urban landscape and, overall, the whole society in which it is located:

Since profit is a legitimate objective of its activity and the persuasive function of its message is unavoidable, its corporate function as a public service within the framework of business ethics must also play a predominant role. (...) Advertising should not only benefit the company that pays for it, but also the whole society to which it is directed (Aznar and Catalán, 2000, p. 12).

In this research, firstly, it has been conceptualized the term of sustainable outdoor advertisement through an elaborated model that details the five basic foundations and characteristics that all advertising communication actions in the public space must follow in order to be considered sustainable: integration and adaptation to the environment and its needs, creation of shared value for society and advertiser, sustainability over time, reduction of the ecological footprint and development of a cultural and symbolic function in the different public spaces in which it is located.

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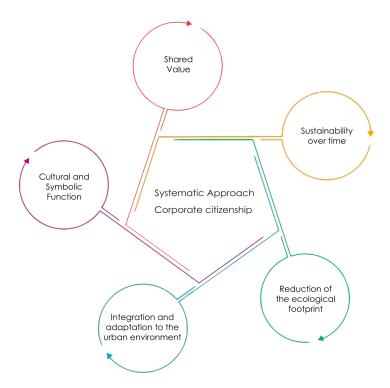


Figure 9. Sustainable outdoor advertising model. Source: self-made.

In this way, sustainable outdoor advertising is achieved in the urban landscape, not only visually, but also ecologically and economically. In this sense, sustainable outdoor advertising is about distributing ads in an orderly, controlled and punctual way, achieving benefits for the society, the landscape and, by extension, the whole environment and the city of which it is part. This kind of advertisement goes one step further and, instead of selling values related to environmental and social responsibility and sustainability, as green or ecological advertisement do, sustainable outdoor advertisement is putting into practice demonstrating that the advertiser has an ultimate goal that goes beyond that of obtaining benefits. Thus, a company that behaves as a corporate citizen being responsibly and socially, takes into account not only the economic and financial consequences of each one of its activities, but also the social, environmental and development aspects (Morrós and Vidal, 2005, p. 22).

References

- Andreu, A. & Fernández, J. L. (2011). De la RSC a la sostenibilidad corporativa. Harvard-Deusto Business Review, 207, pp. 5-21.
- Aznar, H. & Catalán, M. (2000). Códigos éticos de publicidad y marketing. Ariel: Barcelona.
- Baladrón, A. J. (2007). Reflexiones sobre la omnipresencia publicitaria en el contexto urbano: la ciudad anuncio. In Baladrón, A., Martínez, E. & Pacheco Rueda, M. (dirs.): Publicidad y ciudad. La comunicación publicitaria y lo urbano: perspectivas y aportaciones (pp. 75-93). Sevilla, Zamora: Comunicación Social.
- Boston City Government (2016). Mayor Walsh Adds Solar Powered Screen to City Hall Plaza to Provide Information



to Visitors. Retrieved from https://goo.gl/bJA5QH

- Eink (2017). Signage with elnk. Retrieved from https://goo.gl/3yupQd
- Fariña, J. & Hernández, A. (1999). Ciudad, desarrollo y territorio sostenibles, Urban Journal, 3, pp. 6-8.
- FCC (2017). Una empresa sostenible. Cemusa: Mobiliario urbano. Retrieved from www.fcc.es/documents/21301/154526/ucm_004330.pdf/fbedf4b4-4b02-4d94-bc49-abc5873f8367
- Flores, J. (2011). Llega a Europa la valla publicitaria ecológica. Retrieved from tinyurl.com/plxvbg9
- GKD (2016). Transparent Media Facades. Illumesh + Mediamesh. Disponible en: https://goo.gl/kYaXnF
- GKD (2017). American Airlines Arena Transforms Downtown With GKD Mediamesh. Retrieved from https://goo.gl/5AxpzV
- Haeusler, M. H. (2009). Media Facades: History, Technology and Media Content. Luisburgo (Germany): Avedition.
- Haeusler, M. H., Tomitsch, M. & Tscherteu, G. (2012). New Media Facades: A Global Survey. Luisburgo (Germany): Avedition.
- Iruzubieta, G. (2011). Libro Blanco del Digital Signage: la cuarta pantalla. Cuadernos de Comunicación Interactiva de IAB y Revista de la Comunicación Interactiva y el Marketing Digital Interactive. Madrid: Edipo.
- JCDecaux (2014). JCDecaux. 2014 reference document. Retrieved from tinyurl.com/omccwfs
- JCDecaux (2017). Desarrollo sostenible: creemos en un futuro sostenible. Retrieved from www.jcdecaux.es/index.php/grupo-jcdecaux/nuestro-compromiso/desarrollo-sostenible
- Jornet, L. (2007). Aceptación social del mobiliario urbano como servicio público y soporte publicitario. Barcelona, Universitat Ramon Llull.
- Marchán, S. & Rodríguez, R. (2006). Las Vegas: resplandor pop y simulaciones posmodernas, 1905-2005.
 Madrid, Akal.
- Montesinos Mejía, S. (2013). Contaminación visual. Retrieved from tinyurl.com/p2d445h
- Morrós, J. & Vidal, I. (2005). Responsabilidad Social Corporativa. Madrid: FC.
- Muñíz, J.A. (2013). En torno a la «audiovisualización de la comunicación publicitaria. Revista Pangea, 4, pp. 245-262.
- Olcese, A., Rodríguez, M.A. & ALFARO, J. (2008): Manual De la empresa responsable y sostenible. Madrid: McGraw-Hill.
- Olivares, F. (2009). "Cidade limpa" y la contaminación publicitaria en la ciudad". Revistas de Estudios de la Comunicación Zer, 14, (26), pp. 253-275.
- Only Glass (2016). Facade-integrated Mediatecture. Retrieved from https://goo.gl/hyUgty
- Pacheco Rueda, M. (2007). Publicidad y falsedad en el paisaje urbano: hacia una convivencia sostenible. In Méndiz, A. & Cristófol, C. (coords.): Falsedad y comunicación: publicidad engañosa, información falsa, imagen manipulada (pp. 75-84). Málaga: Universidad de Málaga.
- Pacheco Rueda, M. (2004). La función social de la publicidad exterior. In Eguizábal, R. (ed.): La comunicación publicitaria (pp. 117-134). Comunicación Social Ediciones y Publicaciones: Sevilla.
- Pacheco, M. (2000). Cuatro décadas de publicidad exterior en España. Madrid: Ediciones de las Ciencias Sociales.
- Pop, S. & Toft, T. (2016). What Urban Media Art Can Do: Why, When Where and How? Stuttgart (Germany): Avedition.



- Porter, M. E. & Kramer, M. R. (2011). La creación de valor compartido. Harvard Business Review. América Latina, 89 (1), pp. 1-18.
- Rey, J. (1997). Palabras para vender, palabras para soñar. Barcelona: Paidós.
- Salcedo Campino, J. (2011). Publicidad urbana de gran formato en Santiago. Santiago de Chile: Pontificia Universidad Católica de Chile.
- Shiseido (2015). Shiseido despliega la primera lona que elimina la contaminación en el centro de Madrid. Retrieved from blog.shiseido.es/lona-de-shiseido
- Verde Nieto, D. (2008). The Advertising Industry, Sustainability and the Bottom Line. Retrieved from tinyurl.com/ q7fldeh
- Villafañe, J. (2008). La ciudad reputada. Retrieved from villafane.info/files/pdf/ciudad_reputada.pdf