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# Short-Term City Dynamics: effects and Proposals before the Covid-19 Pandemic[1]

Sharing platforms have been changing urban balances and triggering historical cities' transformation from a structural, economic, and social perspective before the Covid-19 Pandemic.

In particular, Airbnb influences urban space, production through physical impacts and the tendency to mystify places, appealing to authenticity and experiential tourism. New images of reality, mediated by the platform, constitute the symbolic production of the city's tourist palatability, which is intertwined with new uses and the exasperation of the consumption of a part of the cultural heritage. The research aims to structure a hybrid methodological approach combining investigation and assessment for identifying and understanding the impacts of touristification and over-tourism on the urban dimension and develop intervention strategies consistent with the Circular Economy perspective. In Southern Italy, Naples City is chosen as a case study and field test.

## 1. Introduction

The touristification concept defines the whole of urban spaces transformation processes aiming to shape the city exclusively in terms of attractiveness for the ordinary tourist. Some authors, indeed, define touristification as the transformation of residential neighbourhoods to tourism precincts (Gurran et al., 2020; Sequera and Nofre, 2018). Other authors remark the cosmopolitan features of the cities affected by this process that turns urban spaces and neighbourhoods into leisure playgrounds with substantial impacts on residents (Lim and Bouchon, 2017). In this perspective, Farkic correlates touristification with consumption of dystopian places, where commercialisation and museification of the city are related to the touristic experience (Farkic, 2020).

According to Gutiérrez et al. (2017), peer-to-peer (P2P) accommodation phenomenon, fostered by AirBnb, HomeAway, Wimdu, etc., has been leading to touristification of historic downtown due to high availability of empty apartments even more than hotspots density. At the same time, the significant social impact of historic downtown touristification has been considered as the displacement of lower-income residents due to increasing home market values

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(Atkinson et al., 2011; Hyra, 2016; Gurran et al., 2020; Miller, 2014; Rouwendal et al., 2018).

Therefore, these typologies of changes are unable to restore identity-related features either for the famous tourist towns or the towns searching for a new image as "tourist destination" (Marchi, 2012). On the downside, they deplete the places meaning and profoundly transform cities image by the homogenisation in terms of everyday needs that are strictly related to the uses (e.g. metro station, pub, street food, souvenirs shops). In more severe cases, a fake has been generated by stereotyping realities for use and consumption of tourists (e.g. fake clothes hanging in the Spanish quarters of Naples, in Italy, or coloured flags that decorate them). Furthermore, the unsustainability of tourism has been already revealed by Hollenhorst et al. (2014) when they unmasked the image of tourism as a false embodiment of sustainability since it is one of the most carbon-emitter industries and resource depletion factor.

According to some studies, indeed, the tourism sector would be responsible for the emission of 4.5 Gigaton of $CO_2$ in 2013, corresponding to the 8% of global carbon footprint and increasing four times more than the previous year estimation (Lenzen et al., 2018). In this perspective, Andersen (2007) has highlighted the contribution of environmental economics (Pearce and Turner 1990) addressed to measure negative externalities to market prices in terms of ecological charges to include within the mutual transactions among economic stakeholders.

The relationships between tourism and SDGs targets have been remarked by the "1st Research Conference on Tourism and the SDGs" (UNWTO, 2019), which has highlighted positive and negative impacts of tourism in terms of sustainability. The primary outcome of the Conference mentioned above has highlighted strong relationships, specifically with three objectives:

- SDG 8 - "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all";
- SDG 12 - "Ensure sustainable consumption and production patterns";
- SDG 14 - "Conserve and sustainably use the oceans, seas and marine resources for sustainable development".

Nevertheless, tourism as economic development driver can be meaningful, the relevant force also for: creating new job opportunities (1); shifting towards sustainable agriculture supply chain (2); re-investing tourism taxes for health and care services (3), promoting inclusiveness, gender empowerment through income generation, and reducing inequalities through local population engagement (4,5,10,16), boosting investment for water and sanitation utilities and renewable energy (6,7), improving local private and public infrastructure with particular attention to cultural and environmental heritage (9, 11), contributing to climate change mitigation and/or acceleration in terms of people awareness enhancement (13), preserving biodiversity and nature as main opportunities to enrich tourist experience (15), and reinforcing private/public partnerships (17). Therefore, the tourism industry has great potential to contribute to the achievement of the SDGs, as the third-largest socio-economic activity in the EU. Tourism can activate Circular Economy (CE) processes, consistent with the concept of "sustainable tourism" and

link the different dimensions (economic, social, cultural and environmental) contributing to their mutual improvement (Fusco Girard and Nocca, 2017).

The risk is that every future design, policy, and planning are going to undergo a process of consumer display, trivialising local cultural resources and identity-related features up to stereotyping cities. Touristification is inextricably connected to overtourism neologism which means tourist overcrowding. In a nutshell, the overtourism occurs when the demand outreaches the available supply, i.e. when a destination has been stormed, and the tourist flows exceed the carrying capacity of places. According to Tomaselli (2018), tourism is an extractive industry, precisely like the oil industry. It does not produce goods, but it aims to mine values from "added value" treasure trove tills to deprive it of real life forms. In this meaning, the primitive nature of tourism has to be understood to manage it better.

Within an open-ended system, indeed, the extraction of matter and energy for the economy bound to tourism activities determines entropy increasing (Georgescu-Roegen, 1971). It is the reason why a Circular Economy (CE) model, defined by Ellen Macarthur Foundation (2013, 2017) that aims to close the loop of resource use and waste residuals, has to be adopted to face tourism flows and demands of citizens living in overcrowded cities. According to Rodríguez et al. (2020), circular tourism implies a model in which each tourism actor (tourist, destination management organisations, suppliers, and resident population) assumes an eco-friendly approach, based on the principle of "closing the life cycle" of products, services, waste, materials, water and energy, and reconsidering waste as a new resource for the city-system.

Moreover, the excessive growth of tourism has been supporting by the emergence of P2P accommodation phenomenon which inaugurates the season of the so-called "platform capitalism" (Celata, 2018; Kenney and Zysman, 2016; Langley and Leyshon, 2017; Olma, 2014; Srnicek, 2017; Stergiou and Farmaki, 2019). The *airification* of cities, at once, has been strengthening the ability of these platforms - which act like real political stakeholders - to engage and influence users into a discussion about the regulation of their activities, unbalancing the precarious real estate market of cities (Parisi, 2018; Picascia et al., 2017).

