

A factory for unicorns: continuous and flexible repurposing in Lisbon's digital era

Uma fábrica para unicórnios: refuncionalização contínua e flexível na era digital de Lisboa

João Felipe Pereira Brito [1]

Abstract

Hub Criativo do Beato is an infrastructure targeted at digital innovation in the city of Lisbon, Portugal, that has been constituted, since 2016, through a process that I call continuous and flexible repurposing of an old military-industrial complex. I also understand it as an anchor for urban rehabilitation and as a representation apparatus for a city that competes internationally to attract capital in the context of the global rise of the digital economy. A multiplicity of ideas, experiments, and openness to change and adaptations guide its projects. The article seeks to critically understand the connections between urban production and the digital economy. This case study derives from qualitative research of an explanatory--interpretive nature based on grounded theory.

Keywords: repurposing; industrial heritage; digital economy; digital innovation ecosystem; Lisbon.

Resumo

Hub Criativo do Beato é uma infraestrutura voltada à inovação digital da cidade de Lisboa, Portugal, que vem sendo constituída, desde 2016, por um processo que chamo de refuncionalização contínua e flexível de um antigo complexo industrial militar. Também a compreendo como âncora de reabilitação urbana e como dispositivo de representação para uma Lisboa que compete internacionalmente por atração de capitais em contexto de ascensão global da economia digital. Multiplicidade de ideias, experimentações, aberturas a mudanças e adaptações dão o tom dos projetos lá realizados. O artigo busca compreender criticamente os enlaces possíveis entre produção do urbano e economia digital. Trata-se de um estudo de caso derivado de pesquisa qualitativa de caráter explicativo-interpretativo e baseada no modelo grounded theory.

Palavras-chave: refuncionalização; patrimônio industrial; economia digital; ecossistema de inovação digital; Lisboa.



Introduction¹

The buildings with sturdy walls could not hide the traces of obsolescence of that old military-industrial complex. In plain sight, wide square windows and old exposed metal ducts, surrounded by wide, empty corridors and huge silos for storing grain. Inside the complex, there were signs of recent cleaning and some organization of the machinery, furniture and rubble that occupied open areas and covered spaces. On a stretch of an internal road, paved and flanked by narrow sidewalks covered in Portuguese mosaic in white limestone, a wooden table stood out on a red carpet and dozens of chairs in front of it. There, on 17/6/2016, the Prime Minister of Portugal, António Costa, and the Mayor of Lisbon (CML, the city hall), Fernando Medina,² signed a contract in which the Portuguese State ceded to CML, for 50 years, the *Ala Sul da Manutenção Militar do Beato* (*South Wing of the Military Maintenance of Beato*). The aim was to transform the place into an *innovation hub*, a *creative and entrepreneurial space* that, according to Medina, would be *an important step for the future of Lisbon and, in particular, the eastern part (of the city)* (Fernando Medina e António Costa apresentam o Hub Criativo de Lisboa, 2016).

The previous year, Lisbon had won the right to host the international digital economy conference *Web Summit*, previously held in Dublin (Ireland), which was then considered the largest and most prestigious in the world. The first edition of the event took place in November 2016, five months after the announcement of this new infrastructure. Although based in a sports arena and a convention center in Parque

das Nações,³ the 2016 Web Summit took place at the future Beato hub facilities with some activities and technical visits. Both the major event and the infrastructure are part of a state strategy to transform Lisbon into a globally recognized innovation capital.

With this brief context as a backdrop, I emphasize that the object of this work is the process that has been transforming the former *Manutenção Militar* (MM, Military Maintenance), a military industrial complex listed in the material heritage collection of the city of Lisbon and deactivated in 2011, into a new infrastructure, later named *Hub Criativo do Beato* (HCB, *Beato Creative Hub*). The main objective is to analyze and critically understand this repurposing, a phenomenon that I define as a sociotechnical reconversion of “material remnants of the past” (Rufinoni, 2013, p. 31), which provides for “historical preservation” and a “healthy logistics economy” (Choay, 2006, pp. 219-220).

The fact that the HCB has been established gradually is one of its most special characteristics. A multitude of ideas, experiments and openness to future changes and adaptations set the tone for the projects that are launched on and within it. This is precisely at this time of global rise of the digital economy and major incentives for the “digital transition” in the European Union (EU) and in Portugal (European Council, 2019; Portuguese Republic, n.d.). By “digital economy” I define a globalized field of the capitalist economy in which “fundamental innovations” (semiconductors, processors, software), “core technologies” (computers, telecommunications devices) and “enabling infrastructures” (Internet, telecommunications networks, technological innovation centers) are intensively

used by companies that change “patterns of production (supply) and consumption (demand)” and that, to a large extent, are affected by these same digital services and tools and have profound repercussions on many other economic fields (Unctad – United Nations Conference on Trade and Development, 2021, p. 22). The digital economy has also been thought of based on concepts such as “new productive restructuring” (Tonelo, 2020), “industries 4.0” (Sony and Naik, 2020), “informational-digital capitalism” (Praun and Antunes, 2020) and, at the beginning of the last decade, “digital era” (Fisher, 2010; Orton-Johnson and Prior, 2013).

Thus, the following questions guided the writing of this article: a) can the transformation of an old industrial complex into an innovation hub contribute to the understanding of urban production in the digital age? b) if so, through which elements? I started from two hypotheses: 1) the object, the repurposing in its ideas and practices, demonstrates some current conditions for the reconversion of urban infrastructures intended as levers of the digital economy; 2) it is a phenomenon “good to think about” (Lévi-Strauss, 1980) the materialization of “digital cities” or “capitals of innovation”, redesigned under the dilemmas of an economic field in which virtuality, nomadism, risk and ephemerality are the norms (cf. Pimentel, 2021). The objective of the work is, therefore, and by answering the preliminary questions, to evaluate the relevance of these hypotheses, or “to make intelligible the cause and nature” of well-defined objects and phenomena and their contextualized significance (Weber, 2003, p. 91). In general terms, the work sought possible reconciliations between urban production and the digital economy based on a case study.

To demonstrate the confirmation of hypotheses 1 and 2, I will bring unpublished qualitative data (from interviews, ethnographic scenes, documentary and bibliographic data, news reports) and appropriate to an object that is a “manifest” microprocess, that is, “recognized, foreseen and intended” (Sztompka, 2005, pp. 49 and 53). The article will address these two issues, supported by a bibliography that dialogues with contemporary sociological debates, texts on the anthropology of infrastructures and urban studies linked to the emergence of a digital era. This is a case study derived from a qualitative research (2021-2023) of an explanatory-interpretative nature and based on the “grounded theory” model (Glaser, 2002).

