

STONE, PIXEL AND VECTOR: HIGHLIGHTING THE VALUE OF SEGOVIAN SGRAFFITO Using New Technologies to Showcase the Segovian Sgraffito Technique

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ABSTRACT

Set within the framework of Creative Cities, this study aims to foster renewed civic engagement with the traditional technique of Segovian sgraffito (Ruiz, 2014). It also seeks to deepen understanding of the heritage, architectural, and aesthetic value of the technique, while exploring its contemporary relevance by introducing it to younger audiences through new technologies (Brazuelo and Gallego, 2011). In doing so, the study establishes a dialogue between modernity and local cultural tradition, positioning sgraffito not only as a form of heritage but also as a tool for urban identity and city branding (Fuentes, 2007). By connecting new audiences with a historical technique embedded in the city's urban fabric, it demonstrates how the distinctive geometric patterns of sgraffito can be reinterpreted and revitalised across new media and contemporary visual expressions.

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1. Introduction

Today, Segovian sgraffito has become a symbol of local identity and a valuable resource for the preservation of cultural heritage in decorative, architectural and artistic terms. Its study and conservation remain relevant, driven by the commitment of academics and institutions to sustaining this artistic tradition over time (De la Puente, 1990).

This distinctive decorative technique, traditionally applied to façades and murals, forms part of what is now commonly referred to as *city branding*. City branding has emerged as an instrument of political management and urban communication, particularly within medium-sized cities seeking to consolidate and project a distinctive identity (Pérez, 2022). Within this framework, the objective is to establish a renewed relationship between citizens and the sgraffito technique by fostering an understanding of its heritage and aesthetic value, as well as its contemporary relevance, in order to ensure the continuity of this legacy. As Kavaratzis notes, policies aimed at promoting tourism, urban marketing and what is now termed city branding are not new, although their significance has increased considerably in recent decades (Kavaratzis, 2017).

Figure 1. Detail of sgraffito and façade located on Calle de la Herrería (Segovia)



Source: Own elaboration, 2026.

This article aims to establish a direct connection between audiences, particularly younger generations, and an artistic process that, through its patterned structures and symmetrical qualities, links this traditional technique to the use of geometry and flat design in contemporary digital media and visual languages familiar from everyday experience. In this sense, new technologies have helped to bridge temporal distances between artistic practices and historical periods, enabling constant access from virtually anywhere in the world (Bellido, 2001). This process has contributed to the dissemination and appreciation of diverse forms of artistic expression, making them accessible to broader audiences.

The study adopts a dynamic methodological approach that combines documentary photography of sgraffito distributed across different neighbourhoods of Segovia with digital reinterpretations of the same motifs. This strategy explores new ways of engaging the target audience by linking traditional geometric and floral patterns with their enhancement through public exhibition and digital communication. In doing so, the research aims to bring this historical legacy closer to younger audiences through the integration of new technologies. As Finol (2004) argues, technological advances and emerging applications influence artistic practices by

introducing new possibilities and interpretative frameworks, generating renewed forms of meaning.

Figure 2. Detail of sgraffito in Calle Marqués del Arco, 5, next to Segovia Cathedral, and its vectorised version.



Source: Own elaboration, 2026.

The concept of territorial branding underscores the growing need to construct a coherent territorial brand identity and to develop it in an efficient and professional manner. Such a brand brings together the positive attributes of a region, supporting and promoting the exportable characteristics of a specific territory in a global context that is increasingly homogeneous (Lita and Osuna, 2005). Within this framework, Segovian sgraffito represents a clear example and a particularly suitable resource for achieving these objectives.

This article focuses on the study of ornamental details found on the façades of Segovia and their subsequent transformation into digital art forms. The aim is to reinterpret the region's conventional and traditional aesthetic language within contemporary contexts such as graphic design, branding, and visual communication.

2. Theoretical Framework

Sgraffito is a mural decorative technique that involves the application of two layers of mortar in contrasting colours. Before the upper layer fully hardens, decorative geometric or vegetal motifs are created by scraping its surface. To define these motifs, templates made of metal, paper, cardboard, or wood are used prior to the complete setting of the material. The upper layer is then removed to reveal the underlying layer (Ruiz, 2008). This process produces ornamental compositions through the contrast between background and foreground, generated by variations in volume, form, and colour.

