LIGHT AND COLOUR IN URBAN SPACES
THE ALHÓNDIGA PLAN OF VITORIA-GASTEIZ (SPAIN)

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ABSTRACT
This paper analyses the effect of coloured light on new interventions in urban spaces, taking as an example the Alhóndiga Plan of Vitoria –Gasteiz (Spain).
This intervention tries to bring back the urban and commercial interest of the historic district, partially distorted by the peripheral development, with a strong bet on new led-light technologies.
Consequences of this urban aesthetic and the impact of these colours over the surrounding architecture are studied, questioning its reversibility and the future validity of such an eye-catching resource, when the current aesthetic conceptions will evolve.

THE ORIGIN OF THE ALHÓNDIGA PLAN
The city of Vitoria-Gasteiz, capital of the Basque Country (Spain), has been for many years an example for good planning. Since its almond shaped medieval center [1], through its successive extensions to the creation of green belt that surrounds the city, which accomplish a regeneration of a periphery once in process of degradation [2].
The size and growth of Vitoria allowed trade and social life to focus on a single point, the city center. But in recent years the city has grown much [3] and the distance to the center from the new neighborhoods is not comfortable anymore. Probably because of that it is been appearing in the suburbs new shopping and leisure buildings designed as closed to themselves and killing urban life that city commerce once generated. From this problem it arises the idea of the Alhóndiga Plan, which seeks to convert the downtown into an open large shopping and leisure park. The historic center of Vitoria-Gasteiz is a urban scenario unique enough to become the reference and meeting point that the Plan needs.
Therefore, it aims to link suburbs centers to the city center by generating urban corridors full of life and activity, which result very attractive to the citizens and where the use of light, materials and street furniture are a constant used to identify all of it as a unique area.
The designer and director of the works is Eduardo Rojo Fraile, architect doctor and Head of the Municipal Office of Urban Landscape of Vitoria-Gasteiz.
THE WEST CORRIDOR
The Plan develops three main axis that cross and form the backbone of the city, West, South and North corridors. West Corridor is the most advanced in its implementation and therefore we focus on it for our analysis. This axis runs through the first route of the tram, which promotes mobility and fast connection between all its zones. The corridor as an entity must have certain common characteristics to be recognized as such entity by the citizens. Great care has been taken when choosing the type and quality of the materials involved in both the pavement and street furniture along the route. The pavement placed is gray granite, which results very resistant to both frost and temperature fluctuations commons in the city, as well as resistant to dirt and time. Only in areas where residents and business associations have requested so, it has been mixed with another flooring material in red tones, aligned with brick elements that appear on street facades. In Vitoria any change affecting street aesthetics or that involves construction works, which may affect commerce in the area, is consulted with residents and business associations to reach agreements with them.

An important element, which is maintained along the entire corridor, is the stylish contemporary design and led technology luminaire that marks the route.

We can highlight three important areas in terms of lighting and street furniture already been executed in the West corridor: Virgen Blanca Square, Prado Street and Sancho El Sabio Street.

VIRGEN BLANCA SQUARE. OPEN SPACE AT THE GATES OF THE MEDIEVAL QUARTER.
Virgen Blanca square had a radical change from before to after the intervention, in terms of image, use and occupancy.
The project idea was to remove the French style flower beds existent since the early twentieth’s, which made difficult both access and communication with the medieval center as well as the use by citizens of the square itself. Daytime image of the square is reduced to the materials used in project such as the grey granite of the pavement, with a hard and cold image, same pavement, as we commented before, which appears throughout the entire corridor. Also benches and planters sassa wooden made, whose warmth counteracts pavement hardness. Water, with sources of similar design to the ones in the square of Terraux, Lyon (France), which arises at random from the continuous pavement, both in space and time, that gives dynamism. And luminaires, like metal trees in the lower side of the square, which are mixed among the branches of some natural ones, as a sculptural backdrop.
Project’s first intention also aimed to remove the monument dedicated to the Battle of Vitoria located at center of the square, but due to the great controversy that this meant the citizens, which identified the square with its monument, it was decided to keep it.
Square’s image at night (Fig. 1) is driven by the protagonist, the LED technology lighting [4], which plays with the visual effect of illumination on objects with its colors, intensities, and dynamic variation, to make them stand out and become main characters or, alternatively, dissolve its obvious daytime presence just in front the eyes. This effect is used on central monument lighting, which is tinted with soft blue tones that decrease its weight, together with the ground in orange light under the bench that surrounds it, which enhances the feeling of weightlessness. Benches switched its daytime warmth of wood for the warmth of the orange night lighting.
From the continuous granite floor, together with the flow of water sources, it raises some colors, ranging from green to orange, blue, purple or magenta, as a reminiscent of the flower beds that every spring used to bloom at the square.