Part 1 – A digital innovation hub for a post-crisis Lisbon

To understand the context that enables and encourages the actions analyzed in this article, I would like to point out that Lisbon is the capital of a peripheral European state that suffered a serious sovereign debt crisis in the last decade and is committed to EU policies, values and financial transfers. The time frame of this research (2012-2023) was a period of Portuguese economic restructuring after the crisis and the agreements with the troika (International Monetary Fund – IMF, European Commission, European Central Bank, between 2011 and 2014), whose main effects (and conditions for these agreements) were the reduction of the State and the rights of the population, the privatization of important

public assets and the opening of markets, especially real estate and those linked to urbanization (cf. Amaral, 2022; Carmo, Ascensão and Stevens, 2018; Seixas, 2021). All this occurred in parallel with the explosion of urban services of a “platform capitalism” (Antunes, 2021; Srnicek, 2017). Lisbon has been considered by some authors as an “Uber laboratory” (Tomassoni and Pirina, 2022), as a locus of “digital-based financial extractivism” that triggers “urban struggles” (Silva, 2022) and as a privileged place to observe state incentives for “local accommodation” (housing aimed at tourist or short-term rentals, mediated by digital platforms) and its gentrifying effects (cf. Alves et al., 2023; Gago, 2018; Mendes, 2022).

New forms of remote work or telework have also had a significant impact on the city, attracting “new translocal figures that break the bond between work and home spaces, such as the digital nomad” (Drago, 2022, p. 18). By digital nomad, I understand agents with flexible jobs who can move between different territories whenever they deem necessary, because they have qualifications that allow them to undertake and/or provide professional services remotely (online, using the Internet, laptops, smartphones, software and other digital tools) to markets in different countries and also because they have sufficient financial resources and/or relatively good salaries to take on the challenges of this mobility. This type of professional demands innovative urban architectures and services, for flexible and occasional use, such as shared workspaces (coworkings and colabs), housing with small bedrooms and shared dining and leisure spaces (colivings) or cafes with tables and Internet available. In general, for digital nomads and tourists, urban types

that are already widespread around the world, the entire city is flexible and occasional: a large facility that can be used temporarily. They are not characterized by the public commitments of a traditional city dweller, “with more permanent residence” (Seixas, 2021, p. 93) and immersed in neighborhood and municipal policies, but live as “city users”, with “more sporadic residence”. Even so, they are considered by local governments and businesspeople as fundamental to “cultural dynamism” and the “creative economy” (ibid., pp. 94-97). In the case of digital nomads, they are considered so indispensable to leveraging the digital economy that they are attracted, including through tax benefits and the issuance of special residence and work visas.⁴

I start from the observation that, in a new stage of global intercity competition to attract investment, Lisbon is striving to set up a *digital innovation ecosystem* (DIE) that greatly contributes to the events and actors mentioned. I define this DIE as a network of agents, events, places and infrastructures that (1) has been built, sponsored and promoted mainly by the city and national governments; (2) is fueled by the investments and interests of individuals or companies (*startups, scaleups, unicorns and big techs*)⁵ that aim to work, undertake and develop globally marketable digital products and services from Lisbon; (3) mobilizes circulation and interactions (competitive or cooperative) between these agents throughout the city and between these agents and the city. Therefore, in an attempt to emerge more quickly from the sovereign debt crisis, attract capital, increase the volume and average wage of its jobs and, at the same time, advance in the implementation of old urban plans, the CML, in partnership with the Portuguese government

and the EU, has been adopting, over the last decade, a set of new and old grammars of “urban entrepreneurship” (Harvey, 1989, 2005; Wu, 2018), linked to the digitalization that restructures current capitalism.

It is also worth highlighting the effects of the Covid-19 pandemic (2019-2022) on this process. For some authors, it was a “second crisis” that Lisbon and Portugal had to face (cf. Drago, 2022; Tulumello and Mendes, 2022). On the one hand, infrastructure works were interrupted, investments were suspended, tourism and services suffered a huge blow. On the other hand, social distancing led to an acceleration of the digitalization of life. With the gradual reopening of services and the resumption of investments, the agents and infrastructures of the digital economy gained much more relevance, legitimacy and urgency in public debate, state policies and private planning.

Eastern riverside area: historic industrial zone and urban rehabilitation front

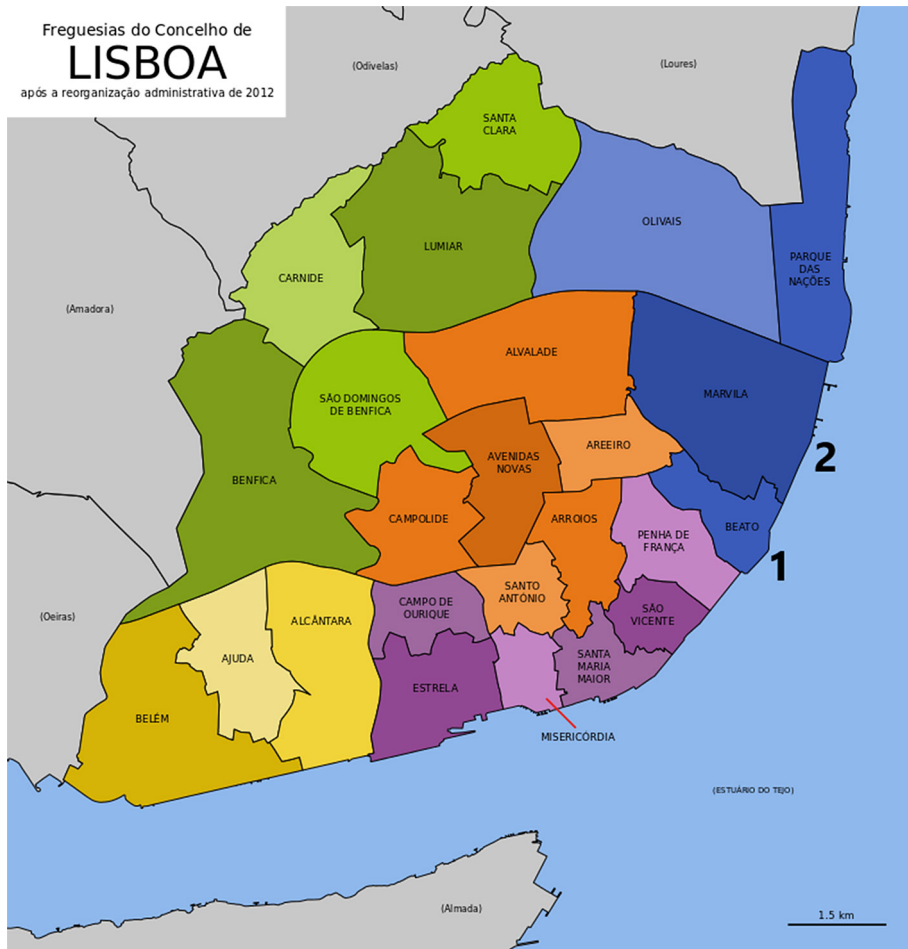
The parishes of Beato and Marvila were suburbs until the first third of the 19th century, with many Catholic convents, mansions and farms of the old Portuguese nobility and land use for rural activities. Some of these features remain visible to this day in the toponymy, in material heritage (churches, mansions, fountains, facades) and in rural traditions, such as goat herding and family farming on idle public land (Map 1).