Figure 3. Use of stencils for sgraffito at the Casa de los Picos School of Art (Segovia)



Source: easdsegovia.com

This technique, whose name derives from the Italian *sgraffiare* ('to scrape'), has a long history rooted in the classical antiquity of the Iberian Peninsula. As a distinctive decorative feature on façades, sgraffito was further developed during the Mudejar period by Islamic master builders, who adapted and employed the technique across various regions, including Extremadura, Andalusia, Aragon, Castile, Catalonia, the Levant, and Portugal. From the Mudejar period onwards, sgraffito acquired particular artistic and heritage significance in Segovia (De la Puente, 1988).

Figure 4. Detail of the scraping technique at the Casa de los Picos School of Art (Segovia)



Source: easdsegovia.com

2.1. Sgraffito in Spain

The artistic and decorative technique of sgraffito, as it is understood today, emerged in Renaissance Italy as part of an effort to revive stylistic practices inherited from classical antiquity,

a historical period in which this technique enjoyed notable popularity. According to Rafael Ruiz Alonso, sgraffito is a traditionally decorative art applied to the finished architecture of a building, specifically to its walls and façades. It consists of carving or perforating a layer of mortar plaster applied to a previously prepared surface in order to reveal the underlying layer, which differs in colour and texture (Ruiz, 2008).

Despite its widespread historical presence, the precise origins of the technique have not yet been definitively established, and its roots remain partially unconfirmed. The oldest documented and classified examples are found in various settlements of classical Rome and within the artistic context of the Andalusian Caliphate, dating from the early eleventh century (Ruiz, 2014).

In the form and stylistic tradition that has endured to the present day, sgraffito incorporates a wide range of motifs and patterns, including abundant decorations inspired by Renaissance ornamental repertoires. These visual languages spread throughout Europe as a result of the expansion and dissemination of the modern printing press (Urquizar, 2004). For this reason, sgraffito is commonly regarded as an architectural decorative element closely associated with the Renaissance. During the Italian Cinquecento, the façades of palaces in cities such as Florence and Rome were adorned with plant and floral motifs, checkerboard designs, other geometric patterns, and figures drawn from the classical legacy. These decorative elements subsequently spread across Europe, adapting to local traditions and architectural contexts.

Figure 5. Façade of the Palazzo Bianca Capello at Via Maggio, 26 (Florence)



Source: dreamstime.com

In Spain, sgraffito was focused on the Crown of Castile during the Renaissance, but it had its predecessor in the Hispano-Muslim tradition (Bauçà de Mirabò, 2021), with an initial presence in Extremadura and Andalusia (Ruiz, 2014).

Figure 6. Detail of arabesque sgraffito in the Alhambra in Granada



Source: uned.es

Its consolidation as an architectural decorative trend was particularly significant throughout the modern period, although its expansion and subsequent decline occurred unevenly across the European continent. Sgraffito even became a highly affordable means of meeting the ornamental demands that intensified with the arrival of the Baroque period (Maldonado, 1979). According to De la Plaza Escudero, the most widespread and recognisable variant is based on an initial dark layer composed of lime, ash and or pigment, combined with sand. Over this chromatic base, a second layer of white lime plaster is applied, typically mixed with a finer type of sand.

Pre-prepared stencils made of paper, die-cut cardboard or perforated zinc were then placed over these lime layers in order to transfer the geometric designs previously developed in the studio or workshop onto the wall surface. Using these openwork or stencilled templates, incisions were made and subsequently carved with care until the coloured background layer was revealed, employing tools such as hooks, gouges or punches (De la Plaza, 2012).

While sgraffito as a decorative practice continued to develop on the Iberian Peninsula during the seventeenth century, it was precisely at the turn of that century that the technique began to fall into disuse across much of the rest of Europe. This decline occurred within a broader context marked by economic crisis, limited fresco production, and the need to construct or remodel a large number of buildings, circumstances that ultimately reduced the prevalence of this ornamental technique (Ruiz, 2008).

Figure 7. Detail of sgraffito in the Casa de la Seda on Carrer de Sant Pere Més Alt (Barcelona)



Source: urban-networks.blogspot.com

In Spain, by contrast, during the second half of the seventeenth century, the sgraffito technique continued to expand and underwent a period of significant development, particularly across the Levantine region. Sgraffito reached the Cartuja de Valdecris (Altera, Castellón), where clear evidence of its application can be observed on the dome of the monument. Archaeological and restoration work carried out at the monastery in 1665 by Claramunt has revealed decorative vegetation patterns created using the sgraffito technique.

