



Paradossi dell'innovazione. Smartness, identità urbana e inclusività nella riqualificazione Green di Nizza

The Paradoxes of Innovation. Smartness, urban identity, and inclusiveness in Nice's Green redevelopment

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Municipalities' adoption of *Smart* [1] approaches in urban evolution requires understanding not only the multiple complexities underlying these models and the innovation introduced but also relevant aspects that may be missed or underestimated. Among these, the most complex to analyze and confront through design is the relationship between urban identity and its perception, between collective memory and the places that have defined it. Employing the French city of Nice as an example, the essay attempts to briefly illustrate the steps taken over the past two decades by the actors in this urban redevelopment process by analyzing recent evolutions. In particular, its conclusions aim to critically reflect on some radical approaches used for the existing built environment. Starting with the implementation of extensive naturalization projects and the adoption of policies to preserve the historic urban landscape, some choices seem to partially diverge from this protection goal, projecting toward the near future.

L'adozione di logiche evolutive urbane di tipo *Smart* [1] da parte delle Municipalità non implica solo la comprensione delle molteplici complessità sottese da questi modelli e dall'innovazione introdotta, ma anche la comprensione di aspetti rilevanti che possono sfuggire o essere sottovalutati. Tra questi probabilmente il più complesso da analizzare e da trattare progettualmente è il rapporto tra la l'identità urbana e la sua percezione, tra memoria collettiva e i luoghi che l'hanno definita. Il saggio cerca di restituire sinteticamente, attraverso un esempio come quello della città francese di Nizza, i passi compiuti nell'ultimo ventennio dagli attori di questo processo di riqualificazione urbana analizzandone i recenti sviluppi. In particolare tenta, in conclusione, un ragionamento critico su alcuni approcci radicali operati sul costruito esistente. Partendo dalla realizzazione di estesi progetti di naturalizzazione e dall'adozione di politiche di conservazione del paesaggio urbano storico, alcune scelte infatti sembrano allontanarsi parzialmente da questa tutela pensando ad un futuro prossimo.

01.

The neo-Gothic Basilica of Notre-Dame de Nice (1864-1879) on Avenue Médecin. In the foreground is the electric streetcar transit of Line 1, built in 2003-2013 as a pilot project for the subsequent two other lines, which have now been realized.

Photo credit: author

PREMISE

Transforming a city requires moving within a perimeter of action with strong environmental protection constraints, which we are now necessarily called upon to respect. Compounded by the relevant influences of the ongoing *Digital Transformation*, the result is an apparently very complex challenge. However, thanks to farsightedness, trust in new technological possibilities, and social involvement, some experiences have achieved attention-worthy measurable results as well as highlighting potential risks to be avoided.

THE MEDITERRANEAN CITY OF NICE AS A PERMANENT LIVING LAB

The city of Nice is the fifth largest city and, by area, the seventh largest metropolitan area in France. One of Europe's undisputed tourist capital, as of 2021, it has an area of 1,479.7km² and a population of 560,351 [2] (data source: INSEE as of the 2021 census on 01/01/2022⁰¹) within the entire aggregated metropolitan area consisting of Nice and its 49 surrounding municipalities (*Métropole Nice Côte d'Azur*). However, perhaps the most significant figure is represented by its about 5 M tourists every year. This is made possible by its very significant accommodation capacity (about 200 hotels in addition to new very short-term rental models) supported by the presence of France's second international airport (14.5 million passengers as of 2019) and an extensive touristic port (10 Ha) equipped with 7 piers, where around 480,000 passengers/year transit. This is indeed the real economic driver for the transformation [3]. In light of the above, this Mediterranean city can be considered a case to monitor - and critically analyze - to fully understand both the spiderweb of complexities underlying the aforementioned balances to be dealt with and managed and the outcomes of some of the actions taken when implementing a planned and effectively Smart evolution model. Nice - and subsequently, since 2012, the *Métropole Nice Côte d'Azur (MNCA)*, - has chosen to evolve by merging a progressive experimentation of the possibilities offered by ICT and digital technologies. Combined with other strategies, they have been oriented toward full-fledged urban environmental sustainability with the ambition to soon become a reference as a Mediterranean *Green City* in the region. To this end, since 2017, it has been participating as one of the *main* partners in the five-year European research program IRIS - *Integrated and Replicable Solutions for CoCreation in Sustainable Cities* (funded by the Horizon 2020 EU program) [4] coordinated by the Netherlands (centering on the city of Utrecht) together with Sweden (city of Gothenburg) and developing other collaborations with Finland, Greece, Spain, and Romania to develop and test new solutions in the field. Ambitious research aimed at stimulating a joint effort between universities, research centers, innovation agencies, local administrators, and public and private *stakeholders* for planning, developing, and applying innovative programs for sustainability (energy, urban mobility, and ICT diffusion and optimization). At the same time, it actively participates in networks such as *Eurocities*⁰² [5] to bring their requests and experiences to the attention of the EU, to the *Green Digital Charter*⁰³ [6] [7] to promote the progress achieved and/or projects in the fight against climate change through the innovative use of ICT by transferring information on projects and results achieved (*best practices*) and participates in research on Renewable Energy Communities and Energy Efficiency.