The "platform capitalism" has allowed the homeowners to become self-made entrepreneurs since it will enable them to enhance a waste building heritage, which would be unattractive for the ordinary market. This practice highlights the existence of an "interstitial income" which can be improved through short-term rent. In this direction, searching balance between places and tourist flows spaces leads necessarily to the formulation of collaborative and circular strategies. Indeed, circular and sustainable tourism does not refer exclusively to green tourism which aims to limit the consumption and waste of non-renewable energy sources but is also connected to the practices of recovery, reuse, requalification, and of enhancement and regeneration of cultural heritage (Nocca, 2017). The promotion of the CE principles in the rehabilitation and conservation of cultural heritage is essential for defining innovative strategies, oriented to a slow tourism model and culture-led regeneration projects (Rodríguez et al., 2020).

Therefore, a hybrid company consisting of stakeholders' coalitions, which enable bottom-up processes and promote the company as a vehicle for new social values and models of wealth, has its foundation (Venturi and Zandonai, 2016; Zamagni, 2018). The proposed policy has its roots in the awareness that the CE identifies both new consumption models (such as sharing and bartering of goods) and new business models (including reuse, regeneration, eco-design), which are assuming a predominant role in the current socio-economic scene (Vargas-Sánchez, 2018), and are able to trigger and stimulate circular flows, aiming to conciliate the tourism sector and sustainable local resource management.

The research aims to investigate the touristification and overtourism phenomena which involve Naples historic downtown, in the South of Italy. The effects on the short-term city dynamics, concerning the ordinary real-estate market, support to develop an intervention strategy for the mitigation of negative tourism effects and to determine a more sustainable scenario. The paper develops, in Section 2, methods and tools, describing the methodological process and its articulation; Section 3 introduces the case study of Naples; Section 4 describes data processing and assessment, and Section 5 presents discussion and conclusions with a proposal of policy strategy for the selected case study to implement CE principles.

## 2. Methods and tools

The methodology has been structured into four main steps (Figure 1): Knowledge; Data Processing; Assessment; Outcome. The exploratory phase of knowledge has been aimed at the investigation of meaning and effects assumed by touristification and overtourism in different cities of the world. The comparison has been focused on the impact of Airbnb in accelerating the tourist saturation process of the observed cities. In any case, the effects tend to manifest themselves in different ways and times, depending on the city's propensity to lose its authenticity in view of turning to the tourist destination.

The capacity to resist, more or less for a long time, against the transformations required by touristification, lies in the historical-urban and economic-social features that make up the city under observation. The graphic representation of these features allows for obtaining maps of georeferenced information.

Investigating the Airbnb phenomenon and mapping the listings, together with the estimate of Airbnb offer weight in terms of tourist presences, means operationalising a hybrid methodology which involves IT skills and on-field survey. Accurately, the census of ads referring to the case study has been performed through data mining from a web site technique defined as "web-scraping". Data extraction, led on a monthly basis for one year of observation, has allowed the subsequent development of the database. The list from Airbnb scraping has been compared with a survey from Insideairbnb.com platform.

The following methodological process has pursued the aim of evaluating the economic gain in renting property without regular lease through the Airbnb platform and assessing the interstitial rent generated during the year of observation:

Figure 1. The methodological framework.
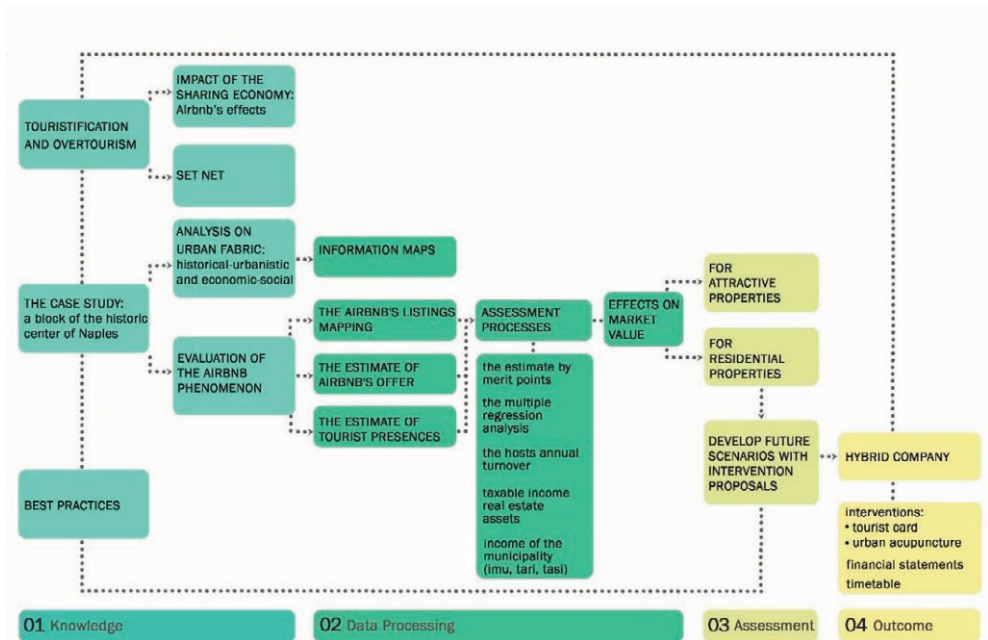


1. the assessment by merit points method and the unitary normal value for the determination of the weighted average of the market value of the observed properties;
2. the multiple regression analysis to highlight the most influential variables in determining the observed average market value;
3. the assessment of the hosts annual turnover for the comparison with the taxable income of real-estate properties and the income collected by the municipality through services taxes.

The hybrid implementation of different methods allowed us to gather the results of the investigation through incremental steps. The assessment – along with the analysis of best practices – has been useful to identify a suitable policy for the sustainable development of local resources, able to activate regenerative processes consistent with the CE principles. The policy strategy has been compared with the current scenario to produce outputs which consist in both physical interventions on assets, both intangible ones, at several levels, e.g. the economic development, the communication, the interaction between different stakeholders, till up the transformation and enhancement of urban space.