Subsequent research has demonstrated that this technique was later employed in numerous monasteries throughout the Valencian region, where it became a fundamental component of mural decoration in this type of religious architecture. There is currently broad consensus among researchers and archaeologists that sgraffito spread from Valencia to Aragon, the Balearic Islands and Catalonia (Bauçà de Mirabò, 2021).

Figure 8. Detail of sgraffito mural in the noblemen's guest quarters. Valdecris Charterhouse (Castellón)



Source: Bauçà de Mirabò, 2021

2.2. Sgraffito in Segovia

The origin and proliferation of the Segovian style followed a different trajectory and development from that of the Levantine tradition. In the province of Segovia, Mudejar sgraffito was reinterpreted and refined, evolving into a genuine regional school and giving rise to a distinct style characterised by the abundant decoration of façades, courtyards and interior passageways. Its expansion was consolidated between the fifteenth and seventeenth centuries, when it was incorporated into both civil architecture (Figure 9) and urban religious buildings (Bauçà de Mirabò, 2021). Consequently, the Segovian style predates the Valencian tradition and has demonstrated greater continuity, as it remains in use as a decorative technique to this day.

Figure 9. Detail of sgraffito in the interior courtyard of the Artillery Academy in Segovia.



Source: Own elaboration, 2026.

Its early appearance in the Castilian province is not surprising, given the widespread diffusion and impact of this technique throughout the Islamic world at the time. Architectural examples can be found in both traditional and later constructions across regions as diverse as Tunisia, Egypt, Mauritania, Morocco, and even in areas as distant as Ghana and the Republic of Niger (Ruiz, 2008).

According to research conducted by Rafael Ruiz, a leading specialist in Segovian sgraffito, decorative applications of this technique, particularly on façades, are still visible today in buildings that remain standing in the province of Segovia, most of which date from between the twelfth and fifteenth centuries (Ruiz, 2008). Moreover, sgraffito continues to be employed in contemporary architecture, having become a recognisable and emblematic feature of the city and province of Segovia.

The distribution of sgraffito decoration on walls generally follows two main approaches. In some cases, the decoration entirely covers the façade, creating a tapestry-like surface, as seen in the Casa de Aguilar in Segovia or in two examples in Toledo. In other cases, the decoration is confined within rectangular masonry or rammed-earth panels, such as those found in the Tower of Arias Dávila. In both configurations, façades function as the primary surface for intervention, particularly in religious buildings, aristocratic residences, and, notably, structures with a defensive purpose, including the castles of Pedraza, Castilnovo and Coca.

Beyond façades, sgraffito was also applied to other architectural spaces, including courtyards and cloisters, as exemplified by the Casa de los Picos and the cloister of San Pedro de las Dueñas near Lastras del Pozo. It was likewise used in entrance halls and, more unusually, on the staircase balustrade of the church of La Vera Cruz (Ruiz, 2008, p. 153).

Figure 10. Tasting where the original sgraffito and its subsequent restoration are shown, on Calle Bajada del Carmen (Segovia)



Source: Own elaboration, 2026.

Far from disappearing, Segovian sgraffito has stood the test of time. Although this decorative technique experienced a resurgence in Barcelona and the wider province through Catalan Modernism, particularly under the influence of Antoni Gaudí, it once again declined in popularity towards the end of the 19th century.

Figure 11. Facade decorated with sgraffito in El Putxet i el Farró, located at Carrer de Pàdua, 75 (Barcelona)



Source: elperiodico.com

In Segovia, however, sgraffito has stood the test of time and continues to be used today. In the mid-19th century, the city sought a general architectural transformation in keeping with the new times. Older houses were renovated, respecting their original layouts while updating their façades with more sober and restrained designs, which, according to Herrero Ayerra, functioned as markers of identity for wealthy individuals of high social status (Herrero, 2024).

At the same time, Segovia was experiencing a period of austerity and economic hardship, which led to the severe deterioration of some of its most historic and emblematic buildings. In the words of Moreno Llorente, it was in July 1859 that, during a public meeting of the Segovia City Council, the cladding of façades was declared mandatory, with sgraffito placed at the centre of the urban policy and public beautification agenda of the period (Moreno, 2013).