However, it is worth mentioning that what has just been described is a physiological evolution phase of other innovative digital innovation and urban redevelopment approaches implemented even before the creation of the MNCA. Administrations have been working for over twenty years to achieve their goals in Urban Mobility, *Climate Change* mitigation, safety, urban redevelopment/social programs, and Sustainability/Energy Efficiency: these multiple scopes, well-coordinated in time, were born even before 2012.

The close collaboration with IBM dates back to 2010: this led to Nice winning the IBM "*Smarter Cities Challenge*". After several joint research efforts, this also resulted in the creation of a



02.

Top view of the three-hectare Jardin Albert 1er above the Paillon River sea outlet route.

Photo credit: author



03.

Top view photo framing the main part of the 522-hectare surface recognized as an area of interest by UNESCO with a partial view of the Promenade du Paillon on the left.

Photo credit: author

04.

The water games area (inclusive and accessible) at the entrance to the Promenade on the central Place Massena.

Photo credit: author



05.

View of the children's playground-equipped area on the Promenade du Paillon (PdP). In the center, the now-demolished Nice National Theater (TNN) site can be seen above.

Photo credit: author, 2017

digital urban control and management platform to serve the city's "Urban Hypervision Center" (UHC) [8] and subsequently to the *Smart City Innovation Center* (MNCA with IBM, Veolia, m2ocity, and Orange) featured in IMREDD⁰⁴ [9]. Regarding mobility, for example, the radical transformation of public transport through the creation of electric rail tramways for urban pollution mitigation started as early as March 2003, with the declaration of public utility of the project for Line 1 (implementation 2003-2013) [Fig. 01.]. It was an out-and-out pilot project, connecting the neighborhoods to the north with the city center and then to the Nice hospital hub to the east with its 9.15-kilometer route and a first-estimate movement of 100,000 travelers/day. This project was carried out with mixed Regional, State, European, and local funding. It also serves as a fine-tuning of all procedures (technological and financial) for future extensions of Lines 2 - east-west/port-airport axis (2013-2019) and 3 - airport to Eco-Vallee - along the Var River (2017-2020). The same can be said for the urban redevelopment, extension, and greening project now known as *Promenade du Paillon (PdP)*. It involved the creation of a large multifunctional and highly inclusive urban public park of 12 Ha as an extension of the pre-existing *Jardin Albert 1er* (3 Ha) [Fig. 02.] designed by Michel Pena in the late 2000s [Fig. 03.]. This came with an equipped (and constantly under video surveillance) green promenade, running from the central *Place Massena* [Fig. 04.] towards the National Theater of Nice (TNN) [Fig. 05.] and the Museum of Modern and Contemporary Art of Nice (MAMAC). Work began in 2010 with the complete demolition of the historic Bus Station and was completed in the following two years.