During the 19th century, with the end of absolutism and the triumph of liberalism, after a period of intense civil conflicts, “[...] many convents were transformed into fundamental facilities for the city (hospitals, schools, courts, barracks)” (Seixas, 2021, p. 18). There was also the alienation of properties that had previously belonged to the Crown and the old nobility. It was the century of industrialization in Portugal: the port was expanded, the railway was built, and industries, towns, courtyards, clubs and workers’ social gatherings were set up in this region on the banks of the Tagus (cf. Silva, 2020; Marques, 1996). In 1890, there were 156 “industrial branches” in the “eastern parishes” of Lisbon (Folgado and Custódio, 1999, p. 19).

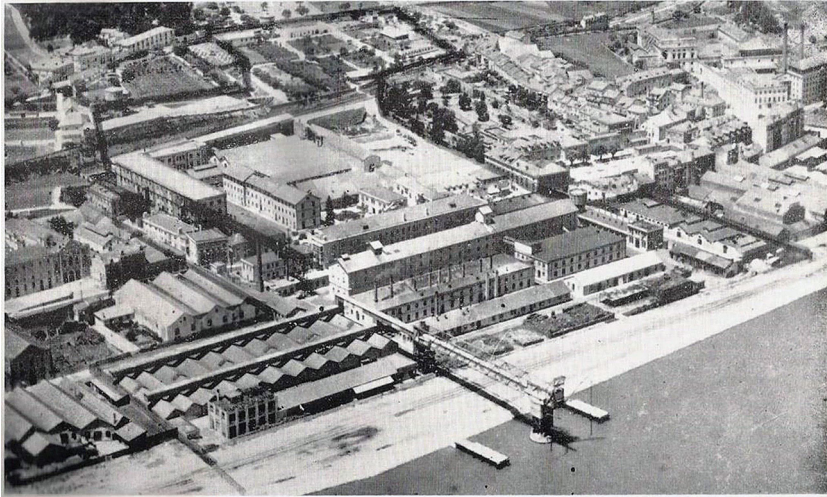
In 1888, the Convento das Grilas (Grilas Convent), whose memory is now residual, was transformed into a factory infrastructure belonging to the Portuguese armed forces, which already occupied nearby areas, called *Manutenção Militar* – this one, yes, has a very vivid memory among residents, public managers, new entrepreneurs and visitors to the HCB (Figure 1).

In 1908, the *Fábrica Braço de Prata* (Braço de Prata Factory), responsible for the production of weapons and ammunition for the Portuguese armed forces, began operating in the parish of Marvila, a 15-minute walk from Beato. It was closed in the 1990s. It is also important to note that both military manufacturing infrastructures – *Manutenção Militar* (Beato) and *Fábrica Braço de Prata* (Marvila) – declined after the *Revolução dos Cravos* (Carnation Revolution), with the end of the Portuguese empire and the colonial wars in Africa (Ribeiro, 2017).

Map 1 – Municipality of Lisbon



Legend: in blue, the parishes in the eastern area: 1) Parish of Beato; 2) Parish of Marvila.
Source: Assembleia Municipal de Lisboa (2024).

Figure 1 – Beato’s Manutenção Militar, in 1932⁶

Source: Pinto (1966).

At the turn of the 20th century to the 21st century, the deindustrialization that swept through Europe's peripheral economies at that time and the economic-productive pacts that conditioned Portugal's entry into the European Economic Community (EEC) 1985 (signing of the Treaty of Accession) and the euro zone in 2002 contributed to the closure or weakening of factories and the emptying of surrounding neighborhoods as a consequence (cf. Pereira, 2016).

This area currently attracts businesses advertised by governments, the media, and investors as creative and innovative: art galleries, craft breweries, cultural spaces, coworking spaces, and colabs (De Xabregas..., 2017). High-cost real estate developments are also arriving, linked to new “material and

symbolic investments” (Brito, 2021; Costa, 1999) that take advantage of the industrial past of these places, their memories, their heritage, and their aesthetics. There is talk of an “urban rebranding” (Azevedo, 2019) and of “conflicting imaginaries” (Pereira and Brito, 2022a) and “overlapping” (Pereira and Brito, 2022b) in this deindustrialized region that is undergoing gradual rehabilitation.

If in the past it was industrial modernization that was imposed on that site, with a long-term future and some stability of jobs, processes and products, now it is the emergence of people, spaces and objects that seeks to territorialize the fluidity of a new and imposing digitalized economy, thought of, a priori, by its own agents as flexible, risky and potentially disruptive. Based on Christensen

(1997) and Christensen, Raynor and McDonald (2015), I understand technological disruption or innovation as a phenomenon of profound and accelerated transformation of a market or branch of capitalist business based on the creation of a new product or process, whether through the increase of a new technology, a new use of an existing technology or, even, a new organizational model of a company. As can be seen in the case of Uber and local accommodation platforms (*AirBnb*, *Booking*, *Idealista*, etc.), technological and digital disruption has major urban effects, such as greater attraction of tourists, city users and foreign investment, on the one hand; and, on the other, the weakening of social cohesion and the emergence of new political struggles and conflicts over space.

If once the mass of people who would make up that urban place were factory workers, now the expectation falls on digital nomads and “sociotechnical vanguards” (Hilgartner, 2015). The future, this “cultural fact” (Appadurai, 2013), is then announced as an emergency and a “promise” (Costa, 2020) for a prosperous Lisbon well-positioned in the global arena of cities.

As another nodal point in this web of public strategies and private interests, we have the HCB: an infrastructure announced in 2016 and which, little by little, and even during the pandemic, was opened to private events and the public, attracting investors and recreating functionalities in the course of its daily and temporary uses. Today, its largest building, overlooking the river, houses Factory Lisbon – “a campus of innovation and entrepreneurship where technology and education meet the arts”.⁷

Part 2 – The ongoing repurposing

In January 2018, almost two years after the announcement of the transfer of the MM from the Portuguese State to the Lisbon City Council, the document *Global Project for the Hub Criativo do Beato – Descriptive and Justification Report* was released to the public, following its approval by the Lisbon Municipal Assembly. The document was prepared by *Startup Lisboa*, a public-private institution created in 2011 and announced as a “business incubator” that builds, organizes and promotes the DIE, welcoming, training, advising and supporting entrepreneurs who wish to invest and work in Lisbon.⁸ It had also been decided that *Startup Lisboa* would manage the HCB. Shortly afterwards, the first infrastructure works began, under the responsibility of the Lisbon City Hall: “water network, sewage, electricity supply, gas, telecommunications, waste treatment, paving, green areas” (Barbosa, 2000). It is now time to analyse in more detail some points of this fundamental document.