Despite the transformations undergone by the city during the 19th century and its subsequent evolution throughout the 20th and 21st centuries, the sgraffito technique has not disappeared. It continues to be employed both in new constructions and in the restoration of masonry buildings and sober façades, in the city itself as well as throughout the province of Segovia. This continuity has allowed what is historically recognised as Segovian sgraffito, characterised by its distinctive formal qualities, to remain an exclusive and defining feature of the city of Segovia (Ruiz, 2014).

Figure 12. Detail of sgraffito and façade at Calle Valdeláguila, 7 (Segovia)



Source: Own elaboration, 2026.

2.3. Use of Technology in Art

Art has undergone a significant transformation in the so-called digital age. Mobile applications, social networks and emerging technologies have opened up new pathways for the dissemination of art, bringing it closer to broader audiences (Romero and Rodríguez, 2017), with a particular emphasis on younger generations. This shift is exemplified by initiatives such as the Minerva project promoted by the European Union, which seeks to digitise Europe's cultural heritage through the creation of a shared platform that collects and disseminates this heritage in digital form (Bañuelos, 2005).

Increasingly, artists, exhibition centres and art curators are incorporating new digital tools to promote more democratic access to art. These tools encourage the active participation of younger audiences who are already familiar with digital systems and technological languages (Brazuelo and Gallego, 2011).

Digitisation has enabled galleries and museums worldwide to adopt innovative strategies to broaden their target audiences. Virtual tours and immersive experiences in travelling exhibitions have become increasingly common. Interactive catalogues and the use of codes, such as Quick Response (QR) codes, placed alongside artistic and architectural works to provide additional information via mobile devices are now widely recognised practices. Renowned institutions such as the Prado Museum in Madrid have expanded this trend by offering mobile applications that allow users to engage with their collections without the need for physical presence (Llorente, García and Rodríguez, 2010). Furthermore, in order to enhance the viewer's experience, technologies such as virtual reality (VR), user experience (UX) environments and augmented reality (AR) have been incorporated into selected exhibitions and heritage sites, facilitating a deeper understanding of the original state of architectural or artistic works (Schnapp, 2015).

Within this context, contemporary research on user experience has focused on identifying the key dimensions through which audiences engage with digital environments. As Capece et al. observes:

Current research in UX focuses mainly on three areas: emotional experience, functional experience and environmental experience. Emotional experience explores user attitudes and behaviour, analysing their sensory and social needs, as well as their perceptions and aesthetic imagination. (Capece et al., 2024, p. 3)

Visual simplification in art can be a highly effective strategy for bringing artistic works closer to younger audiences and facilitating learning processes (Sweller, 2010), particularly within educational, digital, exhibition and museum contexts. Such approaches do not aim to replace the complexity of original artworks; rather, they seek to create more accessible and engaging points of entry for new generations who have grown up in environments characterised by interactive visual consumption, easily accessed through mobile and portable devices. This tendency is also evident in educational settings (González-Zamar and Abad-Segura, 2023), where digital technologies have significantly influenced both learning and teaching practices, particularly in relation to connectivism. Within this framework, learning in a networked society is based on connectivity and rapid, flexible access to information.

From a broader theoretical perspective, the potential of new technologies in art and design continues to expand. As Finol notes:

What new technologies offer us, both in design and art, albeit at completely different levels and in different dimensions, is a technical capacity whose limits we cannot yet glimpse. Those of us who were fortunate enough to experience the sometimes tortuous transition from the typewriter to the computer or from the radio to the television can perhaps more easily foresee that new technical media will greatly expand, and in fact have expanded and will continue to expand, both the possibilities of art and those of design. (Finol, 2004, pp. 41-42)

In direct relation to the subject of this article, in November 2022 master craftsman Julio Barbero presented a sgraffito incorporating a QR code during the Third International Congress on Traditional Construction and Urban Planning held in Segovia. This work exemplified the fusion of traditional craftsmanship with contemporary digital technology within the Segovian context, demonstrating an innovative approach to integrating modern communication tools into a historical artistic technique deeply rooted in the identity of the city (eldiasegovia.es, 2022).