This first experience will lead to the "Nice Verte" Program (2019-2021). That is a plan to enhance existing urban greenery by integrating large amounts of trees, shrubs, and ornamental plants to mitigate heat and pollution and to enhance urban biodiversity, starting with major downtown streets. The program was then gradually and widely extended to other parts of the city, with the rehabilitation of pipelines and street utilities, the enlargement of sidewalks, and especially the creation of bike lanes separated from roadways for motor vehicles [Fig. 06].

06.

Example of the outcomes of the "Nice Verte" program. Inclusion of urban greenery to increase biodiversity and mitigate urban heat, new reduced vehicular roads and protected bicycle lanes. Every architectural barrier has been removed in the resurfacing and widening of sidewalks.

Photo credit: author



ACTIONS TO PROTECT AND ENHANCE THE HISTORIC URBAN LANDSCAPE

In parallel with the described actions, the Nice administration and the mayor, Mr. Christian Estrosi, decided in 2014 to nominate Nice for inclusion on the UNESCO World Heritage List as a "City of Art and History." After the usual inquiry, the UNESCO World Heritage Committee accepted the candidacy in July 2021. Nice was recognized for its Outstanding Universal Value as the "Winter Resort Town of the Riviera" [10]. The value of its buildings, hotels, villas [Fig. 07], places of worship [Fig. 01], and social buildings [Fig. 08.] was also appreciated for their display of international influences from resort communities. This is associated with the remarkable quality of the landscapes, enriched by walks, parks, gardens, etc. The latter are primarily influenced by Italian and English culture. This historical architectural heritage testifies to the



07.

The historic Villa Masséna (1898) now converted into a museum on the *Promenade des Anglais* and its fine garden. The Villa is adjacent to the world-famous Hotel Negresco.

Photo credit: author



08.

The facade of the Nice Opera House (1882-1885) on the *Promenade des Anglais*. Realized by Arch. François Aune under the supervision of Charles Garnier, it has been a historical monument of France since 1992.

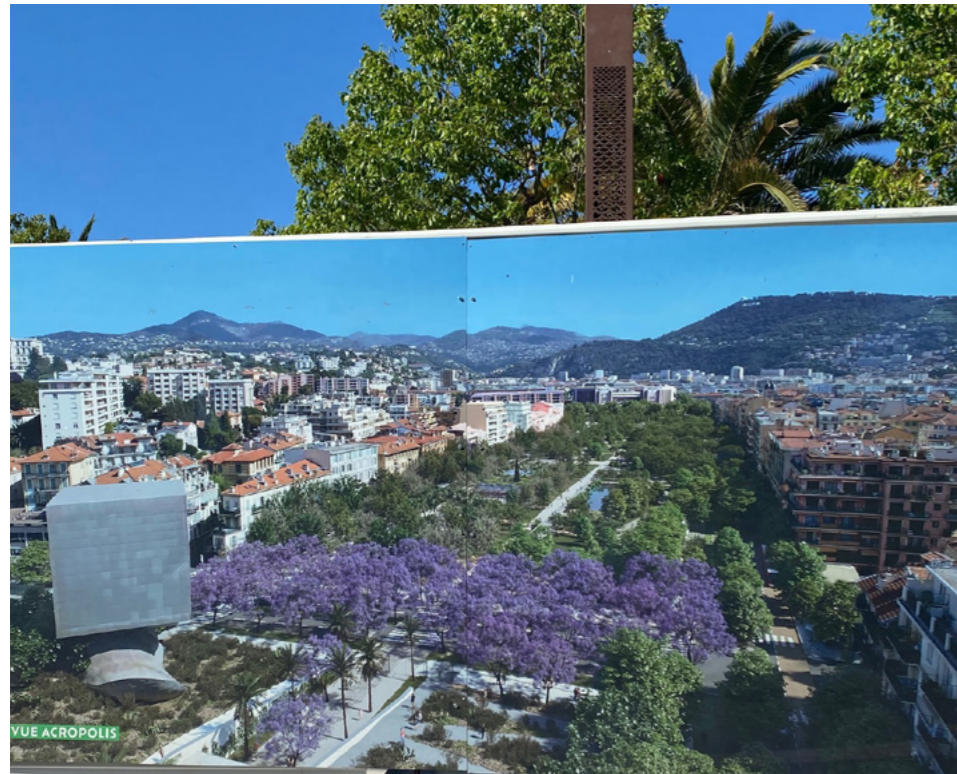
Photo credit: author



09.