## 3. The case study

The assessment has been elaborated on a block of the Naples historic downtown. The selected area is located in a central position between San Lorenzo and

Figure 2. The study area.
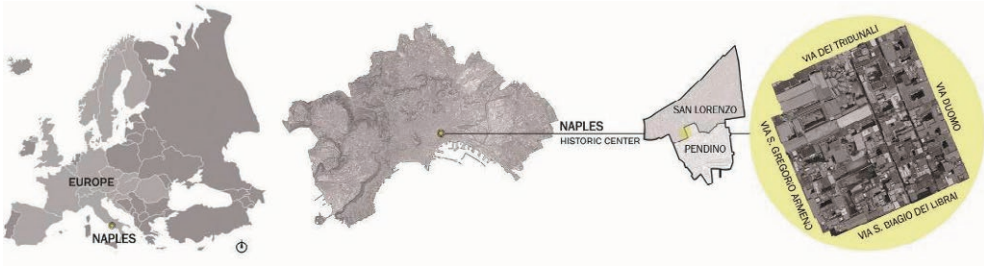


Pendino neighbourhoods (Figure 2). The focus area intercepts the streets of San Biagio dei Librai and Tribunali – known as *decumani* of the ancient Greek-Roman urban fabric – and Duomo and San Gregorio Armeno streets, which are the longitudinal axes referred to as *cardines.*

The selected block is highly stratified, and it dates back to Greek epoch since it preserves a large part of the orthogonal layout. Since the nineteenth century, the most evident transformations can be highlighted by the urban plan, as a result of the post-unitary restoration plan of 1868 which led to the enlargement of Duomo street and renovation of several buildings' facades (Ferraro, 2002). The following changes mainly concern structural adaptation and typological adjustment because of the housing emergency (Figure 3).

As mentioned above, the hybrid methodology for assessing Airbnb's effects has been performed with the monthly extraction of data through web-scraping into the range from June 2018 to May 2019. This step has been led through the open-source software "Airbnb Data Collection" (https://github.com/tomslee/airbnb-data-collection). The used tools are the followings:
1. Python script to extract information concerning the accommodations on the Airbnb website;
2. PostgreSQL database to store data;
3. Graphic editor PgAdmin4 to create queries (management, modification and consultation of the DB).

At the same time, data mining procedure, therefore, can be summarised into four main steps:
1. Identification of the geographical search area for accommodations;
2. Choice of survey method among neighbourhoods, bounding box or zip code methods;
3. Choice of the survey to implement into Python script;
4. Creation of tables (e.g. "search_area", "survey", etc.), identified by the corresponding ID.

The bounding box has been chosen as the preferred detection method for data extraction since it allows to overcome the uncertainty of the street addresses of the individual listings. The extracted data have been converted into .cvs format

Figure 3. Analysis of the urban fabric.
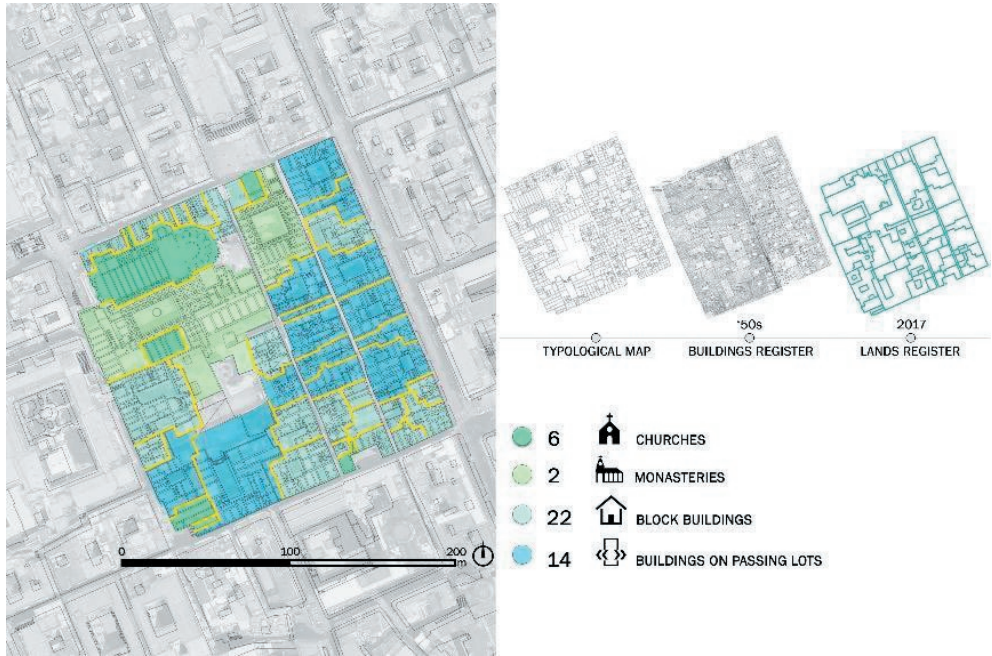


to enable the subsequent structuring of the dataset. Through this analysis, it has been possible:
• detecting the available structures and the beds offer;
• assessing of tourists' presences linked to Airbnb;
• estimating of currency revenue;
• comparing the prevalence of Airbnb offers with the overall traditional accommodation.

The listings mapping has been compared with on-field data survey, to join the available turnover data of the hosts to the cadastral data, therefore to the consistency of the properties. Data, emerging from the assessment of the hosts annual turnover, have been compared with the delta parameter determined between the captured income by the platform and the taxation of properties intended for rental on Airbnb, as well as the delta parameter obtained from the taxable income of properties. Through the carried out analysis, it was possible to evaluate the effects of tourism on residents and, thus, develop future scenarios with intervention proposals.