Figure 13. Julio Barbero finishing a sgraffito QR code on a building in Plaza de Santa Bárbara (Madrid)



Source: elmundo.es

2.4. City Branding

The term city branding refers to a set of characteristics and distinctive attributes that allow a particular city to be recognised and differentiated from others within its geographical and cultural context. Its primary objective is to foster a sense of belonging and to project a positive image beyond local boundaries, as the city brand functions as a key attraction for both investors and tourists (Fuentes, 2007). This process involves a combined strategy that draws not only on local symbols and traditions, but also on the development of messages and values that communicate the identity and essence of a place. In this way, city branding promotes competitiveness and social cohesion, positioning cities as differentiated entities within an increasingly competitive territorial landscape (Zenker and Braun, 2010).

The core strategy of city branding lies in the construction of an identity that is attractive, recognisable and distinctive. This symbolic framework incorporates historical and cultural elements alongside economic and promotional components, and is directed at both local and global audiences (Jacobsen, 2009). Consequently, territories, countries or cities with a strong, coherent and well-communicated brand are more likely to capture the attention of their audiences and remain present in collective memory (Boisen et al., 2018).

As Rodrigo-Martín and Núñez-Gómez (2025) argue, contemporary cities must seek to transform their built environments in order to achieve greater synergy with present-day society. Segovia offers a clear example of this approach through the conversion of its former women's prison into a cultural centre. In this regard, the authors state:

The various cultural, artistic and museum projects that have emerged from the transformation of former prisons allow us to appreciate the importance of culture, art and creativity as tools for building new concepts of participatory, respectful, inclusive and democratic citizenship, in short, as elements that contribute to progress and social justice (Rodrigo-Martín and Núñez-Gómez, 2025, p. 45).

This approach examines the theoretical foundations, academic definitions, and methodological elements essential for understanding how a city can become a brand with emotional significance. Heredero and Chaves argue that so-called city brands could be strategically associated with

product brands, as in the famous cases of New York and its *I Love NY*, or simply with the projection inherent in their name, such as Paris or London, which are very well positioned solely because of their historical and geographical names (Torres et al., 2021).

In the current socio-economic context, in which cities, like companies and public and private institutions, have become part of a globalised market, they all seek, through their brands, an element of differentiation that will give them a competitive advantage. That is why associations between product brands and their cities of origin are included in the branding process of the latter as a new formula for overcoming the uncertainty arising from the global financial crisis. This approach is likely to be successful as long as these unions are conceived as long-term strategic alliances, rather than mere naming actions in which the name of the city and the product brand appear together without further ado. (Heredero and Chaves, 2015, p.64)

Figure 14. Design of I Love NY.



Source: morpheus.es

In recent years, the city of Malaga has been successfully promoted internationally in terms of national heritage, with connections between its branding and the cities of origin incorporated into the brand creation process as an innovative strategy to boost local economies and tourism (Díaz Morilla et al., 2021). Other Spanish cities have consolidated their city brand image for many decades prior to the formalisation of the concept itself, as is the case with Barcelona (Balibrea, 2005) and, more generally, in relation to coastal and island tourism. Additional city brands with a notable presence beyond Spain include Malaga, Madrid, Valencia, Seville, and Bilbao. From a strategic perspective, a city must first determine the type of brand it aspires to become and identify the physical and functional characteristics that need to be developed, optimised, projected, and promoted in order to endorse or support that brand (Kavaratzis, 2007).

Table 1. Key requirements for effective city branding management

Vision for the future	Long-term planning
Authenticity	Messages must reflect the reality of the city
Ambition	Set challenging but realistic goals
Consistency	Daily implementation through consistent actions
Determination	Prioritise decisions aligned with the desired identity
Consistency	Coordination of all actors around a common purpose
Collaboration	Without the participation of companies, institutions and citizens, a solid brand identity cannot be achieved

Source: Llorens, C. (2018).

In a study concerning trademark registrations in major Spanish cities, three registrations of the Segovia trademark are recognised by the Spanish Trademark and Patent Office; however, no registration had been recorded by the European agency responsible for the registration of trademarks, designs, and models valid across the 27 Member States (OHIM) at the time of the study (Sáez et al., 2011). In the case addressed in this article, with regard to the city brand centred on Segovia, the capital of the province of Castile and León is recognised for its architectural and cultural tourism as well as its gastronomy, both nationally and internationally. Its profile, however, remains largely limited to its principal architectural monuments, the aqueduct, Alcázar, and Cathedral, and its traditional cuisine, focused on roast suckling pig and conventional stews.