Image taken from the site information signs of the "Forêt Urbain" Project under realization (2023-2026). The curvilinear part of the green line in the upper right belongs to the original first part, while the straight section corresponds to the development of the second phase of the *Promenade du Paillon Saison 2*. The central indication in red corresponded to the head entrance of the ACROPOLIS Center.

Photo credit: author



10.

The rendering of the "Forêt Urbain" project (by the designers and Métropole Nice Côte d'Azur) displayed on the site perimeter to highlight the transformation following the demolition of ACROPOLIS.

Photo credit: author

A FOREST IN THE CITY

The public's appreciation of the *Promenade du Paillon* mentioned above recently prompted the Nice Administration to define a new and ambitious project to extend green spaces in the city's central areas. Mainly motivated by relevant desiderata in urban city heat mitigation and pollution reduction for the next decades, the "Forêt Urbain" or "*Promenade du Paillon Saison 2*" project [12] envisions an extension of the equipped promenade by an additional 8 hectares of permeable soil and planting 1,500 new trees [Figs. 09., 10.]. According to the designers' estimates, this will lead to a 5 °C decrease in ambient temperature, 1,700 tons CO₂ less per year, the absorption of one ton/year of pollutants (nitrogen dioxide and sulfur), a 20% reduction in cardiovascular diseases and a 6 to 8-decibel reduction in urban noise. For this purpose, the project involves demolishing two significant buildings: the *Téâtre National de Nice* (TNN) (1989-2013) by Arch. Yves Bayard south from MAMAC [Fig. 05.] and the ACROPOLIS Multipurpose Convention Center and Auditorium to the north [Fig. 11.] [13]. The latter is a monumental building from the 1980s (1981-1984), cherished and used by residents, designed by architects George Buzzi⁰⁵, Pierre Bernasconi and Pierre Baptiste; the former was one of the most enlightened, and appreciated architects in Nice [14].

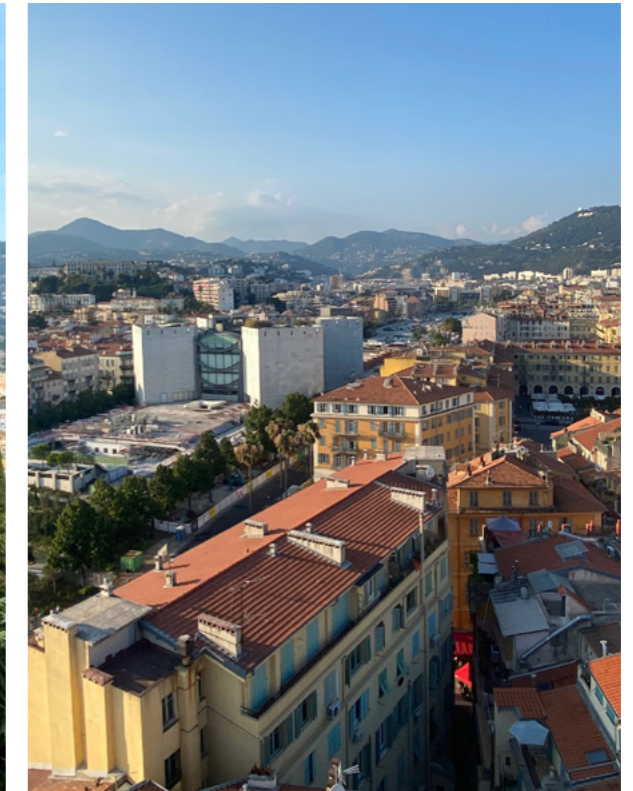
tourist vocation of the places (from the 18th century onward), which are rich in different styles ranging "from neoclassicism to eclecticism, from Art Nouveau to Art Deco up to early 20th-century modernism" [11] (from UNESCO report - *Ville de Nice - Nice la ville de la villégiature d'hiver de riviera*, 2022, p.22). This testimonial value perfectly aligns with UNESCO recommendations that provide for evidence of "(...) a significant exchange of influences in a given period or within a given cultural area on the development of architecture or technology, monumental arts, urban planning or landscape design." (www.unesco.org)



11.