## 4. Data processing and assessment

The applied methodology has highlighted the transformation process of the socio-economic composition of the observed block and the use change of the pre-

Figure 4. Analysis of the Airbnb phenomenon: trends related to listings on Naples and historic centre, and housing stock.
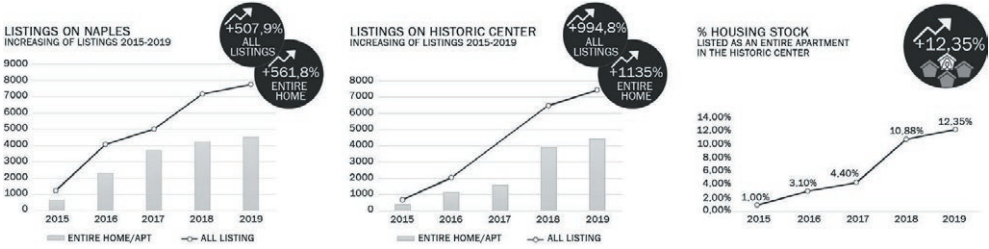


viously residential properties. The observation and detection period for data collection is before the COVID-19 emergency and takes into account the dynamics that were not affected by the pandemic.

In Naples downtown, indeed, between 2015 and 2019, an increase of more than 900% in the offer of accommodation on Airbnb can be detected (Figure 4). A phenomenon that could be conceived as airification city has been taking place, in conflict with living and CE principles.

By combining the available research methodologies, the final mapping of extra-hotel accommodations "made in Airbnb" has been drawn (Figure 5). The obtained data detect the presence of 39 entire apartments, 37 private rooms and 0 shared rooms, for a total of 310 beds.

The offer on Airbnb exceeds the traditional and non-traditional competition since, in the study area, there are only eighteen B&Bs and one hotel. Among the 37 private rooms which are available on Airbnb, 36 derive by the division of the entire apartment on several separate ads; therefore, the number of whole apartments for rent on the platform is more significant than what emerges from webscraping. The analysis of the ads reveals a total of 41 real-estate units on the platform. The data highlights that 99% of the total ads refers to an entire apartment, where the host does not reside, and it is no longer a source of income integration, but a small business. The presence of 38% of hosts that publish multiple ads

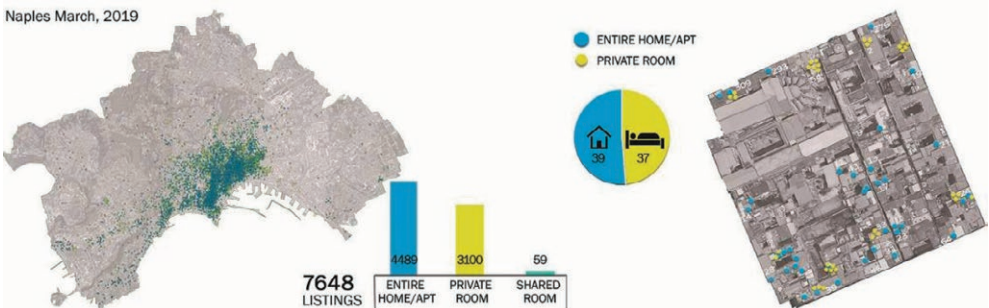Figure 5. Maps of extra-hotel accommodations "made in Airbnb".

Figure 6. Residential real estate and identification of real estate susceptible to turbo-valorisation.

also notices the growing trend to value the second home on the short-term rental market.

By crossing the cadastral data with the average market values, indeed, it has been observed that 62% of residential real-estate units have been affected by a turbo-valorisation process (Figure 6).

Within the analysed area, no high concentration of properties owned by a single host can be noticed; therefore, the management of properties by companies has been excluded. Nowadays, a kind of human dimension has been enduring; nevertheless, it risks disappearing in the face of economic gains, as detailed below. Observing focus area data through scraping technique, it highlights that tourism flow overbooks the available accommodation especially in conjunction with annual festivities, e.g. the Bridge of the Dead, Christmas, Carnival, Easter time, decreasing in summer months. The overall trend in figure 6 highlights a lack of gradual "seasonally adjust" of the phenomenon.

Among 41 real estate units, located into the analysed cadastral registries and featured on Airbnb listings, it emerges that: 61% of public housing (A4), 20% of ultra-popular housing (A5), and 19% of civilian housing (A2). The on-field observation, however, detects a mainly average maintenance status of the buildings – around 64% – and just 12% of buildings with an excellent maintenance status. The average market value of these real-estate units measures 1,562 €/sqm, and it has been calculated as a weighted average between the value inferred from the summary estimate by merit points method and the calculation of the normal unit value (Figure 7).

All the features of the observed market value, instead, have been elicited through multiple regression analysis (Benjamin et al. 2004; Curto, 1993; Dell, 2017;

Figure 7. Assessment of the real estate units: values and influential predictors.
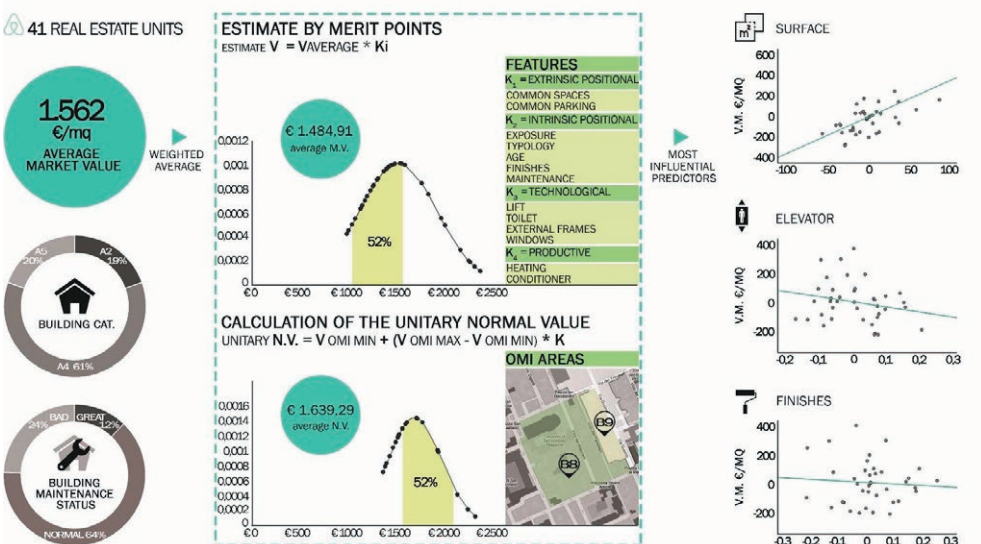
Isakson, 1998; Isakson, 2001; Lisini, 2007; Manganelli and Tajani, 2009; Rosato and Simonotti, 1988).