3. Objectives

The main objective of this study is to promote a traditional art form closely associated with the city and province of Segovia, namely the sgraffito decoration of its walls and façades (Ruiz, 2014), encouraging interested parties or visitors to engage directly with it. Firstly, with regard to Creative Cities and entrepreneurship, the aim is to familiarise audiences with the technique through its simple forms and designs (Sweller, 2010), streamlining them through the use of current digital art tools (Stambekova et al., 2024).

A secondary objective is to transform this particular architectural technique into an image characteristic of the city (Boric-Cvenic and Mesic, 2019), employing the digital image as a visual attraction and decorative element across mobile devices, personal computers, and institutional merchandising products. A final, but no less important, objective is to establish an interactive or exploratory relationship with the user by linking the digitised image of each pattern to its actual location on the city map, thereby enabling the analysis of visitor behaviour in outdoor spaces (Donaire et al., 2015).

4. Methodology

A dynamic, multidisciplinary methodological approach is proposed to showcase the technique. Through a combination of factors and the use of digital technology informed by photography and the study of previous success stories, this intervention is applied in relation to graphic design and contemporary advertising through vector design tools, illustration, and digital art. The approach encourages engagement with art and its techniques primarily through graphic design software, which, as noted by Stambekova et al., 2024. offers endless possibilities, a comprehensive set of artistic tools, a structured work guide, multiple brush options, an intuitive interface for colour selection, and virtually unlimited layers (Stambekova et al., 2024). Drawing on similar initiatives in other cities as references, this project proposes an update and enhancement of these approaches, combining multiple possibilities around the concept of city branding associated with art and technology.

According to Daniel Muñoz, *Málaga Patterns* is an initiative promoted by the Ateneo and the Málaga Foundation that centres on an exhibition at the Ateneo de Málaga, accompanied by a book/catalogue highlighting the city's visual heritage through the geometric patterns found in its streets and monuments (Muñoz et al., 2020), serving as a reference for the project proposed within the framework of Creative Cities. By focusing efforts entirely on Segovian sgraffito and employing so-called hypermedia based on new graphic design technologies (Regil, 2005), the forms would be simplified to facilitate recognition and learning by users. The resulting digital work is intended for presentation in a museum exhibition and, unlike the Malaga case, the digital art would be paired with a photograph of each façade from which the sample was taken. In this way, documentary photography of sgraffito scattered throughout the city, selected from different neighbourhoods of Segovia, would be combined with its enhancement through public exhibition. Laura Regil emphasises the connection between technology and art, noting that this relationship is becoming increasingly strong (Regil, 2005, p. 5).

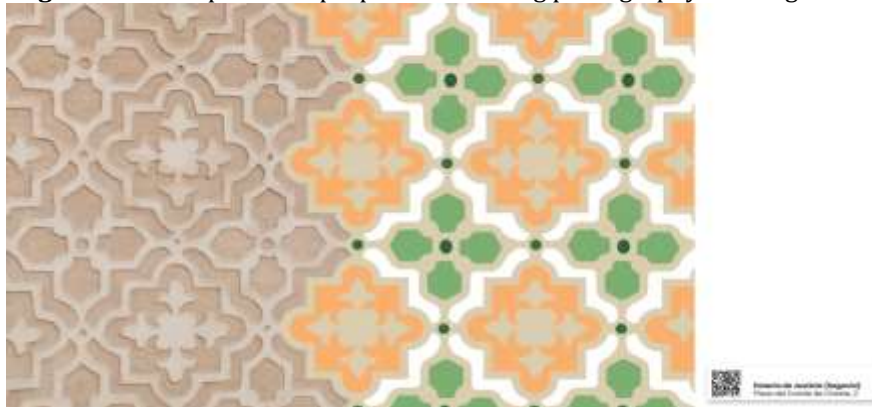
Figure 15. Málaga Patterns exhibition at the Ateneo de Málaga



Source: ateneomalaga.org

Another distinguishing feature is the inclusion of a subtitle, caption, or text indicating the street from which each photograph was taken, accompanying the images and simplified designs. The research focuses on transforming selected ornamental details of Segovian façades into digital art, with the aim of reinterpreting conventional aesthetics within contemporary contexts such as graphic design, branding, and visual communication, while simultaneously generating city-brand values (Holguín & Cabrera, 2016).