Top view of the ACROPOLIS Multipurpose Center. The three-story complex had an area of about 21,000 square meters and a footprint of 338 x 60 m.

Photo credit: author, 2014



12.

View from the other side of the construction site area of the *Promenade du Paillon* extension. Highlighted in the center is the isolated MAMAC in Nice after the demolitions of TNN (first antistate) and ACROPOLIS (behind it) to the hills.

Photo credit: author, 2024



13. The southwest facade of the Multipurpose Center designed by G. Buzzi, P. Baptiste and P. Bernasconi (1981–1984) with consultancy on acoustic design by Prof. Eng. Lothar Cremer (formerly a consultant to Hans Scharoun for the Berlin Philharmonic) for the Auditorium. Photo credit: author, 2014



16. Detail of the exterior facades of the Auditorium. The precast reinforced concrete facades with irregular vertical reliefs were found to be articulately sloping inward toward the building, creating a sharp discontinuity from the surroundings. Photo credit: author, 2017



14. ACROPOLIS. The volume of the Auditorium for 2,500 people is highlighted. The 25 m construction module chosen for the entire project corresponds to the average length of the facades of the houses opposite the Multipurpose Center. Photo credit: author, 2017



15. ACROPOLIS. The entrance hall (Agora) in the foreground. It is a single three-story open space for connecting the parts of the building and, if necessary, the two parts of the city "cut off" by the building. The 400-square-meter sunroof allowed natural internal ventilation and summer cooling in good weather. Photo credit: author, 2017

BALANCES IN URBAN IDENTITY

Undoubtedly, the *PdP* extension, which we could qualify as a sort of Nice's "Central Park" by functional analogy, is a relevant and interesting transformation. It is abreast of the times and coherent with our contemporary purposes. However, the new plan's constituent logic shows some misalignment from the principles of urban identity protection that characterized the UNESCO candidacy. Indeed, if one considers *the Historic Urban Landscape (HUL)* "(...) as a cultural construct, incorporating our memories and helping to give meaning to our current lives (...)" [15] the demolitions of ACROPOLIS (2023–2024) and TNN [Fig. 12.] [16], appear to be very radical and in some ways disorienting actions. Although the ACROPOLIS Multipurpose Convention Center/Auditorium is relatively recent and probably energy-inefficient, it is rooted in the city's history and cultural life. It is an emblem of cultured architecture, rich in context awareness, and provides high cultural performance [14] [Figs. 13.–16.]. It is a trace of Mayor Jacques Médecin's vision, heir to Jean, the celebrated politician and mayor of Nice⁰⁶ who strongly influenced Nice's tourist and cultural history. This vision was later rendered into reality by the ingenuity of three accomplished designers, including Architect Georges Buzzi,

a former collaborator and student of Auguste Perret, who was influenced by L. Mies van der Rohe and W. Gropius and was in contact with other 20th-century masters such as Le Corbusier, C. Perriand, and K. Tange (among others). Since 2006, this designer's very rich professional portfolio included several works listed in the French *Inventaire Culturel du XX siècle (Ministère de la Culture)*⁰⁷ [17].