In this case study, the dependent variable Y is the Market Value (MV). At the same time, the predictors consist of 42 indicators at two main scales of investigation referring to: (i) the analysed property and (ii) the urban and socio-economic context. The SPSS software, provided by IBM, has been used to lead data analysis and statistics.

The predictors most influencing the MV – ordered by most significant influence – are the following (Figure 7): surface, elevator, and finishes. The MV is low compared to the localisation into the historic downtown and the ability to extract buildings by the platform. The properties under observation produce an income surplus, defined as "interstitial rent", around to 707%.

It can be noticed that the un-taxed turnover has been generating a "real bubble", in which both the taxes and the hosts turnover revolve around. The gap highlights the potential of a phenomenon that should not be blocked, but disciplined, to allow everyone to have access to the produced wealth (Figure 8).

The platform capitalism as a digital and continually evolving phenomenon has to be considered before figuring out any regulatory intervention. Therefore, the shortcoming of the traditional planning tools has been experimenting especially in terms of ineffectiveness to short-time response capacity.

Figure 8. The interstitial rent: comparison among the host turnover, the taxable income of real-estate assets and municipality income.
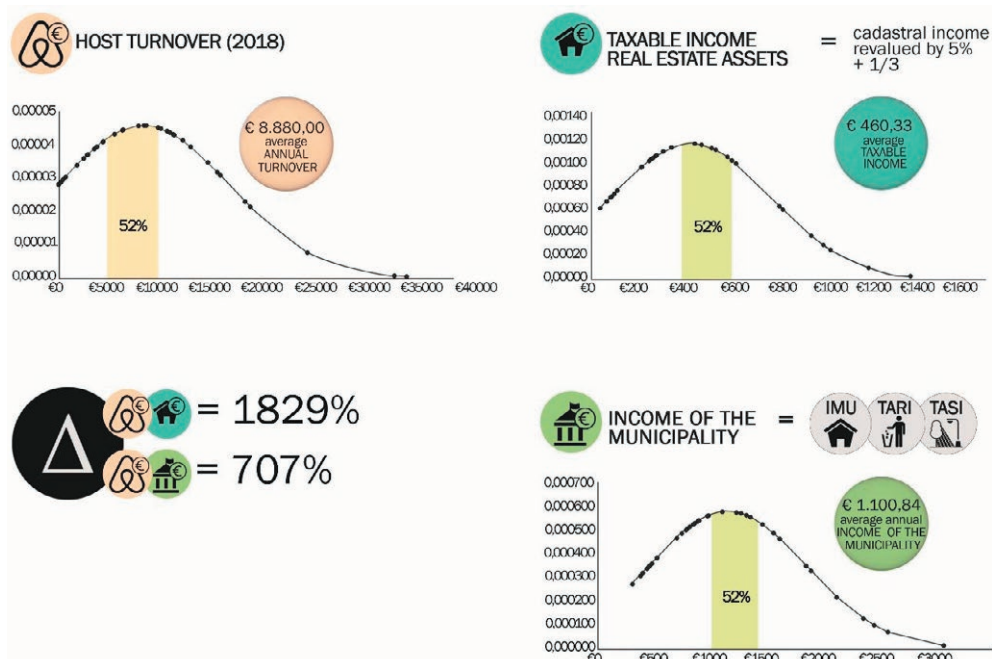
As a digital phenomenon, the difficulty of controlling and tracking the hosting activity is evident; therefore, it is necessary to enable procedures such as those activated in other countries of the world and Italian regions, i.d. the Lombardia, where the hosts have to be equipped with an identification code. A body of rules and strategies defending the right to the city has to be generated to re-establish natural balance and social redistribution of benefits deriving from tourism. Therefore, policies which can protect human and assets for the historic downtown have to be envisaged.

## 5. Discussion and conclusions

The goal focuses on integrating tourist activities within the urban rhythms and demands without conflicting with the needs of the residents by promoting collaborative and circular economy. A site-specific policy setting limitations towards the Airbnb platform and enabling circular and collaborative economy mechanism is needed. The goal is to pursue a model that is able to make not only the traditional economy more efficient and productive, but also to stimulate cooperation, collaboration, and synergies (Fusco Girard and Nocca, 2017), overcoming the traditional paradigm of tourism as an extractive industry, the aim is to calm the negative externalities deriving from tourism and to open new paths of wealth, protecting the cultural heritage, the core business of tourism, and building an alternative growth model.

The contribution is positioned in a relatively young field of research linking CE with sustainable tourism practices, showing a proposal to make operative some instances which synthetically are addressed to: (*i*) monitor the host activities accurately, (*ii*) reduce environmental risks; (*iii*) enhance the communication of rules and promote correct behaviours; (*iv*) transform the "externality adders" (Andersen, 2007) into taxes and charges.

Indeed, the proposal of a policy strategy provides for the adoption of programmatic measures for the management of tourist flows and tourist residences in the Metropolitan City of Naples. The proposed rules consider the following points.

The requirement for hosts of non-hotel tourist facilities - i.e. B&Bs, holiday homes and short-term rentals - to have a municipal identification code (CIC), when they communicate the start of the activity. The CIC can only be obtained by the structures legit, which are also subject to inspection by the local police. The CIC, indeed, certifies that the administrative process for the regulation of holiday homes and apartments has been completed. In this manner, it can be guaranteed that the host has communicated the start of the activity to the municipality and has fulfilled all the due obligations. These obligations involve:

a.1. Each structure must be approved to the firefighting directives and equipped with an extinguisher, emergency call, carbon monoxide and smoke detector, emergency kit;

a.2. The apartments must meet energy efficiency and living comfort requirements;

a.3. The respect of 90 days of downtime within the calendar year - it is not possible to have guests for 90 days, even if they are discontinuous;

a.4. Up to 49% of the total surface of the apartment, which constitutes the own main residence, can be rented at any time and without stopping the activity;

a.5. By the 15th of each month the visitor's tax must be paid for the guests and thus also report any days of "downtime";

a.6. Making receipts to guests;

a.7. Exhibiting the house rules and equipment (both in Italian and English languages);

a.8. Displaying the prices;

a.9. Communicating the tourist flows by the 5th of each month for data collection by ISTAT.