The HCB project and its material and symbolic assumptions

The *Global Project for the Beato Creative Hub – Descriptive and Justifying Report* (CML, 2018) contains the following definition in the item “Strategic Concept”:

With the aim of contributing to improving the conditions and means for the City to attract and retain talent, companies, investment, boost strategic clusters, and stimulate the connection

between innovation, creativity and entrepreneurship, and enhance the effects of holding the Web Summit in Lisbon, an entrepreneurial and creative hub will be installed in the aforementioned property, which should constitute a new hub for bringing together players who will definitively position Lisbon as an open, entrepreneurial, innovative and creative city. [...]. In short, the aim is for this space to act as a true catalyst and anchor for a broader and deeper process of regeneration and revitalization of the eastern part of the city, more specifically on the axis between Santa Apolónia and Parque das Nações, continuing the interventions already carried out and in progress to rehabilitate the riverfront. (CML, 2018, p. 8)

Regarding the government expectations placed on the HCB, in connection with the challenges proposed by the *Lisbon Strategic Charter 2010-2024* and the Lisbon Municipal Master Plan, I would like to highlight the points “Promoting an innovative and creative city, capable of competing in a global context and generating wealth and employment” and “Affirming Lisbon’s identity in a globalized world” (CML, 2018, p. 11). It is therefore clear that this infrastructure is included both in the state strategies of (1) “regeneration and revitalization” of a part of the city (the eastern riverside area) to be explored by new capital from the Portuguese post-industrial era (real estate, tourism, creative and digital industries) and in the strategies of (2) internationalization of the territory and the imaginary about the city – the latter in a technocentric resignification.

In the item “Preservation of industrial heritage”, the importance of identifying and safeguarding “industrial equipment to be preserved on site, as well as notable elements that characterize buildings from an architectural and construction point of view”

is mentioned (CML, 2018, p. 42). The need to promote a “harmonious coexistence between the new functions and the memory of the space” is also stated (ibid., p. 42). With regard to “conservation”, “alteration” or “demolition”, the document states that the aim will be to “retain the meaning, evoking and interpreting its former function. The projects of outdoor spaces and the connecting elements between buildings should also evoke and interpret the history and industrial functioning of the complex” (ibid., p. 48) and, furthermore, the “reuse of materials and elements available on site” is encouraged – symbols, equipment, colors, materials such as concrete and metals identified with MM (ibid., p. 57).

Here, some central concepts of this project are detected and crucial for the argumentation of this article: 1) adaptability: “[...] allowing different uses of spaces, avoiding conditioning areas to certain uses” (ibid., p. 55); 2) permeability with the surrounding neighborhood, “[...] promoting interaction with the social fabric” and ensuring “access for all to the new accessibility conditions to be generated with the installation of the hub” (ibid., pp. 53-54); 3) reversibility and flexibility: “Avoid occupying the space with fixed urban furniture, using mobile or suspended elements [...] that can be moved or removed when necessary” (ibid., p. 60). Further on, it is stated that it “should function” as “a platform for technological experimentation and dissemination” (ibid., p. 61) and that “some buildings may be temporarily occupied during urbanization works and it is not expected that all of them will be intervened at the same time”, making it important for future interveners to “take these aspects into account when developing infrastructural solutions” (ibid., p. 88).

With new and reversible uses, this renewed infrastructure would need to constantly seek out the links between: collective creativity and profitable technological goods; the physical and the digital; the local and the global; the past and the future; techno-productive materialities and prestigious and economically attractive symbolic representations. All these dualities make explicit the articulation between the strategies of attracting “creative classes” (Florida, 2002) and agents of the digital economy to urban production, allowing us to advance in the understanding of contemporary plans for: (1) (re)constituting cities in their ways of living and working; (2) updating their urban grammars and the architecture of their new and emblematic buildings; (3) (re)creation of their imaginaries and dissemination of new representations in the form of urban branding (Freire, 2011; Van Ham, 2008).

Associated with the transformation of post-industrial spaces into “smartified” spaces (Morozov and Bria, 2019; Scalzotto, 2019; Vanolo, 2013), in constant animation, this unique infrastructure is composed of a set of old and renewed materialities, of public practices and rituals, of tangible and virtual symbols that aim to expand and legitimize for Lisbon a new “sociotechnical imaginary”, what Jasanoff (2015) defines as a “collectively maintained and realized vision” of a “desirable future”, which is “animated by shared understandings of forms of life and social order achievable through, and supported by, advances in science and technology” (ibid., p. 19). For the author, a sociotechnical imaginary is a phenomenon that goes beyond discourse, as it is associated with “action and performance” or “materialization” – in this case, (re)materialization – “through technology” (ibid., p. 20). Not just any technology, but, in this case, one that is potentially marketable, innovative and digital (Figure 2).

Figure 2 – Virtual model of HCB



Source: CML, 2018, p. 25.⁹

Redesigning times and spaces

Back in 2018, some occupants of the many different buildings in the 35,000-square-meter complex were announced. The CML announced that those interested in each of the available buildings would be responsible for their own specific works. Thus, the former Central Elétrica (Electric Power Plant) would be occupied by a craft brewery from the *Super Bock Group*. *Fábrica de Carnes e a Administração e Oficina* (Meat Factory and the Administration and Workshop) would be run by a “restaurant and services” store. The winning bid was a project called *A Praça* (The Square), which includes a grocery store, a culinary school and a restaurant serving traditional Portuguese products, with its opening scheduled for 2021. For the *Edifício do Relógio/Antigo Convento* (Clock Building/Old Convent), the former military residence, investors were sought who were willing to create and manage a coliving space for the entrepreneurs of the hub and the city’s ecosystem. Converging with the “mobile lifestyles” (Buhr, 2023) of the target audience, digital nomads and sociotechnical vanguards, the notice provided for “the installation of a shared housing project, *for temporary use of short or medium duration*” (ibid.; emphasis added).¹⁰

The other occupants announced so far would be: a new headquarters for Startup Lisboa, which would be housed in the building of the former *Fábrica de Pão* (Bread Factory); the *Fábrica de Moagem* (Milling Factory) would house the machines and other items that would make up a future Military Maintenance Museum, under the responsibility of the *Empresa de Gestão de Equipamentos e Animação Cultural* (Egeac, Equipment

Management and Cultural Animation Company), a state entity for cultural heritage and equipment. Finally, the *Fábrica de Massas* (Pasta Factory) and the *Fábrica de Bolacha* (Cookie Factory) would form the main building and would be refurbished and occupied by Factory, a German company specialized in coworking spaces and digital innovation incubators. It was reported that the Factory building would be delivered in 2019, with 11 thousand square meters, would have capacity for 700 people to work, an area for events, a gym, and a restaurant.