Figure 16. Example of the proposal combining photography with digital art



Source: Own elaboration, 2026.

It is proposed that, together with the works exhibited or printed in the catalogue, users can, by scanning a Quick Response (QR) code, be geolocated through geographical triangulation to the urban sites of the selected façades. Using Global Positioning System (GPS) technology, it will be possible to pinpoint the precise location of each landmark building, which, in conjunction with compass and virtual mapping applications, will indicate possible routes. In this way, the application software can detect these points of interest (POIs) and guide the user's path (García, 2021).

The objectives are therefore to promote this artistic technique, unique to and deeply rooted in Segovia, while adding value to the city brand, encouraging user interaction with the local architectural and artistic landscape, and, through the artistic and aesthetic simplification of digital art, integrating all these concepts within the framework of Creative Cities. In their study of GPS use to examine tourist behaviour spatially and temporally, Donaire et al., conducted a pre-test in

a high-visitor area, the Vall del Boí in the province of Lleida, Catalonia, which yielded results that serve as a guide for this project (Donaire et al., 2015).

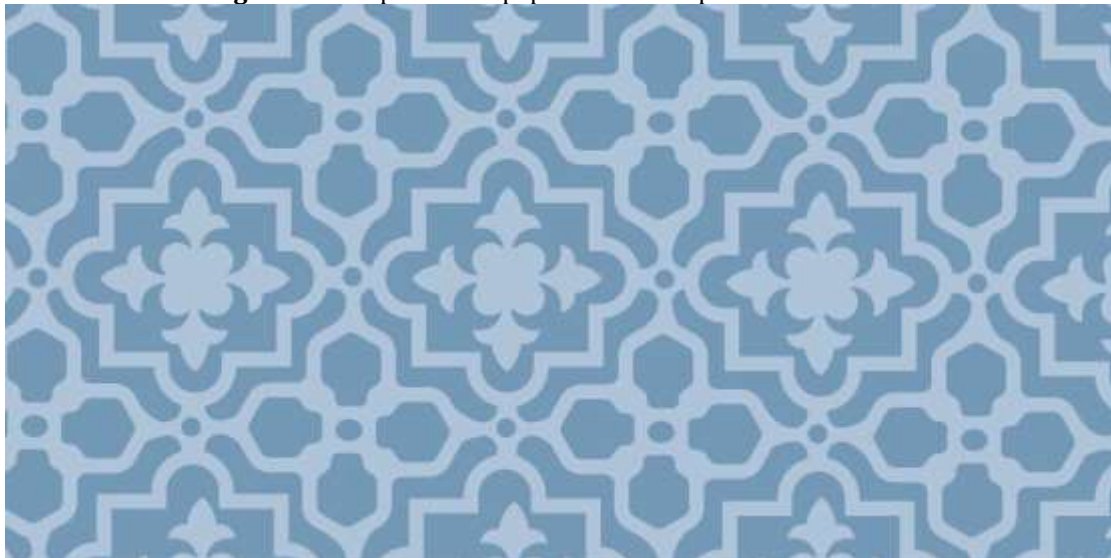
Active GPS geolocation can be supported by global networks such as Google Maps, even enabling the generation of itineraries. Alternatively, a specific application could be developed for the project, downloadable on mobile devices. As noted by Sandra Álvaro, certain applications allow the addition of historical information to maps, as demonstrated in the *34 North 118 West* project by Jeff Knowlton, Jeremy Hight, Naomi Spellman, and Brandon Stow, which invited GPS-enabled mobile users to explore Los Angeles while accessing supplementary audio and explanatory texts about specific landmarks within the city's industrial past (Álvaro, 2011).

As a further distinguishing feature, these images and their digitised versions could be displayed in municipal venues, design schools, or museums, and disseminated academically and culturally through publications, catalogues, and conferences on the evolution of sgraffito in contemporary graphic art, supported by public, private, or mixed sponsorship (Haro, 2019).

In relation to new technologies and within the scope of Creative Cities, a recreational activity is proposed to allow users to interact with digital works and local architecture in situ using apps and mobile devices, without requiring augmented reality (AR). This contrasts with the study by Iris García Urbano on Romanesque mural art in Catalonia, where users were encouraged to visit monuments or view simplified forms in museums (García, 2021). By reducing costs and emphasising abstraction and simplicity of form, the proposed approach enhances the user experience.