Close to them, at the boundary between the single lane of traffic, which only residents and public transport can access, and a series of bars and restaurant’s terraces, daytime pots are lit from inside with a green LED, perhaps too flashy, claiming the presence of the few plants that have kept in the square.

With the exception of trees shaped metal lamps that become powerful rays of light at night, the rest of the square has been claimed that light sources are hidden, either inside the urban furniture, or among the facades of adjacent buildings. The main character has to be the environment, not the light emitter. Thus the illumination of the perimeter of the square architecture is by spotlights incrusted in the floor, which allow observation of those buildings without being dazzled.

White rectangles are projected on the floor and divide the square in areas with different levels of privacy. Those lamps are camouflaged in tall poles that are hidden between the downpipes of buildings.

**PRADO STREET. CONTINUITY IN THE ROUTE.**

Prado Street, before invaded by traffic and with narrow sidewalks, has changed its image becoming an extension to the square, with wide sidewalks and traffic restrictions. Same materials of the Western Corridor appear, and at the same time long linear blenches, flushing with orange light, are inviting to follow the route. Its backdrop is the neo-Gothic cathedral. (Fig. 2)
SANCHO EL SABIO STREET
NEW TECHNOLOGIES, NEW IMAGE

The most recently executed part is Sancho El Sabio Street, and perhaps the most controversial. The tram crosses the street and becomes the protagonist when arriving to an enormous wooden canopy, which appear for pedestrian like Welcome to city center.

This street, before works were made, had similar characteristics to the Prado Street, with two-lane traffic in both directions, it was just passing through street. Intervention reduced traffic to only one lane for cars and another for the tram, whose routes are integrated into a strip of grass. Now sidewalks and pedestrians have taken over the space. Some large sassa wooden benches, with circular shapes this time, become the distinctive furniture of the street. Bars and restaurants have taken their terraces to the public space filling it of activity. Even the facades of the buildings have improved their appearance, to become agents of change on their street image. (Fig. 3)

As a downtown gate which welcomes visitors, this street represents a strong bet on new technologies. In the canopy has been placed a large high definition LED screen for outdoor which reports interesting data about the city, its history and its cultural agenda. This is complemented by four points of information with internet access and free wi-fi.

Image at night emphasizes the dynamism that is intended to this area. In this case, the wooden elements have not been limited to orange lighting, characteristic of those in previous spaces. (Fig. 4) On this street, the RGB LED lighting system plays a dynamic color variation (Fig. 5-6), as in the sources of color that emerge from the floor of
Virgen Blanca Square, turning the streets of different colors with no pre-determined criteria. This was not the author’s initial idea of the project, but after observing the reaction and preference of the public and specialized photographers for the flashy colors, that he was planning to discard, chose to keep them for now. The advantage of such technology luminaries RGB is that these colors can be modified and adapted to a specific situation with a range of appropriate color to it. In fact, the author made an observation demonstrating his interest to take advantage of that flexibility. Since it has been generated an urban scenario where lighting has an important role, it should be taken advantage of these virtues, changing the colors and even with templates that projected figures on the pavement. This way you can customize the streets at specific times in which the city used to spruce up with other resources. At Christmas, big holidays and special events, it is no need any more to hang a new lighting or banners throughout the city, would be enough to adapt existing systems. Some testing is been done by projecting different shapes on the pavement during the winter months (Fig. 7), now it is projected the Alhóndiga Plan logo itself. Those tests are made on specific points which, if well received, will spread throughout the corridor.

PRESENT AND FUTURE OF ALHÓNIGA PLAN.
The council is promoting parallel social activities to attract people to the new urban spaces and make them known. Among them, we could highlight Muralia, a competition in which selected artists decorate the facades of retail spaces in the area without activity at the moment, creating an inter-
est in the route and also for beautifying the sad image of the blinds drawn.
The Alhóndiga Plan is part of a larger project of sustainable mobility, supported by the European initiative MODERN-CIVITAS [5]. So a few months after the official opening of the last section, in February 2010, the city of Vitoria-Gasteiz commissioned a study to verify the actual effect on the transit through the renovated streets. According to the results, the flow of pedestrians and cyclists had increased to 154% in some cases. It is expected that this increase will continue to grow as the following phases of the Plan are running.

As for the aesthetics of the furniture and lighting, in later stages it is intended to keep the materials and lighting characteristics of the corridor, but the singularities of the night lighting will be considered in each case, avoiding the exploitation of the unique aesthetics of RGB LED, and its possibility of dynamic variation of color, by the mere fact of being a novelty. Its use must be justified and the colors have to be studied in advance, as with architectural finishes and materials and street furniture for daytime image.

REFERENCES
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