However, the inconsistency in the timing of the works was combined with constant changes in the actions and perspectives for the complex. At the time the works began, the mayor of Lisbon, Fernando Medina, expressed an interest in expanding the Hub Criativo do Beato to the North Wing of *Manutenção Militar*, a larger piece of land still occupied by the Portuguese Army, located across Grilo Street, also in Beato. In November 2019, however, no works had been completed. The media reported delays in contracting and performing services, the increase in the forecast for public spending and the low interest of private partners. However, the CML also mentioned the feasibility of building a new railway station on the north line, next to the HCB.¹¹

At the beginning of 2020, the first sad episodes of the arrival of the new coronavirus in Europe appeared. During that year, the Portuguese government gradually created rules that limited social interactions to reduce viral transmission and protect the most vulnerable. In January 2021, the first lockdown was imposed in Lisbon. During the many stages of deconfinement and reopening of public and private services, with strict social distancing

strategies, and until my arrival in Lisbon in October 2021, the HCB had works halted, then slowly resumed and hosted initiatives called *pop-ups* (temporary occupation), such as *Casa do Capitão* (Captain's House), a mix of bar, cultural fair and open-air artistic performance space that occupied different areas of the complex between May and November 2021.¹²

When asked about the delay in completing the HCB works, the then president of Startup Lisboa, Miguel Fontes, stated in 2020 that "100% and certainly are two difficult assumptions" for this type of initiative (Machado, 2020). In another interview, now in 2022 and with a new municipal administration already elected, Fontes said that:

[...] there will not be a magic moment of opening (of the HCB), because we will not be waiting for the last building to open. *It is gradually being opened*, this is a project that was always thought of this way, to be organic, and to grow at its own pace. (emphasis added)

Regarding the future offices of Startup Lisboa in the former MM Bread Factory, he revealed that the project "*is flexible and agile*, because it allows rooms to start with a certain size, say 25 m² modules, *but can then easily grow according to needs*" (Lobo, 2022; emphasis added). In short, due to the requirements and recommendations of the Global Project, the specific notices for each building and the ideas put forward by Miguel Fontes, one of the builders of this supposed European "capital of innovation", a title recognized by the European Commission in 2023 (European Commission, 2023), the architectural conception of a workplace and business in digital capitalism needs to dialogue with the logic of open and collaborative innovation of this new economy. Going further, it can be seen from Fontes'

statements that this new architecture must follow without many prior definitions, open and changeable. As unstable as the venture capital that fuels digital entrepreneurship and as fluid as the mobility of digital agents who arrive in Lisbon today and who, tomorrow, no one knows where they will be.

Activating incompleteness: experimentation and symbolic representation

The HCB presents those "forms of selective mobility of artifacts, people, practices and capital through local and global networks of specialization" pointed out by Vailati and D'Andrea (2020, p. 8). As a place in the city, this infrastructure promotes from the outset "concentration and distribution of resources" (safe space, good location, waterfront, free advertising for events) and, at the same time, receives and distributes these international flows (of innovators, *techies* and *creatives*) as a "landing arena organized in multiple and often dispersed hierarchies" (ibid.). In other words: it does not serve any event, nor any audience, but it discovers and invents its vocations at the pace of putting new plaster on the walls that were already there, installing light fixtures on the ceilings with new ducts and wiring, placing ornamental plants in corridors that preserve the industrial rusticity.

The HCB has also been imagined and conducted by CML and its private partners as a *representation apparatus (dispositif)* (cf. Foucault, 2000), as it seeks to create a cosmopolitan and creative imaginary about Lisbon, aiming for such recognition internationally and trying to reposition the city as the most promising European capital for

innovation. Following the ideas of Vailati and D’Andrea (2020, p. 6), it is an infrastructure designed and continually constituted to shape “the imagination through optimistic promises for the future”, aimed at Portuguese and foreigners, fully linked to “techno-scientific markets” (ibid., p. 8), or even as a “semiotic and aesthetic vehicle oriented towards its recipients”, according to Larkin’s (2020, p. 30) analysis of infrastructures of our time. Even with a slow physical reconstitution of its facilities – and until the beginning of 2023 with only one occupant in regular operation (A Praça) –, this infrastructure has been, for some years, discursively announcing a desired future and, furthermore, has been an equipment and social environment for public practices and performances that seek to anticipate the innovative and technological future, reifying it for locals and outsiders.

In this sense, between 2018 and 2023, many events were held at the HCB that allowed the reinvention of its spaces, both degraded and already restored, as well as the gaps between the built parts. Events and initiatives such as *Casa do Capitão*, *ModaLisboa*, *Web Summit*, *Sónar Lisboa*, exhibitions, tours and workshops¹³ activated the HCB even before the arrival of developers of technological innovations. The following ethnographic descriptions aim to qualify the expression *It is gradually being opened* (in Portuguese: *Vai abrindo*) used by Miguel Fontes about the renovation of the former military industrial complex.

Ethnographing repurposing: Sónar Lisboa

Of all the events held within the HCB that I was able to ethnograph, Sónar Lisboa was the one that best appropriated the complex and its different environments. Created in Barcelona in 1994, the artistic-cultural event gained scale and has the prerogative of combining *avant-garde* and experimental music, visual arts, audiovisual and other technologies. Its motto is *Music, Creativity & Technology*¹⁴ and its arrival in Lisbon is directly related to the symbolic investments and city branding strategies that the city’s governance promotes to reposition it internationally as the capital of technological innovation, a fact made explicit at the press conference with the creators, the president of Startup Lisboa, the person responsible for Factory Lisbon (renovator and manager of the main HCB building), as well as high-ranking members of the CML and the Portuguese national government.¹⁵ The choice of HCB as the home of Sónar expresses the high degree of importance that this infrastructure has as a representation device for a Lisbon that is proclaiming itself to be more technological and inventive.

During the first edition of the event in Lisbon, in April 2022, I was able to observe the attendees and interact with them, walking between the buildings and inside them in a curious way, discovering them (Figure 3).

Figure 3 – Circulation in the areas between HCB buildings during Sónar+D



Source: photo by the author, in 2022.

At times, it felt like walking through a maze, such was the number of stairs, corridors and rooms that followed one after the other, generally poorly lit and with improvised access points with wooden handrails and thick plastic tape. This was most evident at Factory Lisbon, where there were stores selling beer and other drinks at one of the entrances, spaces for artistic installations and performances,

decorative plants and also a kind of auditorium set up for the event, with wooden bleachers and cushions, the main space for the talks – which covered art and science, sustainability, the future of technology, technological applications in everyday life etc.

In all the event spaces, I noticed that there was a kind of enchantment among the attendees with the industrial heritage

expressed in the architecture and machinery on display there. People photographed, through large, aged windows, the external structures, the chimneys, the silos, the exposed brick walls, the relationship of the complex with the port and the Tagus River in front. They regularly photographed the difference in scale between the human body (foreground) and those structures (background). The days were cold, it rained occasionally, and yet there were hundreds of people circulating through the internal streets of the complex, through the buildings and the facilities. The public presence and participation in the talks were large. Many people spent long moments drinking beers and eating sandwiches in the temporary tents and food trucks in the external areas, alone or accompanied, always observing the passersby and the surrounding materiality. They appropriated the infrastructure, considering it as a true and pleasant “environment for interactions” (Larkin, 2020, p. 29).