Finally, a connection is established with contemporary graphic and vector design, as the symmetrical geometry of sgraffito is particularly suited for digital processing. The relevance of simplicity, symmetry, and harmony as aesthetic elements supports visitors' understanding of spaces in anthropological and archaeological research and sites (Ferro, 2012).

Figure 17. Proposed wallpaper for mobile phones or tablets.



Source: Own elaboration, 2026.

This approach to traditional local art, utilising digital tools to simplify forms, also enables the creation of engaging digital patterns (Muñoz et al., 2020). These patterns can be employed in merchandising, both physically, for instance in printed posters, clothing, bags, key rings, and office supplies, and digitally, as desktop backgrounds for personal computers or wallpapers for mobile devices.

Figure 18. Merchandising proposal.



Source: Own elaboration, 2026.

There are additional possibilities to enhance the proposal presented in this article, such as extending the use of the sgraffito technique to a broader target audience, including children and young people, through workshops. A study conducted by educator Sara Moreno Llorente with her students at a nursery and primary school in the province of Segovia demonstrates the interest of even the youngest children in studying, observing, and creating these patterns (Moreno, 2013).

It should be noted that Segovian sgraffito is a distinctive hallmark of the province and capital of Castile and León, having endured over time despite other historical trends. It survives not only on the façades, murals, and walls of Segovian architecture but also in other cultural and commercial spheres. An example of this continuity is the logo of the Manuel González Herrero Cultural Institute of Segovian Tradition, which incorporates the geometric form of a sgraffito pattern above the brand identity text.

Figure 19. Corporate identity of the Manuel González Herrero Institute of Traditional Segovian Culture



Source: institutogonzalezherrero.es

As Moreno Llorente suggests, activities such as the study and creation of patterns, templates, and even sgraffito samples could complement the project proposed here. Workshops could be organised across nursery, primary, and secondary schools in Segovia and its province, bringing the technique closer to, and enhancing its understanding among, a younger audience (Moreno, 2013), with the support of institutions such as the recently mentioned Manuel González Herrero Institute of Traditional Segovian Culture.

Figure 20. Activity at a nursery and primary school



Source: Moreno, 2013

While this article was being written, the local sports club Gimnástica Segoviana Club de Fútbol unveiled its new kits for the 2025/26 season, featuring a background pattern on all sports shirts. This pattern, rendered in a flat design style, simulates the sgraffito found on the façades of one of the city's most iconic monuments, the Alcázar de Segovia.

Figure 21. Detail of sgraffito on official kit of Gimnástica Segoviana Football Club



Source: www.gimnasticasegoviana.es

4. Conclusions

The impact of new technologies and applications is increasingly evident in the field of art. If any artistic discipline reflects this impact more strongly, it is arguably architecture, which is inherently a spatial art form. Within the context of Creative Cities, this article proposes a dynamic, multidisciplinary methodological approach that combines documentary photography of sgraffito dispersed across different neighbourhoods of Segovia, exhibited publicly or presented in printed catalogues, linking these traditional patterns with contemporary geometric and floral designs in digital art. By connecting these samples with audiences through technologies such as geolocation, mobile applications, and data triangulation, the approach seeks to extend understanding of this style of architectural decoration to a wider public.

The research focuses on transforming selected ornamental details of Segovia's façades into digital art, with the aim of reinterpreting conventional aesthetics within contemporary contexts such as graphic design, branding, and visual communication.

As a final means of disseminating ideas, these images and their digitised reproductions could be exhibited in museums, design schools, or municipal spaces, or disseminated culturally and academically through conferences, publications, and catalogues examining the development of sgraffito in contemporary graphic art. Talks and workshops in public and private educational centres could further expand the target audience for this initiative.

Today, Segovian sgraffito constitutes both an emblem of local identity and a resource for heritage preservation. Its study and revival continue to attract institutional and academic interest in preserving this living artistic tradition (De la Puente, 1990).

Within the framework of Creative Cities, the aim is to establish a renewed connection between citizens and the technique, recognising the heritage and aesthetic value of sgraffito and promoting its contemporary appreciation. In doing so, modernity and cultural tradition are brought together, directly linking people with a technique that, through its patterns and symmetrical brilliance, can be revitalised in new media and visual applications.

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