The municipality provides the hosts that have CIC with rewards on taxation to be achieved with municipal tax reliefs up to 10%. It promotes the formation of a "Community of hosts" as active actors for the determination of tourism management and control measures, together with those of physical space improving through small actions of transformation recognising the primary interest of protecting the physical and social space in which hosts' activities thrive. In this meaning, for the Municipality of Naples it is necessary to found a specific public office which links the initiatives promoted by the Community of hosts, fostering and checking the production of quality interventions.

The Community of hosts can operate implementing two types of measures: 1. immaterial measures: unified tourist card; 2. material measures: the urban design of physical spaces, through a process of setting up the urban area, often spontaneous. Therefore, the formation of a hybrid company - made up of hosts, citizens and institutional bodies - have to be promoted. Within this type of company, the capital captured by hosts through the short lease, will be partly re-invested, producing further advantages over time for tourist accommodation activities and micro-transformations which improve space of relationships and built environment. The main question, indeed, is: What are the benefits of the public entity? The different benefits can include:

b.1. The municipality allows the use of tourist tax for the implementation of the intervention measures provided by the policy;

b.2 The Municipality rewards the members of the Community of hosts through a further tax relief (up to 10%) for the time of intervention implementation;

b.3. The specific public office is able to support the Community of hosts in all the steps of interventions achievement;

b.4. Facilitations for bank loans are provided;

b.5. Tariff concessions are applied for specialist consultancy and soil occupation tax for scaffolding.

Firstly, the obligation for hosts to provide themselves with a municipal identification code would guarantee the census of non-hotel facilities by gathering these types of data for the government. Moreover, the fire certificate allows to carry out a procedure for the release of the house plan, with its cadastral con-

Table 1. Hybridisation markers (revised by Venturi and Zandonai, 2014).

| Hybridisation markers | Detected elements | Further potentials |
|---|---|---|
| Innovation | New service models for new needs / risks | Replicability and expansion of service prototypes and business models |
| Governance | Balanced composition of the models: enhancement of the cooperative form, introduction of profit company models and the principle of holacracy | Dissemination of new "social" standards of the company |
| Partnership | Network structure of the company that brings together private individuals, citizens and bodies and institutions to create services | Implementation of models and structures of networks on a larger scale |
| Marketplace | "Hybrid" market transactions with the public, private and tourists | |
| Beneficiary | Citizens, tourists and operators in the cultural and entertainment sectors | |
| Finance | Polarisation of investments to support the start-up phase | Methods of interaction between the Host Community and specialised lenders |
| Skills | Technical skills taken from cooperation with specific university addresses | |

sistency. It could enable the municipality to gather updated information on the built heritage. Civil society organisations have been recognised for their ability to actively cooperate in the process of planning interventions and adopting the necessary strategic choices, as a win-win game. On the one hand, the city will be redeveloped through punctual urban design interventions without affecting the hard structure of the city, but fostering the process of rearrangement of the urban space that has been already spontaneously arising. On the other hand, the hosts will benefit from the small renovation, improving the performance of services, which benefits both the neighbourhood community as well as the owners and the local government. In this context, the establishment of the hybrid, networked, value-generating company has to be pursued, not only by activating paths of wealth but also opening the way to positive social values extended to all Community of hosts (Table 1).

The characteristics of the prefigured hybrid enterprise are summarised below.

*The composition.* A business network, by which the hosts have to be involved with citizens and institutional bodies too, can be conceived as an ecosystem of resources rather than a typology of management.

*The mission.* The mission aims to guarantee the city safeguard by investing part of the financial resources by hosting activity in urban acupuncture interventions through cooperation and co-design ventures along with citizens. Moreover, the co-production with the municipality, university, cultural and commercial activities,

has to be strengthened to boost strategies for addressing tourist flows, aiming at the sustainability of tourism together with the protection of the right to the city.

*The vision.* Within any phase of the company's development, the importance of safeguarding the urban landscape – understood as the inseparable set of inhabitants, environment, culture and local traditions – is primary. People and places they live have to be placed in the foreground since a person can self-determine only if the preservation of the relationships with its context has been guaranteed.

*The governance.* Co-governance system, conceived as holacracy, has to be pursued. The holacracy consists of a type of governance that aims to be as democratic as possible, proposing a coordinator who has been recognised by the network as the most skilful person.

The promoters of change have to be the host communities and citizens. The proposed actions concern the creation of a tourist card and urban acupuncture interventions to be carried out both through the use of specialised partners.

A tourist card has been proposed, as a tool already experimented in other cities, pursuing objectives of sustainability of tourist flows through the structuring of places that offer attractions and events that suggest less travelled destinations. Moreover, through a cyclical renewal of the offer can be avoided the overcrowded and unliveable flows for which the proposal is seeking a cure. A pragmatic approach to afford the phenomenon is crucial; trying to lay the foundations for culturally oriented tourism more sustainable for the city and its inhabitants. In a