In the old MM Milling Factory, now managed by Egeac, with four floors full of obsolete but well-preserved machinery, an installation combined experimental music, light effects and a kind of fog, sometimes very dense, that hung over the machinery and filled the corridors, rooms and stairs leading to the floors. This set of elements made the environment confusing, enigmatic and, to a certain extent, highlighted the strangeness of the visitors in the face of that industrial world of yesteryear, with aged tiles, dusty staircases, frosted glass windows, somewhat rusty metal structures, and peeling paint. All of this created a setting and an experience of strangeness, but also of fascination for the people who walked by. Armchairs and cushions scattered around the scene were always occupied, they were

fought over, which showed that people did not run away from there, but were satisfied to experience those sensations.

What does this make us think about this supposedly dysfunctional but fully-used infrastructure? The fact that it was post-industrial, technically unproductive, partly preserved and partly deteriorated, was fascinating and attractive, which says a lot about the interests of the Sónar public: the HCB was not looking for its promised technical efficiency. The improvisation and *bricolage* between period elements, forms and different materials on display at the hub found support in the ethos of that public of art lovers. The organization of Sónar also revealed a lot about the HCB’s ability to activate international sociotechnical vanguards and the visitors who trust them or identify with them, even when they were far from being fully equipped in their new technical functionalities: the offices and coworking and coliving spaces were not ready, far from it. Even so, the place brought satisfaction to those who visited it at Sónar and at the cultural and artistic events that were held there.

Ethnographing repurposing: the Made of Lisboa tour

Made of Lisboa (MOL) was one of the initiatives of the Lisbon City Hall to present the city, promote and encourage Lisbon’s innovative scene to potential talents and investors through masterclasses, workshops and tours, online and in person, in Portuguese and English. In May 2022, during the *11th Lisbon Entrepreneurship Week*, I was able to take a tour with MOL to HCB. The tour guide, an employee of Startup Lisboa, gave her explanations in English to an audience of two dozen people, mostly foreign, but also responded

in Portuguese to a minority. She said that the hub aims to *produce the benefits of the Web Summit throughout the year* and that it will bring *commerce, new jobs and urban development to Beato and Marvila*, with the intention of bringing *global companies* to the place, in addition to the *creative industries* – mentioning *web design* and *gaming*. She also said that the complex will be important for creating *networking innovation*.

During the walk, under the morning sun, when everyone was wearing an orange vest with the logo of the place, the guide seemed a bit embarrassed when explaining

the delay in the works. She said that even under construction, *the hub is a vibrant place that creates good vibes for the city*. Here, she positively highlighted those “invisible or opaque dimensions” (Lima, 2020) common to complex infrastructures. She explained that each building has a specific occupation and rhythm and that, therefore, there is no forecast for the complete opening of the hub – a statement that seemed honest and precise to me and, at that moment, revealed to me the idea of incompleteness continually activated for repurposing (Figure 4).

Figure 4 – HCB tour



Source: photo by the author, in 2022.¹⁶

When asked about the rumors about *Mercedes-Benz.io* leaving HCB, information that I had received days before from another interlocutor, she dodged the question, saying that everything there is part of big business that requires negotiations: *Negotiations are negotiations*. She explained that, during the worst phase of the Covid-19 pandemic, the company responsible for the construction of Factory Lisbon went bankrupt, delaying the schedule – at that point, being resumed. She explained everything optimistically, stating what each of the buildings will be, have and do. The visitors showed some curiosity, but realized that everything was very far from the realization of those ideas.

There was construction work underway in the first building, on the left as you enter via Manutenção Street, that of Claranet, a cybersecurity company. Many workers were working there, mobilizing machines and materials. The guide could not hide her satisfaction when she pointed out the fast-moving construction. The Startup Lisboa building was not open to visitors – the old military bakery, in front of the entrance to the HCB, with three striking Manchester-style red brick chimneys. A Praça, the only business operating in the hub, was closed. It was also not allowed to go up to the terrace of the Factory Lisbon to see the river and the surrounding neighborhoods. It was possible, however, to enter the old MM Milling Factory, where the Browsers Beato brewery will be located. Inside, there was a lot of rubble and remains of materials still on display, which didn't stop some people on the tour from staying longer to photograph its beautiful iron windows and resistant glass and an immense engine surrounded by twisted iron located under a beautiful wooden ceiling and metal frame, letting the guide follow the route with its stories and its (still) imagined futures.

The audience profile of the group I was with was older people, very different from the Sónar audience. They appeared to belong to the group of entrepreneurs and investors, and not to the group of talents (potential young workers). Unlike Sónar and because they were not experiencing an artistic, musical or gastronomic event, the visitors on the tour seemed more focused on the real possibilities of technical and corporate use of the infrastructure. Therefore, they showed some frustration with the stage of the works, despite their interest in being there and absorbing as much information as possible from the guide and through photographs.

Regarding the information that Mercedes-Benz.io had withdrawn from the HCB, the news was confirmed in May 2022 (Marcela, 2022a). Provisionally installed in the NOW-Beato coworking space, next door to the hub, the multinational sought offices in Parque das Nações, an already established corporate neighborhood on the eastern riverfront. In early 2023, after the elections for the Lisbon City Hall, the new municipal administration decided to accelerate the implementation of one of its campaign promises: a “unicorn factory”. This would be installed in the Factory Lisbon, and is the most recent stage of the ongoing repurposing of the former Manutenção Militar do Beato.

Part 3 – The latest stage and the promise of unicorns

At the beginning of 2023, after overcoming the restrictions on movement and gatherings caused by the Covid-19 pandemic and in the second year of the new administration at CML, I was present at the opening ceremony of *Unicorn*

Week, the former Lisbon Entrepreneurship Week, renamed in that edition. The new name came about with the reformulation of Lisbon's brand under the new municipal administration: *Lisbon Unicorn Capital*.¹⁷ The event was held in a large room at Factory Lisbon, the main piece of the board, which had its "architecture based on the preexisting" (Sette apud Rufinoni, 2013, p. 75) based on the "adaptive reuse" method, developed by a partner office, also German. The architects say that the interventions in the 200-meter-long and 11-meter-wide building and the materials used (concrete, steel, glass, wood) were intended to adapt "the functionality of an old food production facility to contemporary office and event uses" (Factory Lisbon, 2023). One of Factory's founders stated in a recent text published on an online platform: "The future of real estate is adaptive reuse". He also said that agents in his field must face the challenges of "retrofitting" the "stock of existing buildings" with "creativity" and "sustainability" (Bamberg, 2024).

Regarding the close relationship between the adaptive reuse of existing infrastructures and the digital economy, it is worth highlighting two dramatic points about the current stage of the capitalist system: the increasingly shorter cycles of (1) *technological disruption* and (2) *economic crisis*.

As noted, technological disruption is the phenomenon in which new technologies rapidly reorganize production and consumption in some economic field, eliminating companies and jobs that, in a short time, become low-competitive or obsolete, generally with sudden market changes and sociocultural and socioeconomic effects that are also disruptive and challenging for social cohesion

in urban environments. Advances and new possible uses for different *artificial intelligence* tools, for example, dominate debates on the next disruptive technologies (Păvăloaia and Necula, 2023). Asked about projections for future business in the next decade in Lisbon, a manager of a major Portuguese venture capital fund warned me: "*We don't have any projections about that. After all, a decade is a long time*" (Interview 9, 2022).