The demolition of the *Gare Routier* (Bus Station) in 2011 to make some space for the first phase of the *PdP* was an understandable decision considering the quality of the built environment and the function of the building (with a view to enhancing the electrification of public mobility) [18]. However, it is much less the case for these other buildings. TNN and ACROPOLIS were instruments of urban socialization, places of cultural, artistic and musical gatherings in the city, resulting from the imagination of sophisticated architects and technicians who could interpret and take into account the meanings of urban fabrics and the social and environmental context in their projects [14]. The significant public contestation against these significant urban "subtractions" from the community that followed the announcement of the decision to proceed with the "*Forêt Urbain*" project, heedless of the citizenry's opinion, prove the malaise caused and of an emerging criticality in the planning of Nice's transformation. The citizenship's active participation can be easily detected through *ICT, Big Data, and IoT*. However, if one fails to capture the nuances of other types of needs expressed by users, then the goodness of the *Smart* paradigm risks being depleted, downgrading the proposed actions and unbalancing the sought harmony. In this, the justification of the actions to be conducted by administrations and planners should also suit their intensity. In this case, detractors were not convinced by the latter. For example, it does not seem relevant to bring up the need for demolition to avoid hydrogeological hazards in case of flooding of the *Paillon* bermed river, as the circumstance continued even after demolition. This is the same as planning the compensatory implementation of an anonymous facility with similar functions and efficiency elsewhere.

CONCLUSIONS

Pursuing the goals related to carbon neutrality, implementing the most virtuous policies in terms of sustainability and *Green* approaches to city redevelopment, and realizing the urban environment's sensorialization (and all the consequences in sensing different functional performance) are aspects of a picture with far more complexities to manage. Other scenarios, integrating the previous ones, appear to be much more refined and far more difficult to balance. These include the simultaneous protection of places' cultural identities, social participation and program sharing, and safeguarding inclusiveness. These aspects encompass the needs of all citizens and city users without distinction. Such complexity is also enriched by the need to address and satisfy a dual and amalgamated user composition. In addition to those who can interact fluently in the *Infosphere* where we are immersed, it is indeed also necessary to interpret the needs of those who live primarily according to beliefs cemented by the experience of places and life, i.e., those who are immersed in what philosopher Luciano Floridi calls the "*age of history*" [19]. These people are much less aware or familiar with digital aids and, therefore, are little attracted to their potential. Respect for urban perceptions, collective memory, and the recognizability of certain places [16] – particularly those with cultural significance – should be prioritized in any sought-after urban evolution, or at least be valued on a par with establishing more efficient, cost-effective, and sustainable programs. Without all this, there is the risk of performing changes with just an apparent or partial overall *smartness*.

NOTES

- 011 Institut National de la Statistique et des Études Économiques (INSEE), France.
- 021 An organization comprising more than 200 member cities in 38 European countries, it was established in 1986 with the aim of gathering the solicitations and needs of various cities of a political, economic, social, and cultural nature and bringing them to the attention of the European Union. Website: <https://eurocities.eu/>
- 031 This is an intent subscription by the members (196 Smart Cities) to the EU to share best practice developments on combating *Climate Change* based on the use of ICT to achieve the climate goals set by the EU. [7]
- 041 Institut Méditerranéen du Risque de l'Environnement et du Développement Durable (IMREDD) active in the new Nice Meridia district.
- 051 Georges Edmond Secondo Buzzi was an Architect who was born and lived in Nice (1924– 2019) and graduated from the E.N.S. des Beaux-arts de Paris. He mainly worked in Nice and the Alpes-Maritimes Department in the Provence-Alpes-Côte d'Azur (PACA) region (Région Sud). Professionally active from 1950 to 1993, he is the author of dozens of completed works and as many projects (sometimes visionary and provocative) ranging from religious architecture to commercial and tourist buildings, villas, offices, and Sports and cultural centers, such as the aforementioned ACROPO-LIS Multipurpose Convention Center with Auditorium.
- 061 Jean Médecin (1890–1965) was the mayor of Nice from 1928 to 1943 and from 1947 to 1965. From 1966 to 1990, he was succeeded as a mayor by his son Jacques (1928–1998) who also wanted to introduce a vocation for convention tourism in the city.
- 071 In fact, the Cannes Ferry Terminal (1952–1957) with the collaboration of ceramist Roger Capron, the Saint-Martin de Peille Chapel (1950–1952), inspired by futurism and brutalism, and Mr. and Mrs. Capron's Chalet in Beuil (1960) were awarded the Heritage of the 20th Century in France label.[17]

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