Figure 9. The policy strategy articulation.
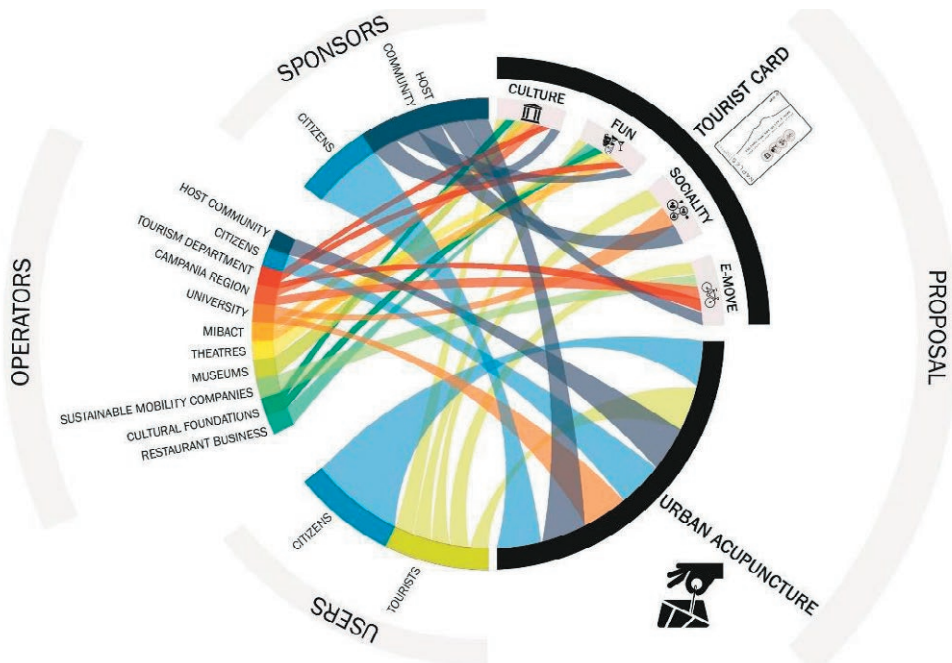
highly fragmented tourist offer scenario, Naples Tourist Card – proposed by the Community Host – aims at bringing together the positive skills of the current cards and enhancing the promotion of slow and curious tourism, which looks at the local specificities without being invasive. The card has a buffer that goes beyond the municipal area, extending the search for places to explore throughout the region. The research finds places that are attractive but not yet known to the general public or threatened by degradation due to abandonment. It aims at distributing tourist flows by networking between the different places of culture. In this perspective, promoting destinations means also building a common thread between them and potential tourists, managing tours and cards by smartphone through a dedicated app. The point of interest proposed by the card has been geo-located on an interactive map. By clicking on the pin through the "culture" function (A) it is possible to explore the selected place through a card that returns photos, useful information and the availability to book the chosen visit or activity (Figure 10).

Through the "fun" function (B), a series of artistic and excursion activities have been proposed to suggest events and destinations even during the evening hours, to reduce and prevent the disturbance of peace at night.

According to circular sustainable tourism, equally sustainable mobility is needed. The app, indeed, promotes alternative mobility to urban public transport, offering free use of bike-sharing and accessing bus sharing. Through the "e-move" function (C), an interactive map for the location of cycle stations for bike-sharing and bus sharing stop displays. Through the "chat" function (D), cardholders are allowed to socialise, favouring the formation of groups for travel with bus sharing. As far as the material intervention measures, the prefigured urban regeneration is featured by active and co-participatory promotion with a bottom-up and top-down approach.

The proposed micro-interventions have been divided into two macro-typologies, according to their scope: fostering the space of relationships; enhancing the

Figure 10. The Naples Tourist Card.

built heritage. The two different types of intervention find specific objectives and application criteria concerning the case considered. Referring to responses to the space of relationships, they aim to re-design the open spaces of the city, replacing the current function of parking with other facilities. The goal can be achieved through equipped spaces that encourage socialising, promoting interaction between people and offering a quiet, but not isolated, a place where you can stop, relax and attend artistic events.

Responding to needs of greater public open spaces means processing easy, low cost and incremental solutions. The interventions arise from the need to re-arrange the urban balance between positive and negative functions for common spaces. Therefore, active and bottom-up cooperation for the decisive and functional design processes should be pursued, as well as the financing of the new spaces public. For example, when interventions are going to foresee close to commercial activities in the city core, new seats can encourage purchases of food and drinks, increasing the attractive value of urban spaces and supporting local business. A design model with these features could be the "parklet" (San Francisco Planning Department, 2013).

Micro-interventions on buildings are configured as complexes of operations defined by different criteria. First, the criterion of minimal intervention has to be considered to resolve the degradation framework without altering the original state of the building. A way to reach this type of intervention involves cleaning, painting, integrating small deteriorated parts, replacing elements without structur-

Figure 11. The results of the Financial Analysis.
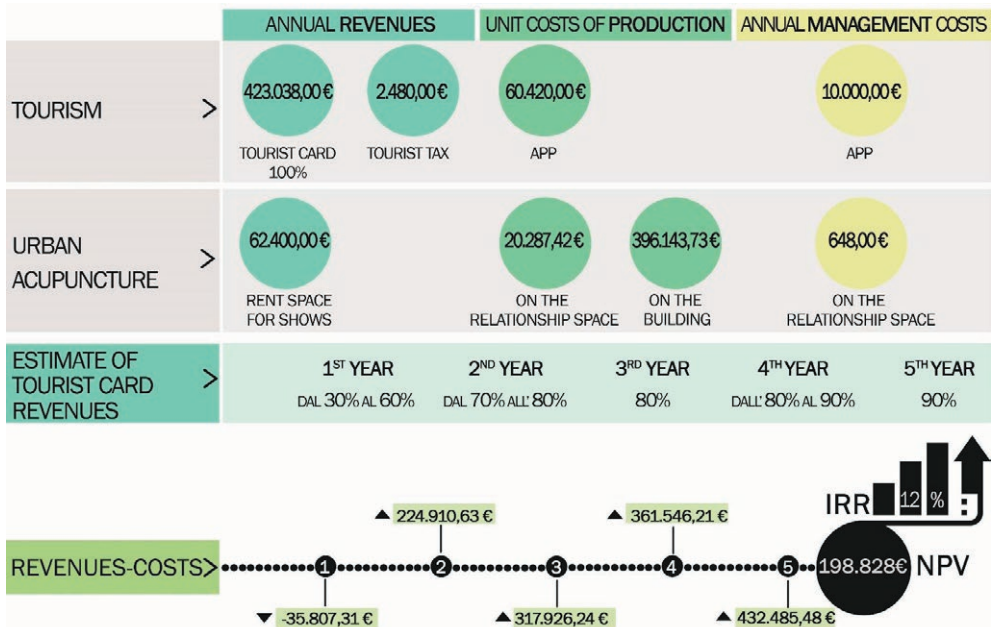
al function. Furthermore, the interventions have to guarantee the safety of roads avoiding the danger of falling material from deteriorated elements on the facade, i.d. stone cornices, rubble, etc. At the same time, interventions to ensure their effectiveness have to be guided by respect for the relationship with the urban context and made by traditional materials, compatible integration with the existing elements, preserving the authentic image of places. Last, to ensure agreement of the interventions and their ongoing maintenance, the use of inhabitants' knowledge and skills has to be encouraged by promoting active and bottom-up cooperation.