As for regular economic crises, they are a systemic issue that has been analyzed for a long time (Harvey, 2014; Krugman, 2009). With the acceleration of globalization and the digitalization of finance and economic exchanges, crises have become a short-term probability for almost all areas of the capitalist economy, now closely intertwined with global consumer, credit and debt markets and transnational chains of resources and supplies for production. Both phenomena manifest themselves in new hegemonic perceptions of the time and space of social life, which are increasingly inconstant and changing. They are crucial for understanding both the abandonment of infrastructures and their reuse in contemporary times.

All these new terms and challenges are linked to the city's new ambitions. At the aforementioned event, the current president of the Lisbon City Hall, Carlos Moedas, stated that Lisbon's digital innovation ecosystem (DIE) was already internationally renowned and that the city – a good place to live and do business and a safe place to invest – needed to take a bigger step. Thus, Unicorn Factory Lisbon would have the mission of "scaling up" some promising local startups selected by the CML so that, with more

beneficial legislation,¹⁸ the city could retain and attract talent, capital and companies, as stated in the *Multi-Year Investment Plan 2023-2027* (CML, 2023, p. 40). The theme of retaining/staying in Lisbon of companies that, based in the city, are gaining scale and becoming internationalized, as well as retaining the talent that works in these companies or that others will create, is recurrent in the speeches of state and private decision-makers. In the document cited, Moedas highlights a concern regarding foreign investment, entrepreneurship and international intercity competition: “The city has to be more than a transit point” (ibid.). Regarding the problem of startups remaining in Portugal, the manager of the Portuguese venture capital fund told me that “*for reasons of growth needs, (some companies) will move their headquarters abroad*” (Interview 9, 2022). Another interviewee, who is a leader in the Portuguese debate on the links between technologies and gender issues, was a little more fearful. When asked about future prospects, after acknowledging the thriving digital innovation ecosystem in Lisbon, she told me:

I fear that Lisbon will very quickly become tiring to live in and to attract and retain this new generation that wants to be more digital nomads, that wants to have other conditions, that wants to have more peace and quiet, that wants to have time to experience other things and that may eventually look for opportunities outside Lisbon. I think we have to be careful here. And on the other hand, we have to be competitive enough so that our people do not have another exodus to work abroad. (Interview 18, 2023)

These concerns make a lot of sense. In the current global configuration of urban production based on floating capital from companies and digital agents who are nomads, the future is a gamble and urban entrepreneurship is a risky investment. The meaning of the continuous and flexible repurposing of an old industrial heritage aimed at businesses in the digital age can therefore be understood. This concept has the following characteristics:

a) *activation of incompleteness* – it is the idea of “gradually being constituted” and “It is gradually being opened”. A logic that the new infrastructure should not have a moment of opening or completion of the works. It is a process of creative use of voids, ruins and spaces under (re)construction to activate and maintain positive expectations and imaginaries;

b) *temporal fluctuation and spatial elasticity* – the pace of creation and the spaces of use of the hub and its constituent parts vary according to the investment flows and the management of the projects of the agents inserted there and of those who may settle there;

c) *intermittent capital and agents* – in the field of the digital economy, the capital and agents mentioned are highly mobile and anxious. Thus, they can either reinvest profits and new amounts of risk investment in other companies and territories or they can give up on a specific project or company, transferring financial and human resources to other infrastructures and to other territories. They can also adopt and expand remote work or telework for their teams. Companies in this field frequently adopt these measures and, as

a result, reduce the use of or even abandon offices and cities in which they have recently set up shop.

In an urban area undergoing rehabilitation and dispute, *continuous and flexible repurposing* is also a mechanism that reveals contradictions and regulates the different local expectations of owners and tenants, investors and small business owners, newcomers and long-time residents, such as those from Vila Dias, an old and modest working-class village 200 meters from the HCB. Regarding the arrival of the hub and its agents in Beato's routine, the leader of an association of residents of local working-class villages told me:

[...] the Creative Hub. It is being designed not for us, but for digital nomads. The Hub now brings problems, big challenges. The creative hub brings investment, speculation, companies with great financial capacity. It brought local accommodation (temporary housing rented by digital applications) that did not exist here. It brought more cars, more pollution, more noise. How is it possible to have a creative hub here, a digital platform, cutting-edge technology with startups, with this and that, and here we have a ghetto without sewers, without basic sanitation, which has existed since the 19th century? How is that possible? The Hub has brought nothing to the community. It is like going to a friend's house for lunch and not bringing a bottle of wine. (Interview 19, 2023)

Conclusions

Until October 2023, *A Praça, Claranet* and *Factory Lisbon* (the latter with 11 partners installed there, including *Unicorn Factory Lisboa* and the *Web Summit* offices) were the established and active ventures in the Hub Criativo do Beato, which was now publicized by the CML as the main arena for in-person participation and face-to-face exchanges among the multiple agents of Lisbon's growing digital innovation ecosystem. Interdependent – sometimes competing, sometimes cooperating –, these entrepreneurs organized in startups and facilitators (ecosystem builders) bring life to the infrastructure and attract new visitors to the neighborhoods of the parish of Beato. In 2024, CML renamed HCB as Beato Innovation District (but the previous name remains in use), reinforcing the idea that this large facility has an uninterrupted movement of symbolic constitution.

Considering the maxim of geographer Milton Santos (2012, p. 67) that “whenever society (the social totality) undergoes a change, geographic forms or objects (both new and old) take on new functions”, I understand that the transformation of the old MM into an infrastructure of technological innovation and entrepreneurship reflects the hegemonic conditions of capitalist accumulation in the

digital age. The Hub Criativo do Beato, as a whole, and the occupants of its private buildings, both those already in operation and those still inactive, are committed to the idea of continuous and flexible repurposing, reaffirming that space is “a social product in a permanent process of transformation” (ibid.). But that’s not all. This infrastructure assumes its *permanent process of transformation* as its own logic of operation or *modus operandi*. According to its formulators and managers, this is an indispensable characteristic for its attractiveness and suitability to the interests of the agents of the digital economy.

Regarding the treatment of the different types of available industrial heritage, the phenomenon analyzed reveals that, currently, the stage of economic specialization and thematization of cities is no longer limited only to finished architectural works, but also to their manufacturing processes. In this logic, it is the constant mobilization of the forms and functions of infrastructure that tends to attract and optimize the ventures of its internal agents. The central idea present in initiatives such as the Lisbon hub is that the refunctionalization architecture of post-industrial buildings in favor of the digital economy does not need to define all uses and reuses *a priori*, but, as in the businesses that give it meaning, it needs to allow and creatively stimulate: (1) experimentation with full and empty spaces and with objects that are potentially useful and useless; (2) exchanges between routine users (a permanent team of entrepreneurs and workers) and sporadic users (temporary workers, partners, visitors); (3) integration between in-person and remote work; (4) connections with the outside (the

Beato neighborhood, the city, fixed and global flows of digital capitalism) and the inside of the HCB (members of the ecosystem present there).

The idea that HCB already needed to be an infrastructure for the dynamization and adjustment of Lisbon's innovative ecosystem even before its full technicality corresponds to the observation, among decision-makers and among the ecosystem agents themselves, that digital markets are fickle and that the permanence of individuals and companies in the city may be ephemeral. The immediacy, haste and constancy of the actions to attract and mobilize new agents for the Lisbon digital innovation ecosystem took into account both the competition with ecosystems in other cities and an expectation, sometimes veiled, sometimes explicit, that this cycle of attracting and retaining talent, creating and leveraging startups, scaleups and unicorns, with financial returns and gains in innovation for Portuguese society, may not last long. The construction of the HCB – continuous, adaptable and based on temporary uses – is, therefore, a demand for political economy and, at the same time, a management solution for a space with delayed, unfinished, risky works or with prospects of readaptation. The projects relating to the hub and its private buildings (engineering, architecture, interior design and operations) were drawn up taking these conditions into account and were continually adjusted by them, valuing experimentation, adaptability and the possibility of future change in their uses.

Therefore, I understand the HCB as an infrastructure that: 1) serves as an *anchor* to attract other investments to the city and to the eastern area; 2) is used as a *representation*

apparatus for a Lisbon that aims to be the innovation capital of Europe, but with global reach; 3) *already organizes and animates Lisbon's digital innovation ecosystem*, "mediating flows, exchanges and connecting people" (Larkin, 2020).

Regarding the rehabilitative and resignifying actions that allow the creation of the HCB, I can say that they have been controlling its temporal rhythm and spatial elasticity – triggering different types of "waiting" (cf. Lima, 2020) for local operators and outsiders –, which regulate and feed the different promises of Lisbon's governance about the city.

So far, however, I have noticed *two ambiguities* inherent to this infrastructure. The first emerges during the events and tours held there and when I receive news about the progress of its construction and negotiations with interested parties: on the one hand, the HCB is appreciated as an industrial heritage site transforming itself for digital entrepreneurship and its ecosystem; on the other, there is regret for the delay in what is not yet seen as ready – the buildings still deteriorating or under construction, and full integration with

Beato and the city. The second ambiguous phenomenon refers to the social expectations generated by the HCB continuous and flexible repurposing: for some, hope and euphoria, generally for younger, wealthier people, owners of stores or homes in the surrounding area and/or immersed in the opportunities it opens up; for others, older, poorer, with rented homes or stores and a more traditional and analogical daily life, a feeling of loss, fear or anxiety in the face of this future and this innovative Lisbon that is coming.

In other words, the continuous establishment of a hub of innovation and the promises of a future of disruptive digital technologies are phenomena seen as a virtue for some and a problem for others, depending on the relative positions of each agent within the socioeconomic structure of the city. In fact, the same city that demands more and better jobs and that benefits from new digital tools and services is the one that worries, rebels and protests against the invasion of digital nomads, city users and rich investors with tax benefits in its neighborhoods that were once accessible, cheaper and more socially cohesive.

<https://orcid.org/0000-0001-5752-9560>

Universidade de São Paulo, Faculdade de Filosofia, Letras e Ciências Humanas, Departamento de Sociologia. São Paulo, SP/Brasil.

brito.jfp@gmail.com

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- (2) Both are from the Socialist Party (PS). Medina replaced Costa in the Lisbon City Hall when he was elected Prime Minister in 2015. In late 2021, after a fierce electoral process, Medina was replaced in the Lisbon City Hall by Carlos Moedas, from the Social Democratic Party (PSD), a former European Commissioner for Innovation.
- (3) A neighborhood of global architecture, inaugurated in 1998, at the Lisbon Universal Exhibition (Expo-98). The first urban rehabilitation front in the former industrial area of eastern Lisbon, it became a paradigm of urban rehabilitation and joint urban operation for the entire country. Today, the Parque das Nações parish has the largest and most suitable offices for large companies and is the preferred area for multinationals operating in the city, such as the big tech company Microsoft.
- (4) As part of a package of measures to attract foreign investment, the Portuguese government created the golden visa or Residence Permit for Investment Activity (ARI, Autorização de Residência para Actividade de Investimento), a special type of permit for residence and business in the country. As a continuation of this strategy, the Startup visa (2018) and the Tech visa (2019) were launched, both for entrepreneurs and skilled workers in the digital economy. In 2023, after much debate about their effects on increasing the cost of living in cities, the golden visas were discontinued. The others are still being issued.
- (5) Startups are small companies with the potential for rapid growth, especially those linked to the digital economy; scaleups are those that are already robust but can scale their businesses globally; unicorns are technological and digital innovation companies that reach a billion dollars in market value; big techs are a small group of hegemonic mega-companies that lead the main innovations and trends in the global digital economy (Alphabet/Google, Meta/Facebook, Microsoft, Apple, Amazon, Tik Tok).
- (6) It is worth noting that at that time, Infante Dom Henrique Av., which is now parallel to the port, did not yet exist.
- (7) About Factory Lisbon, see: <https://www.factorylisbon.com/about>. Accessed: Mar 2024.
- (8) More details about Startup Lisboa at: <https://www.startuplisboa.com/>. Accessed: Mar 2024.
- (9) The largest and longest building, facing Avenida Infante Dom Henrique and the port, is the Factory Lisbon, from the German group Factory, which emerged in Berlin with the purpose of requalifying old industrial buildings for new creative and technological industries.
- (10) See disclosure on the Startup Lisboa page (2019).
- (11) See Pincha (2019) and Principal (2018).
- (12) About Casa do Capitão (Captain's House), see: Real (2020).
- (13) As an example, see: Freitas (2022).
- (14) See: Sónar... (2021).
- (15) See: Sónar... (2021).

- (16) In the background, the old MM bakery building, reserved for Startup Lisboa, the infrastructure administrator. The phrase on the façade – Startup Lisboa is Baking the Future Here! – indicates the mediation between the past and the future of the building, the old MM Bread Factory.
- (17) Lisboa Unicorn Capital has also become the name of the city's DIE promotion platform, formerly Made of Lisboa. The official website states: "The ambition is clear: to establish Lisbon as an entrepreneurial, innovative and technological hub on a global level, working with the community to ensure Lisbon's success as the capital of innovation". This definition means that the Hub Criativo do Beato aims to materially represent the city's aspirations. See: <https://lisboaunicorncapital.com/pt/sobre-nos/>. Accessed: March 2024.
- (18) Regarding Law no. 21/2023, approved by the Assembly of the Republic on May 25, 2023, known as the "Startups Law", see: Marcela (2022b). See also: "New Startups Law. 'We have the opportunity to create an ecosystem of international importance', says executive director of Startup Lisboa" (Marcela, 2022b).

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