The economic benefit of the collaborative economy can be elicited by the financial analysis to assess the proposed experience with the host community. Production and management costs/revenues have been calculated to determine the Net Present Value (NPV) and the Internal Rate of Return (IRR) (Figure 11). In our case, the NPV is greater than zero, and the IRR is 12%; therefore, we can confirm positive results for the hybrid company, whose main feature embraces the social domain. Through timetable, the phases for the implementation of the interventions have been planned. All proposals will be completed within four years.

The observed outcomes involve: the economic benefit of networking; the give back to the Community of hosts; the contribution to sustainable and circular tourism. The future steps are going to amplify benefits by providing: the expansion of bottom-up cooperation; the activation of workshops for sustainable and circular tourism awareness; the scaling up to other neighbourhoods of the city.

In conclusion, the contribution highlights that actions mitigating conflicts between tourists and citizens have to be pursued through the urban planning and resources management (Torre et al., 2015), the active involvement of citizens, and the conscious intervention by the public administration, to avoid that the historic downtown, once emptied of meaning, are going to turn themselves to "theme park" (D'Eramo, 2017). Therefore, Rodríguez et al. (2020) remarked the importance to achieve a multidisciplinary perspective involving scientists, academicians, residents, and public administration to operationalise CE principles and practices for a more sustainable tourism industry. The long-term positive externalities of tourism must be exploited, preserving the attractive capacity of the city and the presence of residents who liven up the urban scene.

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## ANNEXES

Indicators table

| Indicators | Item of assessment | Unit of Measure | Value |
|---|---|---|---|
| Age | Building | from 10 to 20 years ago | 1 |
| | | last century (19th - 20th) | 0.7 |
| | | pre-nineteenth century | 0.4 |

| Indicators | Item of assessment | Unit of Measure | Value |
|---|---|---|---|
| Typology | Building | single | 1 |
|  |  | row house | 0.7 |
|  |  | multifamily | 0.4 |
| Finiture | Building | historical | 1 |
|  |  | noble | 0.7 |
|  |  | civil | 0.4 |
|  |  | low-cost | 0.1 |
| Conservation status of real estate unit | Building | fine refurbishment | 1 |
|  |  | refurbishment | 0.7 |
|  |  | no refurbishment | 0.4 |
| Surface | Building | square metres |  |
| Floor | Building | high (up to ⅔ of height) | 1 |
|  |  | medium (between ⅓ and ⅔ of height) | 0.7 |
|  |  | low (⅓ of height) | 0.4 |
| Balcony | Building | yes | 1 |
|  |  | no | 0 |
| Lift | Building | present o inutile (?) | 1 |
|  |  | absent (between ⅓ and ⅔ of height) | 0.7 |
|  |  | absent (up to ⅔ of height) | 0.4 |
| Panoramic view | Building | fine view | 1 |
|  |  | ordinary view | 0.7 |
|  |  | view on internal courtyard | 0.4 |
| Brightness | Building | yes | 1 |
|  |  | no | 0 |
| Maintenance status | Building | excellent | 1 |
|  |  | medium | 0.7 |
|  |  | worst | 0.4 |
| Common space | Building | absent | 1 |
|  |  | courtyard | 0.7 |
|  |  | garden | 0.4 |
| Average building quality | Building | excellent | 1 |
|  |  | medium | 0.7 |

| Indicators | Item of assessment | Unit of Measure | Value |
|---|---|---|---|
| | | worst | 0.4 |
| Location | Building | central zone (main streets) | 1 |
| | | medium-centered (alleys) | 0.7 |
| | | fringe | 0.4 |
| Historical value of building | Building | pre-nineteenth century - fine architecture | 1 |
| | | pre-nineteenth century - civil architecture | 0.7 |
| | | later period | 0.4 |
| Historical value of neighborhood | Neighborhood | high | 1 |
| | | medium | 0.7 |
| | | null | 0.4 |
| Touristic allure | Neighborhood | high | 1 |
| | | medium | 0.7 |
| | | null | 0.4 |
| Parking availability | Neighborhood | assigned parking inside | 1 |
| | | parking outside (on street) | 0.7 |
| | | absent | 0.4 |
| Closeness to public transportation | Neighborhood | distance minor than 500 metres | 1 |
| | | distance between 500 and 700 metres | 0.7 |
| | | distance major than 700m | 0.4 |
| Services | Neighborhood | differentiated services | 1 |
| | | prevalent services | 0.7 |
| | | absence | 0.4 |
| Climate | Neighborhood | mostly mild | 1 |
| | | mostly rainy | 0 |
| Closeness to green spaces | Neighborhood | distance minor than 850 metres | 1 |
| | | distance between 850 and 900 metres | 0.7 |
| | | distance major than 900m | 0.4 |
| Demography | Neighborhood (census tract) | number | |
| Foreigners | Neighborhood (census tract) | number | |

| Indicators | Item of assessment | Unit of Measure | Value |
|---|---|---|---|
| Residents education level | Neighborhood (census tract) | Majority of graduate residents | 1 |
| | | Majority of middle school residents | 0.7 |
| | | Majority of illiterate | 0.4 |
| Employers | Neighborhood (census tract) | number | |
| Unemployers | Neighborhood (census tract) | number | |
| Workforce | Neighborhood (census tract) | number | |
| Income earner | Neighborhood (census tract) | number | |
| Family with 1 member | Neighborhood (census tract) | number | |
| Family with 2 member | Neighborhood (census tract) | number | |
| Family with 3 member | Neighborhood (census tract) | number | |
| Family with 4 member | Neighborhood (census tract) | number | |
| Family with 5 member | Neighborhood (census tract) | number | |
| Family with more than 6 member | Neighborhood (census tract) | number | |
| Empty apartments | Neighborhood (census tract) | number | |
| No residents apartment occupied | Neighborhood (census tract) | number | |
| Family living in renting apartments | Neighborhood (census tract) | number | |
| Family living in owners apartments | Neighborhood (census tract) | number | |
| Family living in apartments for other reason | Neighborhood (census tract) | number | |
| Criminality (2017-2018) | Neighborhood | high (homicides and attempted murders) | 1 |
| | | medium (robberies and intimidations) | 0.7 |
| | | low (thefts and snatches) | 0.4 |
| Job opportunities | Neighborhood | differentiated sector | 1 |
| | | low or seasonal (catering and sales) | 0.7 |
| | | tourism sector (b&b) | 0.4 |